

Compilation of Changes to the CPC Scheme Between 2025.01 and 2025.05

Presentation Details

Entries for new symbols and headings:	<i>Black text in italics</i>
Entries for existing symbols and headings	
—text insertions:	<i>Green text in italics</i>
—text deletions:	Red strikethrough text with grey background
Entries for deleted symbols and headings:	Black strikethrough text
<ul style="list-style-type: none"> • In cases when the originating project cannot be found, "Unknown" is given for the Project information. • Projects ending in "-F" indicate finalisation after reclassification was completed. 	

Project: Unknown (A23B)

U	A23B 4/00	Preservation of meat, sausages, fish or fish products
U	A23B 4/005	• Preserving by heating
	A23B 4/0053	• • {with gas or liquids, with or without shaping, e.g. in form of powder, granules or flakes}
		<u>NOTE</u>
		{The heating means for the gas or liquid are not classified.}

Project: RP0737-F (A43B)

U	A43B 1/00	Footwear characterised by the material
M	A43B 1/02	• made of fibres or fabrics made therefrom
		<u>WARNING</u>
		Group A43B 1/02 is impacted by reclassification into groups A43B 1/023, A43B 1/025, A43B 1/028 and A43B 1/05.
		All groups listed in this Warning should be considered in order to perform a complete search.
M	A43B 1/023	• • Animal fibres
		<u>WARNING</u>
		Group A43B 1/023 is incomplete pending reclassification of documents from groups A43B 1/02 and A43B 1/04.
		Groups A43B 1/02, A43B 1/04 and A43B 1/023 should be considered in order to perform a complete search.
M	A43B 1/025	• • Plant fibres
		<u>WARNING</u>
		Group A43B 1/025 is incomplete pending reclassification of documents from groups A43B 1/02 and A43B 1/04.
		Groups A43B 1/02, A43B 1/04 and A43B 1/025 should be considered in order to perform a complete search.
M	A43B 1/028	• • Synthetic or artificial fibres
		<u>WARNING</u>
		Group A43B 1/028 is incomplete pending reclassification of documents from groups A43B 1/02, A43B 1/04 and A43B 1/14.
		All groups listed in this Warning should be considered in order to perform a complete search.

M	A43B 1/04	<ul style="list-style-type: none"> • braided, knotted, knitted or crocheted <p>WARNING Group A43B 1/04 is impacted by reclassification into groups A43B 1/023, A43B 1/025, A43B 1/028 and A43B 1/05. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A43B 1/05	<ul style="list-style-type: none"> • woven <p>WARNING Group A43B 1/05 is incomplete pending reclassification of documents from groups A43B 1/02 and A43B 1/04. Groups A43B 1/02, A43B 1/04 and A43B 1/05 should be considered in order to perform a complete search.</p>
M	A43B 1/14	<ul style="list-style-type: none"> • made of plastics (A43B 1/028 takes precedence) <p>WARNING Group A43B 1/14 is impacted by reclassification into group A43B 1/028. Groups A43B 1/14 and A43B 1/028 should be considered in order to perform a complete search.</p>
U	A43B 3/00	Footwear characterised by the shape or the use
M	A43B 3/34	<ul style="list-style-type: none"> • with electrical or electronic arrangements <p>WARNING Group A43B 3/34 is incomplete pending reclassification of documents from group A43B 7/005. Group A43B 3/34 is also impacted by reclassification into groups A43B 3/38, A43B 3/40, A43B 3/42, A43B 3/44, A43B 3/46, and A43B 3/48. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A43B 3/35	<ul style="list-style-type: none"> • with electric heating arrangements <p>WARNING Group A43B 3/35 is incomplete pending reclassification of documents from group A43B 7/02. Group A43B 3/35 is also impacted by reclassification into groups A43B 3/38, A43B 3/40 and A43B 3/42. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A43B 3/38	<ul style="list-style-type: none"> • with power sources <p>WARNING Group A43B 3/38 is incomplete pending reclassification of documents from groups A43B 3/34 and A43B 3/35. Group A43B 3/38 is also impacted by reclassification into groups A43B 3/40 and A43B 3/42. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A43B 3/40	<ul style="list-style-type: none"> • Batteries <p>WARNING Group A43B 3/40 is incomplete pending reclassification of documents from groups A43B 3/34, A43B 3/35 and A43B 3/38. All groups listed in this Warning should be considered in order to perform a complete search.</p>

M	A43B 3/42	<ul style="list-style-type: none"> • • where power is generated by conversion of mechanical movement to electricity, e.g. by piezoelectric means <p><u>WARNING</u> Group A43B 3/42 is incomplete pending reclassification of documents from groups A43B 3/34, A43B 3/35 and A43B 3/38. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A43B 3/44	<ul style="list-style-type: none"> • • with sensors, e.g. for detecting contact or position <p><u>WARNING</u> Groups A43B 3/44 and A43B 3/46 are incomplete pending reclassification of documents from group A43B 3/34. Groups A43B 3/34, A43B 3/44 and A43B 3/46 should be considered in order to perform a complete search.</p>
M	A43B 3/48	<ul style="list-style-type: none"> • • with transmitting devices, e.g. GSM or Wi-Fi® <p><u>WARNING</u> Group A43B 3/48 is incomplete pending reclassification of documents from group A43B 3/34. Groups A43B 3/34 and A43B 3/48 should be considered in order to perform a complete search.</p>
M	A43B 5/00	<p>Footwear for sporting purposes (non-skid devices, e.g. ice-spurs or studs for football shoes, A43C 15/00)</p> <p><u>WARNING</u> Group A43B 5/00 is impacted by reclassification into group A43B 5/06. Groups A43B 5/00 and A43B 5/06 should be considered in order to perform a complete search.</p>
M	A43B 5/06	<ul style="list-style-type: none"> • Running shoes; Track shoes <p><u>WARNING</u> Group A43B 5/06 is incomplete pending reclassification of documents from group A43B 5/00. Groups A43B 5/00 and A43B 5/06 should be considered in order to perform a complete search.</p>
U	A43B 7/00	Footwear with health or hygienic arrangements
M	A43B 7/005	<ul style="list-style-type: none"> • {with cooling arrangements} <p><u>WARNING</u> Group A43B 7/005 is impacted by reclassification into group A43B 3/34. Groups A43B 7/005 and A43B 3/34 should be considered in order to perform a complete search.</p>
M	A43B 7/02	<ul style="list-style-type: none"> • with heating arrangements (with electric heating arrangements A43B 3/35) <p><u>WARNING</u> Group A43B 7/02 is impacted by reclassification into group A43B 3/35. Groups A43B 7/02 and A43B 3/35 should be considered in order to perform a complete search.</p>
U	A43B 7/14	<ul style="list-style-type: none"> • with foot-supporting parts
U	A43B 7/1405	<ul style="list-style-type: none"> • • with pads or holes on one or more locations, or having an anatomical or curved form
U	A43B 7/1455	<ul style="list-style-type: none"> • • • with special properties

- M A43B 7/1463 • • • with removable pads to allow custom fit

WARNING

Group A43B 7/1463 is incomplete pending reclassification of documents from group A43B 7/1464.

Groups A43B 7/1464 and A43B 7/1463 should be considered in order to perform a complete search.

- M A43B 7/1464 • • • with adjustable pads to allow custom fit

WARNING

Group A43B 7/1464 is impacted by reclassification into groups A43B 7/1463, A43B 7/1466, A43B 7/1467, A43B 7/1468 and A43B 7/1469.

All groups listed in this Warning should be considered in order to perform a complete search.

- M A43B 7/1466 • • • • adjustable by screws or threads

WARNING

Group A43B 7/1466 is incomplete pending reclassification of documents from group A43B 7/1464.

Groups A43B 7/1464 and A43B 7/1466 should be considered in order to perform a complete search.

- M A43B 7/1467 • • • • adjustable by resilient members, e.g. springs

WARNING

Group A43B 7/1467 is incomplete pending reclassification of documents from group A43B 7/1464.

Groups A43B 7/1464 and A43B 7/1467 should be considered in order to perform a complete search.

- M A43B 7/1468 • • • • adjustable by shims

WARNING

Group A43B 7/1468 is incomplete pending reclassification of documents from group A43B 7/1464.

Groups A43B 7/1464 and A43B 7/1468 should be considered in order to perform a complete search.

- M A43B 7/1469 • • • • adjustable by selectively fastening or securing into multiple available positions

WARNING

Group A43B 7/1469 is incomplete pending reclassification of documents from group A43B 7/1464.

Groups A43B 7/1464 and A43B 7/1469 should be considered in order to perform a complete search.

U A43B 13/00**Soles; Sole-and-heel integral units**

- M A43B 13/02 • characterised by the material

WARNING

Group A43B 13/02 is impacted by reclassification into group A43B 13/06.

Groups A43B 13/02 and A43B 13/06 should be considered in order to perform a complete search.

M A43B 13/06

• • Leather

WARNING

Group A43B-13/06 is incomplete pending reclassification of documents from group A43B-13/02.
Groups A43B-13/02 and A43B-13/06 should be considered in order to perform a complete search.

Project: MP11897 (A61B)

U A61B 5/00

**Measuring for diagnostic purposes (radiation diagnosis [A61B 6/00](#);
diagnosis by ultrasonic, sonic or infrasonic waves [A61B 8/00](#));
Identification of persons**

NOTE

In this group, the following term is used with the meaning indicated:
"measuring" covers also detecting or recording.

M A61B 5/72

• {Signal processing specially adapted for physiological signals or for diagnostic purposes (~~character recognition, recognising digital ink, document-oriented image-based pattern recognition G06V 30/00; recognition or understanding of postal images G06V 30/424~~)}

M A61B 5/7221

• • {Determining signal validity, reliability or quality (~~A61B 5/7207 and A61B 5/7217 take precedence~~ *preventing, reducing or removing noise induced by motion artefacts A61B 5/7207; noise originating from a therapeutic or surgical apparatus A61B 5/7217*)}

M A61B 5/7225

• • {Details of ~~analog~~ *analogue* processing, e.g. isolation amplifier, gain or sensitivity adjustment, filtering, baseline or drift compensation (~~A61B 5/30; A61B 5/316 take precedence; transformers for specific applications H01F 38/00; amplifiers H03F~~ *input circuits for detecting, measuring, or recording bioelectric or biomagnetic signals A61B 5/30; specific diagnostic methods using bioelectric or biomagnetic signals A61B 5/316*)}

M A61B 5/7228

• • {Signal modulation applied to the input signal sent to patient or subject; ~~demodulation~~ *Demodulation* to recover the physiological signal (~~modulation H03C~~)}

M A61B 5/7235

• • {Details of waveform analysis (~~A61B 5/349 takes precedence~~ *detecting specific parameters of the electrocardiograph cycle A61B 5/349*)}

M A61B 5/725

• • • {using specific filters therefor, e.g. Kalman or adaptive filters (~~A61B 5/316 take precedence~~ *specific diagnostics methods using using bioelectric or biomagnetic signals A61B 5/316*)}

M A61B 5/7264

• • • {Classification of physiological signals or data, e.g. using neural networks, statistical classifiers, expert systems or fuzzy systems (~~neural networks per se G06N 3/00; expert systems per se G06N 5/00~~)}

M A61B 5/7271

• • {Specific aspects of physiological measurement analysis (~~A61B 5/316; A61B 5/349 and A61B 5/374 take precedence~~ *specific diagnostics methods using bioelectric or biomagnetic signals A61B 5/316*)}

M A61B 5/7278

• • • {Artificial waveform generation or derivation, e.g. ~~synthesising~~ *synthesizing* signals from measured signals (~~A61B 5/327 takes precedence~~)}

M A61B 5/7282

• • • {Event detection, e.g. detecting unique waveforms indicative of a medical condition (~~A61B 5/4094, A61B 5/4818, A61B 5/349, A61B 5/0823 take precedence~~ *cough events A61B 5/0823; seizures A61B 5/4094; sleep apnoea A61B 5/4818*)}

M A61B 5/7285

• • • {for ~~synchronising~~ *synchronizing* or triggering a physiological measurement or image acquisition with a physiological event or waveform, e.g. an ECG signal (~~A61B 6/5205, A61B 6/541, A61B 8/5207, A61B 8/543 take precedence~~)}

- M A61B 5/7296
 - • • {for compensation of signal variation due to stress unintentionally induced in the patient, e.g. due to the stress of the medical environment or examination ~~(deliberately inducing physiological or psychological stress A61B 5/4884)~~}
- M A61B 5/74
 - {Details of notification to user or communication with user or patient ~~(indicating measured values G01D 7/00); user input means User input means~~ (input or output arrangements for computers G06F 3/00)}
- M A61B 5/742
 - • {using visual displays ~~(A61B 5/339 takes precedence~~ displays for heart-related electrical signals, e.g. ECG, A61B 5/339)}
- M A61B 5/7425
 - • • {Displaying combinations of multiple images regardless of image source, e.g. displaying a reference anatomical image with a live image ~~(geometric transforms for image registration G06T 3/14; enhancement using image fusion G06T 5/50; algorithms for registration of images G06T 7/30)~~}
- M A61B 5/746
 - • {Alarms related to a physiological condition, e.g. details of setting alarm thresholds or avoiding false alarms ~~(alarms per se G08B)~~}

Project: MP12696 (A61K)

M A61K

PREPARATIONS FOR MEDICAL, DENTAL OR TOILETRY PURPOSES
(devices or methods specially adapted for bringing pharmaceutical products into particular physical or administering forms [A61J 3/00](#); chemical aspects of, or use of materials for deodorisation of air, for disinfection or sterilisation, or for bandages, dressings, absorbent pads or surgical articles [A61L](#); soap compositions [C11D](#))

NOTES

1. This subclass covers the following subject matter, whether set forth as a composition (mixture), process of preparing the composition or process of treating using the composition:

- a. Drug or other biological compositions which are capable of:
 - preventing, alleviating, treating or curing abnormal or pathological conditions of the living body by such means as destroying a parasitic organism, or limiting the effect of the disease or abnormality by chemically altering the physiology of the host or parasite (biocides [A01N 25/00](#) - [A01N 65/00](#));
 - maintaining, increasing, decreasing, limiting, or destroying a physiological body function, e.g. vitamin compositions, sex sterilants, fertility inhibitors, growth promoters, or the like (sex sterilants for invertebrates, e.g. insects, [A01N](#); plant growth regulators [A01N 25/00](#) - [A01N 65/00](#));
 - diagnosing a physiological condition or state by an in vivo test, e.g. X-ray contrast or skin patch test compositions (measuring or testing processes involving enzymes or microorganisms [C12Q](#); in vitro testing of biological material, e.g. blood, urine, [G01N](#), e.g. [G01N 33/48](#))
- b. Body treating compositions generally intended for deodorising, protecting, adorning or grooming the body, e.g. cosmetics, dentifrices, tooth filling materials.

2. Attention is drawn to the definitions of groups of chemical elements following the title of section [C](#).

3. Attention is drawn to the notes in class [C07](#), for example the notes following the title of the subclass [C07D](#), setting forth the rules for classifying organic

compounds in that class, which rules are also applicable, if not otherwise indicated, to the classification of organic compounds in [A61K](#).

4. In this subclass, with the exception of group [s A61K 8/00](#) and [A61K 40/00](#), the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place.

5. Therapeutic activity of medicinal preparations is further classified in subclass [A61P](#).

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

A61K9/133	covered by	A61K 9/127
A61K 9/18	covered by	A61K 9/14
A61K 9/22	covered by	A61K 9/20
A61K 9/24	covered by	A61K 9/209
A61K 9/26	covered by	A61K 9/2077 , A61K 9/2081
A61K 9/30	covered by	A61K 9/28
A61K 9/32	covered by	A61K 9/28
A61K 9/34	covered by	A61K 9/28
A61K 9/36	covered by	A61K 9/28
A61K 9/38	covered by	A61K 9/28
A61K 9/40	covered by	A61K 9/28
A61K 9/42	covered by	A61K 9/28
A61K 9/44	covered by	A61K 9/2072
A61K 9/46	covered by	A61K 9/0007
A61K 9/52	covered by	A61K 9/50
A61K 9/54	covered by	A61K 9/5073 , A61K 9/5078 , A61K 9/5084
A61K 9/56	covered by	A61K 9/50
A61K 9/58	covered by	A61K 9/50
A61K 9/60	covered by	A61K 9/50
A61K 9/62	covered by	A61K 9/50
A61K 9/64	covered by	A61K 9/50
A61K 9/66	covered by	A61K 9/48
A61K 9/68	covered by	A61K 9/0058
A61K 9/72	covered by	A61K 9/0073
A61K 39/108	covered by	A61K 39/0258 , A61K 39/0266
A61K 39/112	covered by	A61K 39/0275 , A61K 39/0283
A61K 45/08	covered by	A61K 31/00 , A61K 47/00
A61K 47/04	covered by	A61K 47/02
A61K 50/00	covered by	A61K 9/0009 , C09J 9/02

The following IPC indexing codes are not in the CPC scheme:

[A61K 101/00](#) - [A61K 103/00](#) covered by [A61K 51/00](#) - [A61K 51/1296](#)
[A61K 125/00](#) - [A61K 135/00](#) covered by [A61K 36/00](#) - [A61K 36/9068](#)

2. Subgroups of [A61K 48/00](#) are incomplete (Jan. 2003). Documents are being reclassified from [A61K 48/00](#) to its subgroups

3. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

M A61K 40/00 Cellular immunotherapy (medicinal preparations containing antigens or antibodies [A61K 39/00](#))

NOTE

1. This group *covers* isolated cells of the immune system presenting or targeting a specific antigen or a mix of antigens for use in therapy.

2. In this main group, the last place priority rule is not applied, i.e. the common rule is applied.

1-3. {In this group, C-Sets are used for classification. The detailed information about the C-Sets construction and the associated syntax rules are found in the Definitions of [A61K 40/00](#).}

Project: Unknown (A61K)

U A61K 41/00 Medicinal preparations obtained by treating materials with wave energy or particle radiation {; Therapies using these preparations}

M A61K 41/0023 • {~~Agression~~ *Aggression* treatment or altering}

NOTE

~~This groups~~ {This group covers aggression treatment or altering

- of a medicinal preparation prior to administration to the human/animal, e.g. altering a binding specificity of a monoclonal antibody used in a medicinal agent with an oxidizing agent or an electric potential;
- of a tissue/organ prior to graft, e.g. destroying immunodominant epitopes;
- the permeability of cell membranes or biological barriers *in vivo*, e.g. by ultrasound, prior to the administration of a medicinal preparation to the animal/human;
- for inducing the production of stress response proteins or heat shock proteins in order to reduce subsequent response to injuries

}

A61K 41/0047 • {Sonophoresis, i.e. ultrasonically-enhanced transdermal delivery, electroporation of a pharmacologically active agent}

NOTE

{To be classified in [A61K 9/0009](#) when it is in relation to the galenic form.}

Project: RP11515-F (A61K)

U A61K 47/00 Medicinal preparations characterised by the non-active ingredients used, e.g. carriers or inert additives; Targeting or modifying agents chemically bound to the active ingredient

U A61K 47/50 • the non-active ingredient being chemically bound to the active ingredient, e.g. polymer-drug conjugates

U A61K 47/51 • • the non-active ingredient being a modifying agent

U A61K 47/68 • • • the modifying agent being an antibody, an immunoglobulin or a fragment thereof, e.g. an Fc-fragment

U A61K 47/6801 • • • {Drug-antibody or immunoglobulin conjugates defined by the pharmacologically or therapeutically active agent}

M A61K 47/6803 • • • • {Drugs conjugated to an antibody or immunoglobulin, e.g. cisplatin-antibody conjugates}

WARNING

Group A61K 47/6803 is impacted by reclassification into groups A61K 47/68035, A61K 47/68033 and A61K 47/68031.

All groups listed in this Warning should be considered in order to perform a complete search.

M A61K 47/68031 {the drug being an auristatin}

WARNING

Group A61K 47/68031 is incomplete pending reclassification of documents from group A61K 47/6803.
All groups listed in this Warning should be considered in order to perform a complete search.

M A61K 47/68033 {the drug being a maytansine}

WARNING

Group A61K 47/68033 is incomplete pending reclassification of documents from group A61K 47/6803.
All groups listed in this Warning should be considered in order to perform a complete search.

M A61K 47/68035 {the drug being a pyrrolobenzodiazepine}

WARNING

Group A61K 47/68035 is incomplete pending reclassification of documents from group A61K 47/6803.
All groups listed in this Warning should be considered in order to perform a complete search.

M A61K 47/68037 {the drug being a camptothecin [CPT] or derivatives}

WARNING

Group A61K 47/68037 is incomplete pending reclassification of documents from group A61K 47/6803.
All groups listed in this Warning should be considered in order to perform a complete search.

Project: Unknown (A61K)

U A61K 49/00 Preparations for testing *in vivo*

U A61K 49/001 . {Preparation for luminescence or biological staining}

U A61K 49/0013 . . {Luminescence}

U A61K 49/0017 . . . {Fluorescence *in vivo*}

A61K 49/005 {characterised by the carrier molecule carrying the fluorescent agent}

NOTE

{Classification is also made according to the nature of the fluorescent group in the appropriate subgroup of [A61K 49/0019](#).}

A61K 49/006 . . {Biological staining of tissues *in vivo*, e.g. methylene blue or toluidine blue O administered in the buccal area to detect epithelial cancer cells, dyes used for delineating tissues during surgery}

NOTE

{If the dye used for staining is fluorescent, classification is also given for the appropriate subgroup of [A61K 49/0019](#).}

- A61K 49/0063
- {characterised by a special physical or galenical form, e.g. emulsions, microspheres}
- NOTE
- {Note Classification is also made according to the nature of the luminescent or fluorescent agent and/or the carrier carrying the fluorescent agent.}
- U A61K 49/0065
- • {the luminescent/fluorescent agent having itself a special physical form, e.g. gold nanoparticle}
- A61K 49/0067
- • • {quantum dots, fluorescent nanocrystals}
- NOTE
- {Quantum dots modified on their surface by an antibody are also classified in [A61K 49/0058](#) .}
- A61K 49/0069
- • {the agent being in a particular physical galenical form}
- NOTE
- {If the physical or galenical form containing a fluorescent agent is modified by a particular agent, classification is also made according to the nature of this agent in the appropriate [A61K 49/005](#) subgroup.}
- U A61K 49/0076
- • • {dispersion, suspension, e.g. particles in a liquid, colloid, emulsion}
- A61K 49/0078
- • • • {microemulsion, nanoemulsion}
- NOTE
- {Microemulsion means that the dispersed phase is in the form of globules having a diameter above or equal to 1 micrometer. Nanoemulsion means that the dispersed phase is in the form of globules having a diameter below 1 micrometer.}
- A61K 49/0082
- • • • {micelle, e.g. phospholipidic micelle and polymeric micelle}
- NOTE
- {Micelles comprise a monolayer of surfactant molecules that are aggregated head-to-head and tail-to-tail, thus forming a small spherical particle; micelles can be normal, i.e., the surfactant heads are hydrophilic, or inverse.}
- A61K 49/0084
- • • • {liposome, i.e. bilayered vesicular structure}
- NOTE
- {When the surface of the liposome encapsulating a fluorescent agent and used *in vivo* is functionalised by a modifying agent, classification is also made according to the nature of this modifying agent: e.g. a liposome modified on its surface by a peptide is classified in [A61K 49/0084](#) and [A61K 49/0056](#). Liposomes encapsulating a fluorescent agent, used *in vivo* and modified on their surface by a polymer because they incorporate a polymer-lipid conjugate, are only additionally classified in [A61K 49/0054](#) if the polymer modifying the lipid is unusual. Liposomes encapsulating a fluorescent agent which are pegylated because they incorporate a pegylated lipid are only classified in [A61K 49/0084](#), not in [A61K 49/0054](#).}
- U A61K 49/0089
- • • • {Particulate, powder, adsorbate, bead, sphere}
- A61K 49/0091
- • • • {Microparticle, microcapsule, microbubble, microsphere, microbead, i.e. having a size or diameter higher or equal to 1 micrometer}
- NOTE
- {When the surface of the microparticle encapsulating a fluorescent agent and used *in vivo* is functionalised by a modifying agent,

classification is also made according to the nature of this modifying agent, e.g. a microparticle modified on its surface by a peptide is classified in [A61K 49/0091](#) and [A61K 49/0056](#).)

- U A61K 49/06
 - Nuclear magnetic resonance [NMR] contrast preparations; Magnetic resonance imaging [MRI] contrast preparations

NOTE

characterised only by the (inorganic) MRI-active nucleus, e.g. ^{129}Xe

- U A61K 49/08
 - • characterised by the carrier

NOTE

{characterised by the carrier carrying the MRI-active nucleus, e.g. inorganic carrier}

- A61K 49/085
 - • • {conjugated systems}

NOTE

{The MRI-active nucleus being complexed to a complex-forming compound (e.g. chelating group) or being covalently linked to a molecule, which being further covalently linked or conjugated to a carrier, e.g. polymer. Classification being also made according to the nature of the carrier, e.g. $[\text{Gd}^{3+}]$ DOTA-polymer to be classified in [A61K 49/085](#) and in the appropriate [A61K 49/12](#) adequate subgroup.)

- U A61K 49/10
 - • • Organic compounds

NOTE

the carrier being an organic compound, e.g. ^{13}C -labelled molecule or perfluorinated alkane, used as MRI *in vivo* probe, or a small organic molecule, e.g. a sugar, linked to a Gd-chelate

- A61K 49/101
 - • • • {the carrier being a complex-forming compound able to form MRI-active complexes with paramagnetic metals}

NOTE

{In the [A61K 49/101](#) subgroups, the MRI-active nucleus being complexed to a complex-forming compound, e.g. chelating group. Classification being made according to the nature of this complex-forming agent, if it being either an uncommon or new complexing agent (not the usual DTPA, DOTA, DOTP, etc...groups) that forms the real contribution to the claimed MRI invention, or if it being not conjugated to any further molecule, e.g. which being not conjugated to a polymer, peptide, protein or antibody. In that latter case, the MRI probe being e.g. a paramagnetic metal chelate.)

- U A61K 49/12
 - • • • Macromolecular compounds

NOTE

the carrier being an organic macromolecular compound, i.e. an oligomeric, polymeric, dendrimeric molecule (not being a peptide, protein, polyamino acid (see [A61K 49/00](#)) or an antibody (see [A61K 49/00](#) or [A61K 49/16](#))

- A61K 49/124
 - • • • • {dendrimers, dendrons, hyperbranched compounds}

NOTE

{Said compounds are either complexes or complex-forming compounds, or they form a backbone to which MRI active nuclei are complexed or covalently linked through chelating groups. In that latter case, the subgroup [A61K 49/085](#) being also given. Dendrimeric,

dendronised or hyperbranched polyamino acids used as carriers are also classified in [A61K 49/146](#) }

- U A61K 49/126 {Linear polymers, e.g. dextran, inulin, PEG}
- A61K 49/128 {comprising multiple complex or complex-forming groups, being either part of the linear polymeric backbone or being pending groups covalently linked to the linear polymeric backbone}

NOTE

{In that latter case, classification is also made in [A61K 49/085](#) }

- U A61K 49/18 . . characterised by a special physical form, e.g. emulsions, microcapsules, liposomes

NOTE

Classification being also made according to the molecule complexing or bearing the MRI-active nucleus

- U A61K 49/1806 . . {Suspensions, emulsions, colloids, dispersions}
- A61K 49/1812 {liposomes, polymersomes, e.g. immunoliposomes}

NOTE

{If the paramagnetic metal complexes are covalently linked to the bilayered membrane, then the [A61K 49/085](#) subgroup being also given. Liposomes modified on their external surface by a targeting agent, e.g. an antibody are classified in [A61K 49/1812](#) without further indication for the targeting agent .}

- A61K 49/1818 . . . {particles, e.g. uncoated or non-functionalised microparticles or nanoparticles}

NOTE

{For nanoparticles, i.e. having a size or diameter smaller than 1 micrometer, the subgroups [B82Y 5/00](#) and [B82Y 15/00](#) are also given. }

U A61K 51/00 Preparations containing radioactive substances for use in therapy or testing in vivo

- U A61K 51/02 . characterised by the carrier {, i.e. characterised by the agent or material covalently linked or complexing the radioactive nucleus}

- U A61K 51/04 . . Organic compounds

NOTE

Organic compounds used as carriers

- A61K 51/041 . . . {Heterocyclic compounds}

NOTE

{Under this group, the last place rule is followed.}

- U A61K 51/044 {having nitrogen as a ring hetero atom, e.g. guanethidine, rifamycins (rifampin [A61K 51/0459](#))}

- U A61K 51/0446 {having five-membered rings with one nitrogen as the only ring hetero atom, e.g. sulpiride, succinimide, tolmetin, buflomedil}

- A61K 51/0451 • • • • {having four such rings, e.g. porphyrine derivatives, bilirubin, biliverdine (hemin, hematin [A61K 51/0472](#))}
- NOTE
{Porphyrins or texaphyrins used as complex-forming compounds, i.e. wherein the nitrogen atoms forming the central ring system complex the radioactive metal, are classified in [A61K 51/0485](#).}
- A61K 51/0474 • • • {complexes or complex-forming compounds, i.e. wherein a radioactive metal (e.g. $^{111}\text{In}^{3+}$) is complexed or chelated by, e.g. a N_2S_2 , N_3S , NS_3 , N_4 chelating group}
- NOTE
{Classification is made according to the nature of this complex-forming agent, if it is either an uncommon or new complexing agent (not the usual DTPA, DOTA, DOTP, MAG3 etc...groups) that forms the real contribution to the claimed invention (radioimaging or radiotherapeutic agent), or if it is not conjugated to any further molecule, e.g. which is not conjugated to a polymer, peptide, protein or antibody. In that latter case, the radioactive agent is e.g. a radioactive metal chelate.}
- A61K 51/0485 • • • • {Porphyrins, texaphyrins wherein the nitrogen atoms forming the central ring system complex the radioactive metal}
- NOTE
{Porphyrins used as simple heterocyclic carriers containing a radioactive nucleus (e.g. ^{11}C) or substituted with a radioactive nucleus (e.g. ^{18}F), are classified in [A61K 51/0451](#).}
- A61K 51/0495 • • • {Pretargeting}
- NOTE
{Pretargeting is the administration of an agent X bearing the radioisotope or radioactive nucleus and of an agent Y capable of binding X and a cell Y in several steps, e.g. the radiolabelled agent is a radiolabelled biotin and the agent Y is a (strept)avidin molecule targeting specific cells. Classification is also made according to the nature of the carrier bearing/linked to the radioactive nucleus, e.g. an antibody.}
- A61K 51/0497 • • • {conjugates with a carrier being an organic compounds}
- NOTE
{The compound which bears, complexes or chelates the radioactive nucleus, is covalently linked or complexed to the carrier being another (small) organic molecule, i.e. not oligomeric, polymeric, dendrimeric. Classification is also made according to the nature of this small organic molecule. In case of a conjugate comprising a complex-forming compound (chelating group) complexing a radioactive metal linked to the carrier (organic compound in [A61K 51/0497](#)), the nature of this complex-forming compound is not classified except if the complexing/chelating group is the subject of the invention and is uncommon, e.g. ^{111}In -DTPA-glucose is classified in [A61K 51/0497](#) (not in [A61K 51/048](#)) and in [A61K 51/0491](#).}
- U A61K 51/06 • • • Macromolecular compounds {, carriers being organic macromolecular compounds, i.e. organic oligomeric, polymeric, dendrimeric molecules (peptides, proteins, polyamino acids [A61K 51/08](#); antibodies [A61K 51/10](#))}
- A61K 51/065 • • • • {conjugates with carriers being macromolecules}
- NOTE
{The compound which bears, complexes or chelates the radioactive nucleus, is covalently linked or complexed to the carrier being a

macromolecule (not being a peptide, polyamino acid, protein, antibody). In case of a conjugate comprising a complex-forming compound (chelating group) complexing a radioactive metal linked to the carrier (organic macromolecular compound in [A61K 51/065](#)), the nature of this complex-forming compound is not classified except if it is the real contribution of the claimed invention and it is an uncommon complexing/chelating group, e.g. ¹¹¹In-DTPA-PEG is classified in [A61K 51/065](#) and new DTPA-like derivatives conjugated to PEG and complexing ¹¹¹In for use *in vivo* is classified in [A61K 51/0478](#) and [A61K 51/065](#).)

- U A61K 51/08 • • • Peptides, e.g. proteins {, carriers being peptides, polyamino acids, proteins}
- A61K 51/088 • • • {conjugates with carriers being peptides, polyamino acids or proteins (antibodies [A61K 51/10](#))}

NOTE

{The compound which bears, complexes or chelates the radioactive nucleus, is covalently linked/complexed to the carrier being a peptide, polyamino acid or protein (not being an antibody). Classification is also made according to the nature of the peptide or protein (e.g. if it is BSA, then [A61K 51/081](#) is also indicated). In case of a conjugate comprising a complex-forming compound (chelating group) complexing a radioactive metal linked to the carrier (peptide, protein or polyamino acid in [A61K 51/088](#)), the nature of this complex-forming compound is not classified except if it is the real contribution of the claimed invention and it is an uncommon complexing or chelating group, e.g. ¹¹¹In-DTPA-interleukin 2 is classified in [A61K 51/088](#); new DTPA-like derivatives conjugated to interleukin 2 and complexing ¹¹¹In for use *in vivo* is classified in [A61K 51/0478](#) and [A61K 51/088](#).)

- U A61K 51/10 • • • Antibodies or immunoglobulins; Fragments thereof {, the carrier being an antibody, an immunoglobulin or a fragment thereof, e.g. a camelised human single domain antibody or the Fc fragment of an antibody}
- A61K 51/1093 • • • • {conjugates with carriers being antibodies}

NOTE

{The compound which bears, complexes or chelates the radioactive nucleus, being covalently linked or complexed to the carrier being an antibody. Classification being also made according to the appropriate [A61K 51/10](#) subgroup. In case of a conjugate comprising a complex-forming compound (chelating group) complexing a radioactive metal linked to the carrier (antibody in [A61K 51/1093](#)), the nature of this complex-forming compound being not classified except if it being the real contribution of the claimed invention and it being an uncommon complexing/chelating group, e.g. ¹¹¹In-DTPA-herceptin being classified in [A61K 51/1093](#) and [A61K 51/1051](#), new DTPA-like derivatives conjugated to herceptin and complexing ¹¹¹In for use *in vivo* being classified in [A61K 51/0478](#), [A61K 51/1093](#) and [A61K 51/1051](#).)

- U A61K 51/12 • characterised by a special physical form, e.g. emulsion, microcapsules, liposomes {, characterized by a special physical form, e.g. emulsions, dispersions, microcapsules (liposomes [A61K 51/1234](#))}
- U A61K 51/1217 • • {Dispersions, suspensions, colloids, emulsions, e.g. perfluorinated emulsion, sols}

A61K 51/1234

- • • {Liposomes}

NOTE

{Liposomes modified on their external surface by a targeting agent, e.g. an antibody, are not additionally classified with the symbol of the targeting agent.}

Project: RP12149 (A63B)**U A63B 67/00****Sporting games or accessories therefor, not provided for in groups****A63B 1/00 - A63B 65/00**

M A63B 67/02

- Special golf games, e.g. miniature golf {~~or golf putting games played on putting tracks; putting practice apparatus having an elongated platform as a putting track~~ *Putting tracks therefor*}

U A63B 69/00**Training appliances or apparatus for special sports (training of parachutists B64D 23/00)**

U A63B 69/36

- for golf

C A63B 69/3691

- {~~Golf courses; {Golf practising terrains having a plurality of driving areas, fairways, greens (special golf games, e.g. miniature golf, A63B 67/02; mats for simulating golf greens A63B 69/3661)}~~}

WARNING

Group A63B 69/3691 is impacted by reclassification into group A63C 19/003. Groups A63B 69/3691 and A63C 19/003 should be considered in order to perform a complete search.

C A63B 69/3694

- • • {for driving only}

WARNING

Group A63B 69/3694 is impacted by reclassification into group A63C 19/003. Groups A63B 69/3694 and A63C 19/003 should be considered in order to perform a complete search.

C A63B 69/3697

- • • {with putting taking place on a green other than the target green}

WARNING

Group A63B 69/3697 is impacted by reclassification into group A63C 19/003. Groups A63B 69/3697 and A63C 19/003 should be considered in order to perform a complete search.

Project: RP12149 (A63C)**M A63C****SKATES; SKIS; ROLLER SKATES; DESIGN OR LAYOUT OF COURTS, RINKS OR THE LIKE (water skis B63B 32/00, B63B 34/00)**WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

A63C 5/14

covered by

A63C 5/12

2. {In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

U A63C 5/00**Skis or snowboards (sledges with runners, e.g. ski-bobs, B62B 13/00; runners for sledges B62B 17/02; runners for carrying wheeled vehicles to facilitate travel on snow or ice B62B 19/00)**

U A63C 5/06

- with special devices thereon, e.g. steering devices

- M A63C 5/075 • • Vibration dampers ~~(vibration dampers per se F16F 7/00)~~
- U A63C 11/00 Accessories for skiing or snowboarding (fittings on vehicles for carrying skis [B60R 9/12](#))**
- U A63C 11/04 • for treating skis or snowboards
- M A63C 11/08 • • Apparatus for waxing or dewaxing ~~(ski waxes C09G 3/00)~~
- M A63C 11/10 • Apparatus for towing ~~skis~~ ~~{(ski-lifts [B61B 11/00](#))}~~
- U A63C 17/00 Roller skates; Skate-boards**
- M A63C 17/01 • Skateboards ([A63C 17/02](#) - [A63C 17/28](#) take precedence; ~~{rolling devices on skis A63C 5/035}~~)
- M A63C 17/02 • with wheels arranged in two pairs ~~{(A63C 17/01 takes precedence for skateboards [A63C 17/015](#))}~~
- M A63C 17/04 • with wheels arranged otherwise than in two pairs ~~{(A63C 17/01 takes precedence for skateboards [A63C 17/014](#))}~~
- M A63C 19/00 Design or layout of playing courts, rinks, bowling greens or areas for water-skiing; Covers therefor ~~{(golf courses A63B 69/3691); water roundabouts A63G 3/00; construction of surfaces of foundations E01C; roofs E04B 7/00; buildings or groups of buildings for sports E04H 3/10; swimming or splash baths or pools E04H 4/00; coverings for baths E04H 4/06}~~**
- N A63C 19/003 • {Golf courses}
- WARNING
Group [A63C 19/003](#) is incomplete pending reclassification of documents from groups [A63B 69/3691](#), [A63B 69/3694](#) and [A63B 69/3697](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- M A63C 19/02 • Shaping of the surface of courts according to the necessities of the different games ~~{(surface construction E01C)}~~
- M A63C 19/10 • Ice-skating or roller-skating rinks; Slopes or trails for skiing, ski-jumping or tobogganing ~~(chutes A63G 21/00; ski-lifts B61B 11/00; making or maintaining surfaces of snow or ice suitable for traffic or sporting purposes E01H 4/00; removing snow or ice E01H 5/00; production of ice or snow F25C 3/00)~~

Project: Unknown (B01D)

- U B01D 29/00 Filters with filtering elements stationary during filtration, e.g. pressure or suction filters, not covered by groups [B01D 24/00](#) - [B01D 27/00](#); Filtering elements therefor**
- U B01D 29/62 • Regenerating the filter material in the filter (devices for taking out of action one or more units of multi-unit filters, e.g. for regeneration, [B01D 35/12](#))
- U B01D 29/66 • • by flushing, e.g. counter-current air-bumps
- B01D 29/668 • • • {with valves, e.g. rotating valves for coaxially placed filtering elements}
- NOTE
[{the subgroup covers only counter-current flushing.}](#)

- U B01D 53/00** Separation of gases or vapours; Recovering vapours of volatile solvents from gases; Chemical or biological purification of waste gases, e.g. engine exhaust gases, smoke, fumes, flue gases, aerosols, (recovery of volatile solvents by condensation [B01D 5/00](#); sublimation [B01D 7/00](#); cold traps, cold baffles [B01D 8/00](#); working-up undefined gaseous mixtures obtained by cracking hydrocarbon oils [C10G 70/00](#); cleaning coal gas [C10K](#); working-up of natural gas, or synthetic natural gas, [C10L 3/10](#); separation of difficult-to-condense gases or air by liquefaction [F25J](#); for investigating materials [G01N 30/00](#))

NOTE

Group [B01D 53/34](#) takes precedence over groups [B01D 53/02](#) - [B01D 53/32](#)

- U B01D 53/14** • by absorption
B01D 53/1493 • {Selection of liquid materials for use as absorbents}

NOTE

{In [B01D 53/1493](#) it is desirable to add indexing codes for compositional aspects of absorbents. The codes are chosen from [B01D 2252/00](#) - [B01D 2252/61](#).}

Project: RP10389-F (B01D)

- U B01D 61/00** Processes of separation using semi-permeable membranes, e.g. dialysis, osmosis or ultrafiltration; Apparatus, accessories or auxiliary operations specially adapted therefor (separation of gases or vapours by diffusion [B01D 53/22](#))

NOTES

1. {When classifying in this group, the indexing codes of the following groups must be added if applicable:

- [B01D 2311/00](#) for details related to process operations and control;
- [B01D 2313/00](#) for details related to membrane modules or apparatus;
- [B01D 2315/00](#) for details related to the membrane module operation;
- [B01D 2317/00](#) for details related to the module arrangement within a plant or an apparatus;
- [B01D 2319/00](#) for details related to the membrane assembly within one housing.

}

2. {Multistep processes comprising two or more membrane-separation steps of different kinds must be classified in [B01D 61/58](#) in combination with the subgroup for the specific steps. The symbols relating to the specific steps are added as "additional information."}

3. {Multistep processes comprising two or more membrane-separation steps of the same kind must be classified in the subgroup covering the specific multistep membrane separation, e.g. [B01D 61/029](#) for processes comprising two or more reverse osmosis steps, [B01D 61/3621](#) for processes comprising two or more pervaporation steps.}

- M B01D 61/002** • {Forward osmosis or direct osmosis}

WARNING

Group B01D-61/002 is impacted by reclassification into groups B01D-61/0021, B01D-61/0022, B01D-61/0023 and B01D-61/0024.

All groups listed in this Warning should be considered in order to perform a complete search.

M	B01D 61/0021	<ul style="list-style-type: none"> • {comprising multiple forward osmosis steps} <p><u>WARNING</u> Group B01D 61/0021 is incomplete pending reclassification of documents from group B01D 61/002. Groups B01D 61/002 and B01D 61/0021 should be considered in order to perform a complete search.</p>
M	B01D 61/0022	<ul style="list-style-type: none"> • {Apparatus therefor} <p><u>WARNING</u> Group B01D 61/0022 is incomplete pending reclassification of documents from group B01D 61/002. Groups B01D 61/002 and B01D 61/0022 should be considered in order to perform a complete search.</p>
M	B01D 61/0023	<ul style="list-style-type: none"> • {Accessories; Auxiliary operations} <p><u>WARNING</u> Group B01D 61/0023 is incomplete pending reclassification of documents from group B01D 61/002. Groups B01D 61/002 and B01D 61/0023 should be considered in order to perform a complete search.</p>
M	B01D 61/0024	<ul style="list-style-type: none"> • {Controlling or regulating} <p><u>WARNING</u> Group B01D 61/0024 is incomplete pending reclassification of documents from group B01D 61/002. Groups B01D 61/002 and B01D 61/0024 should be considered in order to perform a complete search.</p>
U	B01D 61/02	<ul style="list-style-type: none"> • Reverse osmosis; Hyperfiltration {; Nanofiltration}
U	B01D 61/025	<ul style="list-style-type: none"> • {Reverse osmosis; Hyperfiltration}
M	B01D 61/026	<ul style="list-style-type: none"> • • {comprising multiple reverse osmosis steps} <p><u>WARNING</u> Group B01D 61/026 is impacted by reclassification into groups B01D 61/0271 and B01D 61/029. Groups B01D 61/026, B01D 61/0271 and B01D 61/029 should be considered in order to perform a complete search.</p>
U	B01D 61/027	<ul style="list-style-type: none"> • {Nanofiltration}
M	B01D 61/0271	<ul style="list-style-type: none"> • • {comprising multiple nanofiltration steps} <p><u>WARNING</u> Group B01D 61/0271 is incomplete pending reclassification of documents from group B01D 61/026. Groups B01D 61/026 and B01D 61/0271 should be considered in order to perform a complete search.</p>
M	B01D 61/029	<ul style="list-style-type: none"> • {Multistep processes comprising different kinds of membrane processes selected from reverse osmosis, hyperfiltration or nanofiltration} <p><u>WARNING</u> Group B01D 61/029 is incomplete pending reclassification of documents from group B01D 61/026. Groups B01D 61/026 and B01D 61/029 should be considered in order to perform a complete search.</p>

M	B01D 61/08	<ul style="list-style-type: none"> • Apparatus therefor <p><u>WARNING</u> Group B01D 61/08 is impacted by reclassification into group B01D 61/081. Groups B01D 61/08 and B01D 61/081 should be considered in order to perform a complete search.</p>
M	B01D 61/081	<ul style="list-style-type: none"> • • {used at home, e.g. kitchen} <p><u>WARNING</u> Group B01D 61/081 is incomplete pending reclassification of documents from group B01D 61/08. Groups B01D 61/08 and B01D 61/081 should be considered in order to perform a complete search.</p>
U	B01D 61/14	<ul style="list-style-type: none"> • Ultrafiltration; Microfiltration
U	B01D 61/145	<ul style="list-style-type: none"> • • {Ultrafiltration}
M	B01D 61/146	<ul style="list-style-type: none"> • • • {comprising multiple ultrafiltration steps} <p><u>WARNING</u> Group B01D 61/146 is impacted by reclassification into groups B01D 61/1471 and B01D 61/149. Groups B01D 61/146, B01D 61/1471 and B01D 61/149 should be considered in order to perform a complete search.</p>
U	B01D 61/147	<ul style="list-style-type: none"> • • {Microfiltration}
M	B01D 61/1471	<ul style="list-style-type: none"> • • • {comprising multiple microfiltration steps} <p><u>WARNING</u> Group B01D 61/1471 is incomplete pending reclassification of documents from group B01D 61/146. Groups B01D 61/146 and B01D 61/1471 should be considered in order to perform a complete search.</p>
M	B01D 61/149	<ul style="list-style-type: none"> • • {Multistep processes comprising different kinds of membrane processes selected from ultrafiltration or microfiltration} <p><u>WARNING</u> Group B01D 61/149 is incomplete pending reclassification of documents from group B01D 61/146. Groups B01D 61/146 and B01D 61/149 should be considered in order to perform a complete search.</p>
M	B01D 61/24	<ul style="list-style-type: none"> • Dialysis {; Membrane extraction} <p><u>WARNING</u> Group B01D 61/24 is impacted by reclassification into groups B01D 61/244 and B01D 61/2461. Groups B01D 61/24, B01D 61/244 and B01D 61/2461 should be considered in order to perform a complete search.</p>
M	B01D 61/243	<ul style="list-style-type: none"> • • {Dialysis} <p><u>WARNING</u> Group B01D 61/243 is impacted by reclassification into group B01D 61/244. Groups B01D 61/243 and B01D 61/244 should be considered in order to perform a complete search.</p>

M	B01D 61/244	<ul style="list-style-type: none"> • {comprising multiple dialysis steps} <p><u>WARNING</u> Group B01D 61/244 is incomplete pending reclassification of documents from groups B01D 61/24 and B01D 61/243. Groups B01D 61/24, B01D 61/243 and B01D 61/244 should be considered in order to perform a complete search.</p>
M	B01D 61/246	<ul style="list-style-type: none"> • {Membrane extraction} <p><u>WARNING</u> Group B01D 61/246 is impacted by reclassification into group B01D 61/2461. Groups B01D 61/246 and B01D 61/2461 should be considered in order to perform a complete search.</p>
M	B01D 61/2461	<ul style="list-style-type: none"> • {comprising multiple membrane extraction steps} <p><u>WARNING</u> Group B01D 61/2461 is incomplete pending reclassification of documents from groups B01D 61/24 and B01D 61/246. Groups B01D 61/24, B01D 61/246 and B01D 61/2461 should be considered in order to perform a complete search.</p>
M	B01D 61/36	<ul style="list-style-type: none"> • Pervaporation; Membrane distillation; Liquid permeation <p><u>WARNING</u> Group B01D 61/36 is impacted by reclassification into groups B01D 61/363, B01D 61/3631, B01D 61/365 and B01D 61/3651. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 61/362	<ul style="list-style-type: none"> • {Pervaporation} <p><u>WARNING</u> Group B01D 61/362 is impacted by reclassification into group B01D 61/3621. Groups B01D 61/362 and B01D 61/3621 should be considered in order to perform a complete search.</p>
M	B01D 61/3621	<ul style="list-style-type: none"> • {comprising multiple pervaporation steps} <p><u>WARNING</u> Group B01D 61/3621 is incomplete pending reclassification of documents from group B01D 61/362. Groups B01D 61/362 and B01D 61/3621 should be considered in order to perform a complete search.</p>
M	B01D 61/363	<ul style="list-style-type: none"> • {Vapour permeation} <p><u>WARNING</u> Groups B01D 61/363 and B01D 61/3631 are incomplete pending reclassification of documents from group B01D 61/36. Groups B01D 61/36, B01D 61/363 and B01D 61/3631 should be considered in order to perform a complete search.</p>
M	B01D 61/364	<ul style="list-style-type: none"> • {Membrane distillation} <p><u>WARNING</u> Group B01D 61/364 is impacted by reclassification into group B01D 61/3641. Groups B01D 61/364 and B01D 61/3641 should be considered in order to perform a complete search.</p>

M	B01D 61/3641	<ul style="list-style-type: none"> • • {comprising multiple membrane distillation steps} <p><u>WARNING</u> Group B01D 61/3641 is incomplete pending reclassification of documents from group B01D 61/364. Groups B01D 61/364 and B01D 61/3641 should be considered in order to perform a complete search.</p>
M	B01D 61/365	<ul style="list-style-type: none"> • • {Osmotic distillation or osmotic evaporation} <p><u>WARNING</u> Groups B01D 61/365 and B01D 61/3651 are incomplete pending reclassification of documents from group B01D 61/36. Groups B01D 61/36, B01D 61/365 and B01D 61/3651 should be considered in order to perform a complete search.</p>
M	B01D 61/42	<ul style="list-style-type: none"> • Electro dialysis; Electro-osmosis {; Electro-ultrafiltration; Membrane capacitive deionization} <p><u>WARNING</u> Group B01D 61/42 is impacted by reclassification into groups B01D 61/423, B01D 61/4251, B01D 61/4271, B01D 61/428 and B01D 61/4281. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 61/422	<ul style="list-style-type: none"> • • {Electrodialysis} <p><u>WARNING</u> Group B01D 61/422 is impacted by reclassification into group B01D 61/423. Groups B01D 61/422 and B01D 61/423 should be considered in order to perform a complete search.</p>
M	B01D 61/423	<ul style="list-style-type: none"> • • {comprising multiple electrodialysis steps} <p><u>WARNING</u> Group B01D 61/423 is incomplete pending reclassification of documents from groups B01D 61/42 and B01D 61/422. Groups B01D 61/42, B01D 61/422 and B01D 61/423 should be considered in order to perform a complete search.</p>
M	B01D 61/425	<ul style="list-style-type: none"> • • {Electro-ultrafiltration} <p><u>WARNING</u> Group B01D 61/425 is impacted by reclassification into group B01D 61/4251. Groups B01D 61/425 and B01D 61/4251 should be considered in order to perform a complete search.</p>
M	B01D 61/4251	<ul style="list-style-type: none"> • • {comprising multiple electro-ultrafiltration steps} <p><u>WARNING</u> Group B01D 61/4251 is incomplete pending reclassification of documents from groups B01D 61/42 and B01D 61/425. Groups B01D 61/42, B01D 61/425 and B01D 61/4251 should be considered in order to perform a complete search.</p>
M	B01D 61/427	<ul style="list-style-type: none"> • • {Electro-osmosis} <p><u>WARNING</u> Group B01D 61/427 is impacted by reclassification into group B01D 61/4271. Groups B01D 61/427 and B01D 61/4271 should be considered in order to perform a complete search.</p>

M	B01D 61/4271	<ul style="list-style-type: none"> • • • {comprising multiple electro-osmosis steps} <p><u>WARNING</u> Group B01D 61/4271 is incomplete pending reclassification of documents from groups B01D 61/42 and B01D 61/427. Groups B01D 61/42, B01D 61/427 and B01D 61/4271 should be considered in order to perform a complete search.</p>
M	B01D 61/428	<ul style="list-style-type: none"> • • {Membrane capacitive deionization} <p><u>WARNING</u> Groups B01D 61/428 and B01D 61/4281 are incomplete pending reclassification of documents from group B01D 61/42. Groups B01D 61/42, B01D 61/428 and B01D 61/4281 should be considered in order to perform a complete search.</p>
U	B01D 61/44	<ul style="list-style-type: none"> • • Ion-selective electrodialysis
M	B01D 61/46	<ul style="list-style-type: none"> • • • Apparatus therefor <p><u>WARNING</u> Group B01D 61/46 is impacted by reclassification into groups B01D 61/461, B01D 61/462, B01D 61/463, B01D 61/464, B01D 61/465, B01D 61/466, B01D 61/467 and B01D 61/468. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 61/461	<ul style="list-style-type: none"> • • • • {comprising only a single cell, only one anion or cation exchange membrane or one pair of anion and cation membranes} <p><u>WARNING</u> Group B01D 61/461 is incomplete pending reclassification of documents from group B01D 61/46. Groups B01D 61/46 and B01D 61/461 should be considered in order to perform a complete search.</p>
M	B01D 61/462	<ul style="list-style-type: none"> • • • • {comprising the membrane sequence AA, where A is an anion exchange membrane} <p><u>WARNING</u> Group B01D 61/462 is incomplete pending reclassification of documents from group B01D 61/46. Groups B01D 61/46 and B01D 61/462 should be considered in order to perform a complete search.</p>
M	B01D 61/463	<ul style="list-style-type: none"> • • • • {comprising the membrane sequence AC or CA, where C is a cation exchange membrane} <p><u>WARNING</u> Group B01D 61/463 is incomplete pending reclassification of documents from group B01D 61/46. Groups B01D 61/46 and B01D 61/463 should be considered in order to perform a complete search.</p>
M	B01D 61/464	<ul style="list-style-type: none"> • • • • {comprising the membrane sequence CC} <p><u>WARNING</u> Group B01D 61/464 is incomplete pending reclassification of documents from group B01D 61/46. Groups B01D 61/46 and B01D 61/464 should be considered in order to perform a complete search.</p>

M	B01D 61/465	<ul style="list-style-type: none"> • • • {comprising the membrane sequence AB or BA, where B is a bipolar membrane} <p><u>WARNING</u> Group B01D 61/465 is incomplete pending reclassification of documents from group B01D 61/46. Groups B01D 61/46 and B01D 61/465 should be considered in order to perform a complete search.</p>
M	B01D 61/466	<ul style="list-style-type: none"> • • • {comprising the membrane sequence BC or CB} <p><u>WARNING</u> Group B01D 61/466 is incomplete pending reclassification of documents from group B01D 61/46. Groups B01D 61/46 and B01D 61/466 should be considered in order to perform a complete search.</p>
M	B01D 61/467	<ul style="list-style-type: none"> • • • {comprising the membrane sequence BB} <p><u>WARNING</u> Group B01D 61/467 is incomplete pending reclassification of documents from group B01D 61/46. Groups B01D 61/46 and B01D 61/467 should be considered in order to perform a complete search.</p>
M	B01D 61/468	<ul style="list-style-type: none"> • • • {comprising more than two electrodes} <p><u>WARNING</u> Group B01D 61/468 is incomplete pending reclassification of documents from group B01D 61/46. Groups B01D 61/46 and B01D 61/468 should be considered in order to perform a complete search.</p>
U	B01D 63/00	<p>Apparatus in general for separation processes using semi-permeable membranes</p> <p><u>NOTES</u></p> <p>1. {When classifying in this group, the indexing codes of the following groups must be added if applicable:</p> <ul style="list-style-type: none"> • B01D 2313/00 for details related to membrane modules and apparatus; • B01D 2315/00 for details related to the membrane module operation; • B01D 2317/00 for details related to the module arrangement within a plant or an apparatus; • B01D 2319/00 for details related to the membrane assembly within one housing. <p>}</p> <p>2. {Attention is drawn to the Note following B01D 59/50, which indicates the last place rule is not applied in B01D 63/00.}</p>
M	B01D 63/02	<ul style="list-style-type: none"> • Hollow fibre modules <p><u>WARNING</u> Group B01D 63/02 is impacted by reclassification into groups B01D 63/031, B01D 63/032, B01D 63/033 and B01D 63/034. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 63/021	<ul style="list-style-type: none"> • {Manufacturing thereof} <p><u>WARNING</u> Group B01D 63/021 is impacted by reclassification into groups B01D 63/0231, B01D 63/0232 and B01D 63/0233.</p>

All groups listed in this Warning should be considered in order to perform a complete search.

M B01D 63/022

- • • {Encapsulating hollow fibres}

WARNING

Group B01D 63/022 is impacted by reclassification into groups B01D 63/0221, B01D 63/0222, B01D 63/0223, B01D 63/0224 and B01D 63/0225.

All groups listed in this Warning should be considered in order to perform a complete search.

M B01D 63/0221

- • • {using a mould}

WARNING

Group B01D 63/0221 is incomplete pending reclassification of documents from group B01D 63/022.

Groups B01D 63/022 and B01D 63/0221 should be considered in order to perform a complete search.

M B01D 63/0222

- • • {using centrifugal forces}

WARNING

Group B01D 63/0222 is incomplete pending reclassification of documents from group B01D 63/022.

Groups B01D 63/022 and B01D 63/0222 should be considered in order to perform a complete search.

M B01D 63/0223

- • • {by fixing the hollow fibres prior to encapsulation}

WARNING

Group B01D 63/0223 is incomplete pending reclassification of documents from group B01D 63/022.

Groups B01D 63/022 and B01D 63/0223 should be considered in order to perform a complete search.

M B01D 63/0224

- • • {Opening the fibre ends after encapsulation}

WARNING

Group B01D 63/0224 is incomplete pending reclassification of documents from group B01D 63/022.

Groups B01D 63/022 and B01D 63/0224 should be considered in order to perform a complete search.

M B01D 63/0225

- • • {Multiple encapsulation layers}

WARNING

Group B01D 63/0225 is incomplete pending reclassification of documents from group B01D 63/022.

Groups B01D 63/022 and B01D 63/0225 should be considered in order to perform a complete search.

M B01D 63/0231

- • • {using supporting structures, e.g. filaments for weaving mats}

WARNING

Group B01D 63/0231 is incomplete pending reclassification of documents from group B01D 63/021.

Groups B01D 63/021 and B01D 63/0231 should be considered in order to perform a complete search.

M	B01D 63/0232	<ul style="list-style-type: none"> • • {using hollow fibers mats as precursor, e.g. wound or pleated mats} <p><u>WARNING</u> Group B01D 63/0232 is incomplete pending reclassification of documents from group B01D 63/021. Groups B01D 63/021 and B01D 63/0232 should be considered in order to perform a complete search.</p>
M	B01D 63/0233	<ul style="list-style-type: none"> • • {forming the bundle} <p><u>WARNING</u> Group B01D 63/0233 is incomplete pending reclassification of documents from group B01D 63/021. Groups B01D 63/021 and B01D 63/0233 should be considered in order to perform a complete search.</p>
M	B01D 63/024	<ul style="list-style-type: none"> • • {with a single potted end} <p><u>WARNING</u> Group B01D 63/024 is impacted by reclassification into group B01D 63/0241. Groups B01D 63/024 and B01D 63/0241 should be considered in order to perform a complete search.</p>
M	B01D 63/0241	<ul style="list-style-type: none"> • • {being U-shaped} <p><u>WARNING</u> Group B01D 63/0241 is incomplete pending reclassification of documents from group B01D 63/024. Groups B01D 63/024 and B01D 63/0241 should be considered in order to perform a complete search.</p>
M	B01D 63/031	<ul style="list-style-type: none"> • • {Two or more types of hollow fibres within one bundle or within one potting or tube-sheet} <p><u>WARNING</u> Group B01D 63/031 is incomplete pending reclassification of documents from group B01D 63/02. Groups B01D 63/02 and B01D 63/031 should be considered in order to perform a complete search.</p>
M	B01D 63/032	<ul style="list-style-type: none"> • • {More than two tube sheets for one bundle} <p><u>WARNING</u> Group B01D 63/032 is incomplete pending reclassification of documents from group B01D 63/02. Groups B01D 63/02 and B01D 63/032 should be considered in order to perform a complete search.</p>
M	B01D 63/033	<ul style="list-style-type: none"> • • {Specific distribution of fibres within one potting or tube-sheet} <p><u>WARNING</u> Group B01D 63/033 is incomplete pending reclassification of documents from group B01D 63/02. Groups B01D 63/02 and B01D 63/033 should be considered in order to perform a complete search.</p>
M	B01D 63/034	<ul style="list-style-type: none"> • • {Lumen open in more than two directions} <p><u>WARNING</u> Group B01D 63/034 is incomplete pending reclassification of documents from group B01D 63/02.</p>

~~Groups B01D 63/02 and B01D 63/034 should be considered in order to perform a complete search.~~

M B01D 63/06

- Tubular membrane modules

WARNING

~~Group B01D 63/06 is impacted by reclassification into group B01D 63/069. Groups B01D 63/06 and B01D 63/069 should be considered in order to perform a complete search.~~

M B01D 63/069

- {comprising a bundle of tubular membranes}

WARNING

~~Group B01D 63/069 is incomplete pending reclassification of documents from group B01D 63/06. Groups B01D 63/06 and B01D 63/069 should be considered in order to perform a complete search.~~

M B01D 63/08

- Flat membrane modules

WARNING

~~Group B01D 63/08 is impacted by reclassification into group B01D 63/089. Groups B01D 63/08 and B01D 63/089 should be considered in order to perform a complete search.~~

M B01D 63/082

- {comprising a stack of flat membranes}

WARNING

~~Group B01D 63/082 is impacted by reclassification into groups B01D 63/0821 and B01D 63/0822. Groups B01D 63/082, B01D 63/0821 and B01D 63/0822 should be considered in order to perform a complete search.~~

M B01D 63/0821

- {Membrane plate arrangements for submerged operation}

WARNING

~~Group B01D 63/0821 is incomplete pending reclassification of documents from group B01D 63/082. Groups B01D 63/082 and B01D 63/0821 should be considered in order to perform a complete search.~~

M B01D 63/0822

- {Plate-and-frame devices}

WARNING

~~Group B01D 63/0822 is incomplete pending reclassification of documents from group B01D 63/082. Groups B01D 63/082 and B01D 63/0822 should be considered in order to perform a complete search.~~

M B01D 63/089

- {Modules where the membrane is in the form of a bag, membrane cushion or pad}

WARNING

~~Group B01D 63/089 is incomplete pending reclassification of documents from group B01D 63/08. Groups B01D 63/08 and B01D 63/089 should be considered in order to perform a complete search.~~

M B01D 63/10

- Spiral-wound membrane modules

WARNING

~~Group B01D 63/10 is impacted by reclassification into groups B01D 63/101 and B01D 63/107.~~

Groups B01D 63/10, B01D 63/101 and B01D 63/107 should be considered in order to perform a complete search.

M B01D 63/101

- {Spiral winding}

WARNING

Group B01D 63/101 is incomplete pending reclassification of documents from group B01D 63/10.
Groups B01D 63/10 and B01D 63/101 should be considered in order to perform a complete search.

M B01D 63/103

- {Details relating to membrane envelopes}

WARNING

Group B01D 63/103 is impacted by reclassification into group B01D 63/1031.
Groups B01D 63/103 and B01D 63/1031 should be considered in order to perform a complete search.

M B01D 63/1031

- • {Glue line or sealing patterns}

WARNING

Group B01D 63/1031 is incomplete pending reclassification of documents from group B01D 63/103.
Groups B01D 63/103 and B01D 63/1031 should be considered in order to perform a complete search.

M B01D 63/107

- {Specific properties of the central tube or the permeate channel}

WARNING

Group B01D 63/107 is incomplete pending reclassification of documents from group B01D 63/10.
Groups B01D 63/10 and B01D 63/107 should be considered in order to perform a complete search.

U B01D 65/00

Accessories or auxiliary operations, in general, for separation processes or apparatus using semi-permeable membranes

NOTE

{Attention is drawn to the Note following [B01D 59/50](#), which indicates the last place rule is not applied in [B01D 65/00](#).}

M B01D 65/10

- Testing of membranes or membrane apparatus; Detecting or repairing leaks

WARNING

Group B01D 65/10 is impacted by reclassification into group B01D 65/109.
Groups B01D 65/10 and B01D 65/109 should be considered in order to perform a complete search.

M B01D 65/109

- • {Testing of membrane fouling or clogging, e.g. amount or affinity}

WARNING

Group B01D 65/109 is incomplete pending reclassification of documents from group B01D 65/10.
Groups B01D 65/10 and B01D 65/109 should be considered in order to perform a complete search.

U B01D 67/00

Processes specially adapted for manufacturing semi-permeable membranes for separation processes or apparatus

NOTES

1. {When classifying in this group, the indexing codes of the following groups must be added if applicable:

		<ul style="list-style-type: none"> • B01D 2323/00 for details relating to membrane preparation.
		}
		2. {Attention is drawn to the Note following B01D 59/50 , which indicates the last place rule is not applied in B01D 67/00 .}
U	B01D 67/0002	• {Organic membrane manufacture}
M	B01D 67/0004	<ul style="list-style-type: none"> • {by agglomeration of particles} <p>WARNING Group B01D 67/0004 is impacted by reclassification into groups B01D 67/00041, B01D 67/00042, B01D 67/00043, B01D 67/00044, B01D 67/00045 and B01D 67/00046. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 67/00041	<ul style="list-style-type: none"> • • {by sintering} <p>WARNING Group B01D 67/00041 is incomplete pending reclassification of documents from group B01D 67/0004. Groups B01D 67/0004 and B01D 67/00041 should be considered in order to perform a complete search.</p>
M	B01D 67/00042	<ul style="list-style-type: none"> • • {by deposition of fibres, nanofibres or nanofibrils} <p>WARNING Group B01D 67/00042 is incomplete pending reclassification of documents from group B01D 67/0004. Groups B01D 67/0004 and B01D 67/00042 should be considered in order to perform a complete search.</p>
M	B01D 67/00043	<ul style="list-style-type: none"> • • {by agglomeration of nanoparticles} <p>WARNING Group B01D 67/00043 is incomplete pending reclassification of documents from group B01D 67/0004. Groups B01D 67/0004 and B01D 67/00043 should be considered in order to perform a complete search.</p>
M	B01D 67/00044	<ul style="list-style-type: none"> • • {by plasma spraying} <p>WARNING Group B01D 67/00044 is incomplete pending reclassification of documents from group B01D 67/0004. Groups B01D 67/0004 and B01D 67/00044 should be considered in order to perform a complete search.</p>
M	B01D 67/00045	<ul style="list-style-type: none"> • • {by additive layer techniques, e.g. selective laser sintering [SLS], selective laser melting [SLM] or 3D printing} <p>WARNING Group B01D 67/00045 is incomplete pending reclassification of documents from group B01D 67/0004. Groups B01D 67/0004 and B01D 67/00045 should be considered in order to perform a complete search.</p>
M	B01D 67/00046	<ul style="list-style-type: none"> • • {by deposition by filtration through a support or base layer} <p>WARNING Group B01D 67/00046 is incomplete pending reclassification of documents from group B01D 67/0004.</p>

Groups B01D 67/0004 and B01D 67/00046 should be considered in order to perform a complete search.

- M B01D 67/0009 • {by phase separation, sol-gel transition, evaporation or solvent quenching}

WARNING

Group B01D 67/0009 is impacted by reclassification into group B01D 67/00091.

Groups B01D 67/0009 and B01D 67/00091 should be considered in order to perform a complete search.

- M B01D 67/00091 • • {by evaporation}

WARNING

Group B01D 67/00091 is incomplete pending reclassification of documents from group B01D 67/0009.

Groups B01D 67/0009 and B01D 67/00091 should be considered in order to perform a complete search.

- M B01D 67/0011 • • {Casting solutions therefor}

WARNING

Group B01D 67/0011 is impacted by reclassification into groups B01D 67/00111 and B01D 67/00113.

Groups B01D 67/0011, B01D 67/00111 and B01D 67/00113 should be considered in order to perform a complete search.

- M B01D 67/00111 • • • {Polymer pretreatment in the casting solutions}

WARNING

Group B01D 67/00111 is incomplete pending reclassification of documents from group B01D 67/0011.

Groups B01D 67/0011 and B01D 67/00111 should be considered in order to perform a complete search.

- M B01D 67/00113 • • • {Pretreatment of the casting solutions, e.g. thermal treatment or ageing}

WARNING

Group B01D 67/00113 is incomplete pending reclassification of documents from group B01D 67/0011.

Groups B01D 67/0011 and B01D 67/00113 should be considered in order to perform a complete search.

- M B01D 67/0013 • • {Casting processes}

WARNING

Group B01D 67/0013 is impacted by reclassification into group B01D 67/00135.

Groups B01D 67/0013 and B01D 67/00135 should be considered in order to perform a complete search.

- M B01D 67/00135 • • • {Air gap characteristics}

WARNING

Group B01D 67/00135 is incomplete pending reclassification of documents from group B01D 67/0013.

Groups B01D 67/0013 and B01D 67/00135 should be considered in order to perform a complete search.

M	B01D 67/0016	<ul style="list-style-type: none"> • • • {Coagulation} <p><u>WARNING</u> Group B01D 67/0016 is impacted by reclassification into group B01D 67/00165. Groups B01D 67/0016 and B01D 67/00165 should be considered in order to perform a complete search.</p>
M	B01D 67/00165	<ul style="list-style-type: none"> • • • {Composition of the coagulation baths} <p><u>WARNING</u> Group B01D 67/00165 is incomplete pending reclassification of documents from group B01D 67/0016. Groups B01D 67/0016 and B01D 67/00165 should be considered in order to perform a complete search.</p>
U	B01D 67/0023	<ul style="list-style-type: none"> • • {by inducing porosity into non porous precursor membranes}
M	B01D 67/003	<ul style="list-style-type: none"> • • • {by selective elimination of components, e.g. by leaching} <p><u>WARNING</u> Group B01D 67/003 is impacted by reclassification into group B01D 67/0031. Groups B01D 67/003 and B01D 67/0031 should be considered in order to perform a complete search.</p>
M	B01D 67/0031	<ul style="list-style-type: none"> • • • {by elimination of at least one of the blocks of a block copolymer} <p><u>WARNING</u> Group B01D 67/0031 is incomplete pending reclassification of documents from group B01D 67/003. Groups B01D 67/003 and B01D 67/0031 should be considered in order to perform a complete search.</p>
M	B01D 67/0039	<ul style="list-style-type: none"> • {Inorganic membrane manufacture} <p><u>WARNING</u> Group B01D 67/0039 is impacted by reclassification into group B01D 67/0049. Groups B01D 67/0039 and B01D 67/0049 should be considered in order to perform a complete search.</p>
M	B01D 67/0041	<ul style="list-style-type: none"> • • {by agglomeration of particles in the dry state} <p><u>WARNING</u> Group B01D 67/0041 is impacted by reclassification into groups B01D 67/00411, B01D 67/00412, B01D 67/00413, B01D 67/00414, B01D 67/00415 and B01D 67/00416. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 67/00411	<ul style="list-style-type: none"> • • • {by sintering} <p><u>WARNING</u> Group B01D 67/00411 is incomplete pending reclassification of documents from group B01D 67/0041. Groups B01D 67/0041 and B01D 67/00411 should be considered in order to perform a complete search.</p>
M	B01D 67/00412	<ul style="list-style-type: none"> • • • {by deposition of fibres, nanofibres or nanofibrils} <p><u>WARNING</u> Group B01D 67/00412 is incomplete pending reclassification of documents from group B01D 67/0041.</p>

		Groups B01D 67/0041 and B01D 67/00412 should be considered in order to perform a complete search.
M	B01D 67/00413	<ul style="list-style-type: none"> • {by agglomeration of nanoparticles} <p>WARNING Group B01D 67/00413 is incomplete pending reclassification of documents from group B01D 67/0041. Groups B01D 67/0041 and B01D 67/00413 should be considered in order to perform a complete search.</p>
M	B01D 67/00414	<ul style="list-style-type: none"> • {by plasma spraying} <p>WARNING Group B01D 67/00414 is incomplete pending reclassification of documents from group B01D 67/0041. Groups B01D 67/0041 and B01D 67/00414 should be considered in order to perform a complete search.</p>
M	B01D 67/00415	<ul style="list-style-type: none"> • {by additive layer techniques, e.g. selective laser sintering [SLS], selective laser melting [SLM] or 3D printing} <p>WARNING Group B01D 67/00415 is incomplete pending reclassification of documents from group B01D 67/0041. Groups B01D 67/0041 and B01D 67/00415 should be considered in order to perform a complete search.</p>
M	B01D 67/00416	<ul style="list-style-type: none"> • {by deposition by filtration through a support or base layer} <p>WARNING Group B01D 67/00416 is incomplete pending reclassification of documents from group B01D 67/0041. Groups B01D 67/0041 and B01D 67/00416 should be considered in order to perform a complete search.</p>
M	B01D 67/0049	<ul style="list-style-type: none"> • {by evaporation} <p>WARNING Group B01D 67/0049 is incomplete pending reclassification of documents from group B01D 67/0039. Groups B01D 67/0039 and B01D 67/0049 should be considered in order to perform a complete search.</p>
M	B01D 67/0079	<ul style="list-style-type: none"> • {Manufacture of membranes comprising organic and inorganic components} <p>WARNING Group B01D 67/0079 is impacted by reclassification into groups B01D 67/00791 and B01D 67/00793. Groups B01D 67/0079, B01D 67/00791 and B01D 67/00793 should be considered in order to perform a complete search.</p>
M	B01D 67/00791	<ul style="list-style-type: none"> • {Different components in separate layers} <p>WARNING Group B01D 67/00791 is incomplete pending reclassification of documents from group B01D 67/0079. Groups B01D 67/0079 and B01D 67/00791 should be considered in order to perform a complete search.</p>

M	B01D 67/00793	<ul style="list-style-type: none"> • {Dispersing a component, e.g. as particles or powder, in another component} <p>WARNING Group B01D 67/00793 is incomplete pending reclassification of documents from group B01D 67/0079. Groups B01D 67/0079 and B01D 67/00793 should be considered in order to perform a complete search.</p>
U	B01D 67/0081	<ul style="list-style-type: none"> • {After-treatment of organic or inorganic membranes}
M	B01D 67/0093	<ul style="list-style-type: none"> • {Chemical modification} <p>WARNING Group B01D 67/0093 is impacted by reclassification into groups B01D 67/00931 and B01D 67/00933. Groups B01D 67/0093, B01D 67/00931 and B01D 67/00933 should be considered in order to perform a complete search.</p>
M	B01D 67/00931	<ul style="list-style-type: none"> • • {by introduction of specific groups after membrane formation, e.g. by grafting} <p>WARNING Group B01D 67/00931 is incomplete pending reclassification of documents from group B01D 67/0093. Groups B01D 67/0093 and B01D 67/00931 should be considered in order to perform a complete search.</p>
M	B01D 67/00933	<ul style="list-style-type: none"> • • {by addition of a layer chemically bonded to the membrane} <p>WARNING Group B01D 67/00933 is incomplete pending reclassification of documents from group B01D 67/0093. Groups B01D 67/0093 and B01D 67/00933 should be considered in order to perform a complete search.</p>
U	B01D 69/00	<p>Semi-permeable membranes for separation processes or apparatus characterised by their form, structure or properties; Manufacturing processes specially adapted therefor</p> <p>NOTES</p> <ol style="list-style-type: none"> 1. In this group, the following term is used with the meaning indicated: <ul style="list-style-type: none"> • "properties" covers those of a mechanical, physical or chemical nature. 2. { Manufacturing processes, if considered of interest, are also classified in group B01D 67/00. } 3. {Attention is drawn to the Note following B01D 59/50, which indicates the last place rule is not applied in B01D 69/00. }
M	B01D 69/06	<ul style="list-style-type: none"> • Flat membranes <p>WARNING Group B01D 69/06 is impacted by reclassification into group B01D 69/061. Groups B01D 69/06 and B01D 69/061 should be considered in order to perform a complete search.</p>
M	B01D 69/061	<ul style="list-style-type: none"> • {Membrane bags or membrane cushions} <p>WARNING Group B01D 69/061 is incomplete pending reclassification of documents from group B01D 69/06. Groups B01D 69/06 and B01D 69/061 should be considered in order to perform a complete search.</p>

U	B01D 69/08	<ul style="list-style-type: none"> • Hollow fibre membranes (manufacture of hollow fibres D01D 5/24, D01F 1/08)
M	B01D 69/087	<ul style="list-style-type: none"> • {Details relating to the spinning process} <p><u>WARNING</u> Group B01D 69/087 is impacted by reclassification into group B01D 69/0871. Groups B01D 69/087 and B01D 69/0871 should be considered in order to perform a complete search.</p>
M	B01D 69/0871	<ul style="list-style-type: none"> • • {Fibre guidance after spinning through the manufacturing apparatus} <p><u>WARNING</u> Group B01D 69/0871 is incomplete pending reclassification of documents from group B01D 69/087. Groups B01D 69/087 and B01D 69/0871 should be considered in order to perform a complete search.</p>
M	B01D 69/10	<ul style="list-style-type: none"> • Supported membranes; Membrane supports <p><u>WARNING</u> Group B01D 69/10 is impacted by reclassification into groups B01D 69/106, B01D 69/107, B01D 69/1071 and B01D 69/108. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 69/106	<ul style="list-style-type: none"> • {Membranes in the pores of a support, e.g. polymerized in the pores or voids} <p><u>WARNING</u> Group B01D 69/106 is incomplete pending reclassification of documents from group B01D 69/10. Groups B01D 69/10 and B01D 69/106 should be considered in order to perform a complete search.</p>
M	B01D 69/107	<ul style="list-style-type: none"> • {Organic support material} <p><u>WARNING</u> Groups B01D 69/107 and B01D 69/1071 are incomplete pending reclassification of documents from group B01D 69/10. Groups B01D 69/10, B01D 69/107 and B01D 69/1071 should be considered in order to perform a complete search.</p>
M	B01D 69/108	<ul style="list-style-type: none"> • {Inorganic support material} <p><u>WARNING</u> Group B01D 69/108 is incomplete pending reclassification of documents from group B01D 69/10. Groups B01D 69/10 and B01D 69/108 should be considered in order to perform a complete search.</p>
M	B01D 69/12	<ul style="list-style-type: none"> • Composite membranes; Ultra-thin membranes <p><u>WARNING</u> Group B01D 69/12 is impacted by reclassification into groups B01D 69/1212, B01D 69/1213, B01D 69/1214, B01D 69/1216 and B01D 69/1218. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 69/1212	<ul style="list-style-type: none"> • {Coextruded layers} <p><u>WARNING</u> Group B01D 69/1212 is incomplete pending reclassification of documents from group B01D 69/12.</p>

		Groups B01D 69/12 and B01D 69/1212 should be considered in order to perform a complete search.
M	B01D 69/1213	<ul style="list-style-type: none"> • {Laminated layers} <p><u>WARNING</u> Group B01D 69/1213 is incomplete pending reclassification of documents from group B01D 69/12. Groups B01D 69/12 and B01D 69/1213 should be considered in order to perform a complete search.</p>
M	B01D 69/1214	<ul style="list-style-type: none"> • {Chemically bonded layers, e.g. cross-linking} <p><u>WARNING</u> Group B01D 69/1214 is incomplete pending reclassification of documents from group B01D 69/12. Groups B01D 69/12 and B01D 69/1214 should be considered in order to perform a complete search.</p>
M	B01D 69/1216	<ul style="list-style-type: none"> • {Three or more layers} <p><u>WARNING</u> Group B01D 69/1216 is incomplete pending reclassification of documents from group B01D 69/12. Groups B01D 69/12 and B01D 69/1216 should be considered in order to perform a complete search.</p>
M	B01D 69/1218	<ul style="list-style-type: none"> • {Layers having the same chemical composition, but different properties, e.g. pore size, molecular weight or porosity} <p><u>WARNING</u> Group B01D 69/1218 is incomplete pending reclassification of documents from group B01D 69/12. Groups B01D 69/12 and B01D 69/1218 should be considered in order to perform a complete search.</p>
M	B01D 69/125	<ul style="list-style-type: none"> • {In situ manufacturing by polymerisation, polycondensation, cross-linking or chemical reaction} <p><u>WARNING</u> Group B01D 69/125 is impacted by reclassification into group B01D 69/1251. Groups B01D 69/125 and B01D 69/1251 should be considered in order to perform a complete search.</p>
M	B01D 69/1251	<ul style="list-style-type: none"> • • {by interfacial polymerisation} <p><u>WARNING</u> Group B01D 69/1251 is incomplete pending reclassification of documents from group B01D 69/125. Groups B01D 69/125 and B01D 69/1251 should be considered in order to perform a complete search.</p>
U	B01D 69/14	• Dynamic membranes
M	B01D 69/141	<ul style="list-style-type: none"> • {Heterogeneous membranes, e.g. containing dispersed material; Mixed matrix membranes} <p><u>WARNING</u> Group B01D 69/141 is impacted by reclassification into groups B01D 69/1411 and B01D 69/14111. Groups B01D 69/141, B01D 69/1411 and B01D 69/14111 should be considered in order to perform a complete search.</p>

M	B01D 69/1411	<ul style="list-style-type: none"> • • {containing dispersed material in a continuous matrix} <p><u>WARNING</u> Groups B01D 69/1411 and B01D 69/14111 are incomplete pending reclassification of documents from group B01D 69/141. Groups B01D 69/141, B01D 69/1411 and B01D 69/14111 should be considered in order to perform a complete search.</p>
U	B01D 71/00	<p>Semi-permeable membranes for separation processes or apparatus characterised by the material; Manufacturing processes specially adapted therefor</p> <p><u>NOTES</u></p> <p>1. In this group, if the material is a composition it is classified according to the constituent present in the highest proportion; see Note before group B01D 61/00. {This constituent is classified according to the last place rule.} If there is more than one constituent present in equal highest proportions, then each of these constituents is classified according to the last place rule.</p> <p>2. Manufacturing processes, if considered of interest, are also classified in group B01D 67/00.</p>
M	B01D 71/02	<ul style="list-style-type: none"> • Inorganic material <p><u>WARNING</u> Group B01D 71/02 is impacted by reclassification into groups B01D 71/0213, B01D 71/0215 and B01D 71/05. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 71/021	<ul style="list-style-type: none"> • • {Carbon} <p><u>WARNING</u> Group B01D 71/021 is impacted by reclassification into groups B01D 71/0211 and B01D 71/0212. Groups B01D 71/021, B01D 71/0211 and B01D 71/0212 should be considered in order to perform a complete search.</p>
M	B01D 71/0211	<ul style="list-style-type: none"> • • • {Graphene or derivatives thereof} <p><u>WARNING</u> Group B01D 71/0211 is incomplete pending reclassification of documents from group B01D 71/021. Groups B01D 71/021 and B01D 71/0211 should be considered in order to perform a complete search.</p>
M	B01D 71/0212	<ul style="list-style-type: none"> • • • {Carbon nanotubes} <p><u>WARNING</u> Group B01D 71/0212 is incomplete pending reclassification of documents from group B01D 71/021. Groups B01D 71/021 and B01D 71/0212 should be considered in order to perform a complete search.</p>
M	B01D 71/0213	<ul style="list-style-type: none"> • • {Silicon} <p><u>WARNING</u> Group B01D 71/0213 is incomplete pending reclassification of documents from group B01D 71/02. Groups B01D 71/02 and B01D 71/0213 should be considered in order to perform a complete search.</p>

M	B01D 71/0215	<ul style="list-style-type: none"> • {Silicon carbide; Silicon nitride; Silicon oxycarbide} <p><u>WARNING</u> Group B01D 71/0215 is incomplete pending reclassification of documents from group B01D 71/02. Groups B01D 71/02 and B01D 71/0215 should be considered in order to perform a complete search.</p>
M	B01D 71/022	<ul style="list-style-type: none"> • {Metals} <p><u>WARNING</u> Group B01D 71/022 is impacted by reclassification into groups B01D 71/0221, B01D 71/0223, B01D 71/02231, B01D 71/02232 and B01D 71/0227. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 71/0221	<ul style="list-style-type: none"> • • {Group 4 or 5 metals} <p><u>WARNING</u> Group B01D 71/0221 is incomplete pending reclassification of documents from group B01D 71/022. Groups B01D 71/022 and B01D 71/0221 should be considered in order to perform a complete search.</p>
M	B01D 71/0223	<ul style="list-style-type: none"> • • {Group 8, 9 or 10 metals} <p><u>WARNING</u> Groups B01D 71/0223 – B01D 71/02232 are incomplete pending reclassification of documents from group B01D 71/022. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 71/0227	<ul style="list-style-type: none"> • • {comprising an intermediate layer for avoiding intermetallic diffusion} <p><u>WARNING</u> Group B01D 71/0227 is incomplete pending reclassification of documents from group B01D 71/022. Groups B01D 71/022 and B01D 71/0227 should be considered in order to perform a complete search.</p>
M	B01D 71/024	<ul style="list-style-type: none"> • {Oxides} <p><u>WARNING</u> Group B01D 71/024 is impacted by reclassification into group B01D 71/0271. Groups B01D 71/024 and B01D 71/0271 should be considered in order to perform a complete search.</p>
M	B01D 71/0271	<ul style="list-style-type: none"> • • {Perovskites} <p><u>WARNING</u> Group B01D 71/0271 is incomplete pending reclassification of documents from group B01D 71/024. Groups B01D 71/024 and B01D 71/0271 should be considered in order to perform a complete search.</p>
M	B01D 71/028	<ul style="list-style-type: none"> • {Molecular sieves (carbon B01D 71/021)} <p><u>WARNING</u> Group B01D 71/028 is impacted by reclassification into group B01D 71/0281. Groups B01D 71/028 and B01D 71/0281 should be considered in order to perform a complete search.</p>

M	B01D 71/0281	<ul style="list-style-type: none"> • • • {Zeolites} <p><u>WARNING</u> Group B01D 71/0281 is incomplete pending reclassification of documents from group B01D 71/028.- Groups B01D 71/028 and B01D 71/0281 should be considered in order to perform a complete search.</p>
M	B01D 71/05	<ul style="list-style-type: none"> • • {Cermet materials} <p><u>WARNING</u> Group B01D 71/05 is incomplete pending reclassification of documents from group B01D 71/02.- Groups B01D 71/02 and B01D 71/05 should be considered in order to perform a complete search.</p>
U	B01D 71/06	<ul style="list-style-type: none"> • Organic material
M	B01D 71/26	<ul style="list-style-type: none"> • • Polyalkenes <p><u>WARNING</u> Group B01D 71/26 is impacted by reclassification into groups B01D 71/261 and B01D 71/262.- Groups B01D 71/26, B01D 71/261 and B01D 71/262 should be considered in order to perform a complete search.</p>
M	B01D 71/261	<ul style="list-style-type: none"> • • • {Polyethylene} <p><u>WARNING</u> Group B01D 71/261 is incomplete pending reclassification of documents from group B01D 71/26.- Groups B01D 71/26 and B01D 71/261 should be considered in order to perform a complete search.</p>
M	B01D 71/262	<ul style="list-style-type: none"> • • • {Polypropylene} <p><u>WARNING</u> Group B01D 71/262 is incomplete pending reclassification of documents from group B01D 71/26.- Groups B01D 71/26 and B01D 71/262 should be considered in order to perform a complete search.</p>
M	B01D 71/28	<ul style="list-style-type: none"> • • Polymers of vinyl aromatic compounds <p><u>WARNING</u> Group B01D 71/28 is impacted by reclassification into groups B01D 71/281, B01D 71/282 and B01D 71/283.- All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 71/281	<ul style="list-style-type: none"> • • • {Polystyrene} <p><u>WARNING</u> Group B01D 71/281 is incomplete pending reclassification of documents from group B01D 71/28.- Groups B01D 71/28 and B01D 71/281 should be considered in order to perform a complete search.</p>
M	B01D 71/282	<ul style="list-style-type: none"> • • • {Polyvinylphenol} <p><u>WARNING</u> Group B01D 71/282 is incomplete pending reclassification of documents from group B01D 71/28.-</p>

Groups B01D 71/28 and B01D 71/282 should be considered in order to perform a complete search.

- M B01D 71/283 • • • {Polyvinylpyridine}

WARNING

Group B01D 71/283 is incomplete pending reclassification of documents from group B01D 71/28.

Groups B01D 71/28 and B01D 71/283 should be considered in order to perform a complete search.

- M B01D 71/30 • • Polyalkenyl halides

WARNING

Group B01D 71/30 is impacted by reclassification into group B01D 71/301.

Groups B01D 71/30 and B01D 71/301 should be considered in order to perform a complete search.

- M B01D 71/301 • • • {Polyvinylchloride}

WARNING

Group B01D 71/301 is incomplete pending reclassification of documents from group B01D 71/30.

Groups B01D 71/30 and B01D 71/301 should be considered in order to perform a complete search.

- M B01D 71/38 • • Polyalkenylalcohols; Polyalkenylesters; Polyalkenylethers;
Polyalkenylaldehydes; Polyalkenylketones; Polyalkenylacetals;
Polyalkenylketals

WARNING

Group B01D 71/38 is impacted by reclassification into groups B01D 71/381, B01D 71/382 and B01D 71/383.

All groups listed in this Warning should be considered in order to perform a complete search.

- M B01D 71/381 • • • {Polyvinylalcohol}

WARNING

Group B01D 71/381 is incomplete pending reclassification of documents from group B01D 71/38.

Groups B01D 71/38 and B01D 71/381 should be considered in order to perform a complete search.

- M B01D 71/382 • • • {Polyvinylethers}

WARNING

Group B01D 71/382 is incomplete pending reclassification of documents from group B01D 71/38.

Groups B01D 71/38 and B01D 71/382 should be considered in order to perform a complete search.

- M B01D 71/383 • • • {Polyvinylacetates}

WARNING

Group B01D 71/383 is incomplete pending reclassification of documents from group B01D 71/38.

Groups B01D 71/38 and B01D 71/383 should be considered in order to perform a complete search.

- M B01D 71/40
- • Polymers of unsaturated acids or derivatives thereof, e.g. salts, amides, imides, nitriles, anhydrides, esters
- WARNING
Group B01D 71/40 is impacted by reclassification into groups B01D 71/401, B01D 71/4011, B01D 71/402, B01D 71/403 and B01D 71/404.
All groups listed in this Warning should be considered in order to perform a complete search.
- M B01D 71/401
- • {Polymers based on the polymerisation of acrylic acid, e.g. polyacrylate}
- WARNING
Groups B01D 71/401 and B01D 71/4011 are incomplete pending reclassification of documents from group B01D 71/40.
Groups B01D 71/40, B01D 71/401 and B01D 71/4011 should be considered in order to perform a complete search.
- M B01D 71/402
- • {Polymers based on the polymerisation of fumaric acid or derivatives thereof}
- WARNING
Group B01D 71/402 is incomplete pending reclassification of documents from group B01D 71/40.
Groups B01D 71/40 and B01D 71/402 should be considered in order to perform a complete search.
- M B01D 71/403
- • {Polymers based on the polymerisation of maleic acid or derivatives thereof}
- WARNING
Group B01D 71/403 is incomplete pending reclassification of documents from group B01D 71/40.
Groups B01D 71/40 and B01D 71/403 should be considered in order to perform a complete search.
- M B01D 71/404
- • {Polymers based on the polymerisation of crotonic acid}
- WARNING
Group B01D 71/404 is incomplete pending reclassification of documents from group B01D 71/40.
Groups B01D 71/40 and B01D 71/404 should be considered in order to perform a complete search.
- M B01D 71/42
- • Polymers of nitriles, e.g. polyacrylonitrile
- WARNING
Group B01D 71/42 is impacted by reclassification into group B01D 71/421.
Groups B01D 71/42 and B01D 71/421 should be considered in order to perform a complete search.
- M B01D 71/421
- • • {Polyacrylonitrile}
- WARNING
Group B01D 71/421 is incomplete pending reclassification of documents from group B01D 71/42.
Groups B01D 71/42 and B01D 71/421 should be considered in order to perform a complete search.
- M B01D 71/44
- Polymers obtained by reactions only involving carbon-to-carbon unsaturated bonds, not provided for in a single one of groups [B01D 71/26](#)-[B01D 71/42](#)
- WARNING
Group B01D 71/44 is impacted by reclassification into group B01D 71/441.

~~Groups B01D 71/44 and B01D 71/441 should be considered in order to perform a complete search.~~

M B01D 71/441

- • • {Polyvinylpyrrolidone}

WARNING

~~Group B01D 71/441 is incomplete pending reclassification of documents from group B01D 71/44.~~
~~Groups B01D 71/44 and B01D 71/441 should be considered in order to perform a complete search.~~

M B01D 71/48

- • • Polyesters

WARNING

~~Group B01D 71/48 is impacted by reclassification into group B01D 71/481.~~
~~Groups B01D 71/48 and B01D 71/481 should be considered in order to perform a complete search.~~

M B01D 71/481

- • • {Polyarylates}

WARNING

~~Group B01D 71/481 is incomplete pending reclassification of documents from group B01D 71/48.~~
~~Groups B01D 71/48 and B01D 71/481 should be considered in order to perform a complete search.~~

M B01D 71/52

- • • Polyethers

WARNING

~~Group B01D 71/52 is impacted by reclassification into groups B01D 71/521, B01D 71/5211, B01D 71/522, B01D 71/5221, B01D 71/5222 and B01D 71/5223.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M B01D 71/521

- • • {Aliphatic polyethers}

WARNING

~~Groups B01D 71/521 and B01D 71/5211 are incomplete pending reclassification of documents from group B01D 71/52.~~
~~Groups B01D 71/52, B01D 71/521 and B01D 71/5211 should be considered in order to perform a complete search.~~

M B01D 71/522

- • • {Aromatic polyethers}

WARNING

~~Groups B01D 71/522 – B01D 71/5223 are incomplete pending reclassification of documents from group B01D 71/52.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

U B01D 71/58

- • • Other polymers having nitrogen in the main chain, with or without oxygen or carbon only

M B01D 71/60

- • • Polyamines

WARNING

~~Group B01D 71/60 is impacted by reclassification into group B01D 71/601.~~
~~Groups B01D 71/60 and B01D 71/601 should be considered in order to perform a complete search.~~

M	B01D 71/601	<ul style="list-style-type: none"> • • • {Polyethylenimine} <p><u>WARNING</u> Group B01D 71/601 is incomplete pending reclassification of documents from group B01D 71/60. Groups B01D 71/60 and B01D 71/601 should be considered in order to perform a complete search.</p>
U	B01D 71/62	<ul style="list-style-type: none"> • • Polycondensates having nitrogen-containing heterocyclic rings in the main chain
M	B01D 71/64	<ul style="list-style-type: none"> • • • Polyimides; Polyamide-imides; Polyester-imides; Polyamide acids or similar polyimide precursors <p><u>WARNING</u> Group B01D 71/64 is impacted by reclassification into groups B01D 71/641, B01D 71/642 and B01D 71/643. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 71/641	<ul style="list-style-type: none"> • • • • {Polyamide-imides} <p><u>WARNING</u> Group B01D 71/641 is incomplete pending reclassification of documents from group B01D 71/64. Groups B01D 71/64 and B01D 71/641 should be considered in order to perform a complete search.</p>
M	B01D 71/642	<ul style="list-style-type: none"> • • • • {Polyester-imides} <p><u>WARNING</u> Group B01D 71/642 is incomplete pending reclassification of documents from group B01D 71/64. Groups B01D 71/64 and B01D 71/642 should be considered in order to perform a complete search.</p>
M	B01D 71/643	<ul style="list-style-type: none"> • • • • {Polyether-imides} <p><u>WARNING</u> Group B01D 71/643 is incomplete pending reclassification of documents from group B01D 71/64. Groups B01D 71/64 and B01D 71/643 should be considered in order to perform a complete search.</p>
M	B01D 71/66	<ul style="list-style-type: none"> • • Polymers having sulfur in the main chain, with or without nitrogen, oxygen or carbon only <p><u>WARNING</u> Group B01D 71/66 is impacted by reclassification into group B01D 71/69. Groups B01D 71/66 and B01D 71/69 should be considered in order to perform a complete search.</p>
M	B01D 71/69	<ul style="list-style-type: none"> • • • {Polysulfonamides} <p><u>WARNING</u> Group B01D 71/69 is incomplete pending reclassification of documents from group B01D 71/66. Groups B01D 71/66 and B01D 71/69 should be considered in order to perform a complete search.</p>

M	B01D 71/70	<ul style="list-style-type: none"> Polymers having silicon in the main chain, with or without sulfur, nitrogen, oxygen or carbon only <p>WARNING Group B01D 71/70 is impacted by reclassification into groups B01D 71/701 and B01D 71/702. Groups B01D 71/70, B01D 71/701 and B01D 71/702 should be considered in order to perform a complete search.</p>
M	B01D 71/701	<ul style="list-style-type: none"> {Polydimethylsiloxane} <p>WARNING Group B01D 71/701 is incomplete pending reclassification of documents from group B01D 71/70. Groups B01D 71/70 and B01D 71/701 should be considered in order to perform a complete search.</p>
M	B01D 71/702	<ul style="list-style-type: none"> {Polysilsesquioxanes or combination of silica with bridging organosilane groups} <p>WARNING Group B01D 71/702 is incomplete pending reclassification of documents from group B01D 71/70. Groups B01D 71/70 and B01D 71/702 should be considered in order to perform a complete search.</p>
U	B01D 2311/00	<p>Details relating to membrane separation process operations and control</p> <p><u>NOTE</u> In this group, C-sets are used for classification. The detailed information about the C-Sets construction and the associated syntax rules are found in the definitions of B01D.</p>
U	B01D 2311/10	<ul style="list-style-type: none"> Temperature control
M	B01D 2311/103	<ul style="list-style-type: none"> Heating <p>WARNING Group B01D 2311/103 is impacted by reclassification into groups B01D 2311/1031 and B01D 2311/1032. Groups B01D 2311/103, B01D 2311/1031 and B01D 2311/1032 should be considered in order to perform a complete search.</p>
M	B01D 2311/1031	<ul style="list-style-type: none"> Heat integration, heat recovery or reuse within an apparatus <p>WARNING Group B01D 2311/1031 is incomplete pending reclassification of documents from group B01D 2311/103. Groups B01D 2311/103 and B01D 2311/1031 should be considered in order to perform a complete search.</p>
M	B01D 2311/1032	<ul style="list-style-type: none"> Heating or reheating between serial separation steps <p>WARNING Group B01D 2311/1032 is incomplete pending reclassification of documents from group B01D 2311/103. Groups B01D 2311/103 and B01D 2311/1032 should be considered in order to perform a complete search.</p>

M	B01D 2311/106	<ul style="list-style-type: none"> • Cooling <p><u>WARNING</u> Group B01D 2311/106 is impacted by reclassification into group B01D 2311/1061. Groups B01D 2311/106 and B01D 2311/1061 should be considered in order to perform a complete search.</p>
M	B01D 2311/1061	<ul style="list-style-type: none"> • Cooling between serial separation steps <p><u>WARNING</u> Group B01D 2311/1061 is incomplete pending reclassification of documents from group B01D 2311/106. Groups B01D 2311/106 and B01D 2311/1061 should be considered in order to perform a complete search.</p>
M	B01D 2311/25	<ul style="list-style-type: none"> • Recirculation, recycling or bypass, e.g. recirculation of concentrate into the feed <p><u>WARNING</u> Group B01D 2311/25 is impacted by reclassification into groups B01D 2311/251, B01D 2311/2512, B01D 2311/2513, B01D 2311/252, B01D 2311/2521, B01D 2311/2523, B01D 2311/253, B01D 2311/2531 and B01D 2311/2532. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 2311/251	<ul style="list-style-type: none"> • Recirculation of permeate <p><u>WARNING</u> Groups B01D 2311/251 – B01D 2311/2513 are incomplete pending reclassification of documents from group B01D 2311/25. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 2311/252	<ul style="list-style-type: none"> • Recirculation of concentrate <p><u>WARNING</u> Groups B01D 2311/252 – B01D 2311/2523 are incomplete pending reclassification of documents from group B01D 2311/25. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 2311/253	<ul style="list-style-type: none"> • Bypassing of feed <p><u>WARNING</u> Groups B01D 2311/253 – B01D 2311/2532 are incomplete pending reclassification of documents from group B01D 2311/25. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 2311/26	<ul style="list-style-type: none"> • Further operations combined with membrane separation processes <p><u>WARNING</u> Group B01D 2311/26 is impacted by reclassification into groups B01D 2311/2643, B01D 2311/2674, B01D 2311/2697, B01D 2311/2698 and B01D 2311/2699. All groups listed in this Warning should be considered in order to perform a complete search.</p>

M	B01D 2311/2643	<ul style="list-style-type: none"> • Crystallisation <p><u>WARNING</u> Group B01D 2311/2643 is incomplete pending reclassification of documents from group B01D 2311/26. Groups B01D 2311/26 and B01D 2311/2643 should be considered in order to perform a complete search.</p>
M	B01D 2311/2674	<ul style="list-style-type: none"> • Condensation <p><u>WARNING</u> Group B01D 2311/2674 is incomplete pending reclassification of documents from group B01D 2311/26. Groups B01D 2311/26 and B01D 2311/2674 should be considered in order to perform a complete search.</p>
M	B01D 2311/2697	<ul style="list-style-type: none"> • Chromatography <p><u>WARNING</u> Group B01D 2311/2697 is incomplete pending reclassification of documents from group B01D 2311/26. Groups B01D 2311/26 and B01D 2311/2697 should be considered in order to perform a complete search.</p>
M	B01D 2311/2698	<ul style="list-style-type: none"> • Compression <p><u>WARNING</u> Group B01D 2311/2698 is incomplete pending reclassification of documents from group B01D 2311/26. Groups B01D 2311/26 and B01D 2311/2698 should be considered in order to perform a complete search.</p>
M	B01D 2311/2699	<ul style="list-style-type: none"> • Drying <p><u>WARNING</u> Group B01D 2311/2699 is incomplete pending reclassification of documents from group B01D 2311/26. Groups B01D 2311/26 and B01D 2311/2699 should be considered in order to perform a complete search.</p>
M	B01D 2313/00	<p>Details relating to membrane modules or apparatus</p> <p><u>WARNING</u> Group B01D 2313/00 is impacted by reclassification into groups B01D 2313/60, B01D 2313/62, B01D 2313/64, B01D 2313/66, B01D 2313/68, B01D 2313/70, B01D 2313/701 and B01D 2313/702. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 2313/04	<ul style="list-style-type: none"> • Specific sealing means <p><u>WARNING</u> Group B01D 2313/04 is impacted by reclassification into groups B01D 2313/041 and B01D 2313/042. Groups B01D 2313/04, B01D 2313/041 and B01D 2313/042 should be considered in order to perform a complete search.</p>
M	B01D 2313/041	<ul style="list-style-type: none"> • Gaskets or O-rings <p><u>WARNING</u> Group B01D 2313/041 is incomplete pending reclassification of documents from group B01D 2313/04.</p>

		Groups B01D 2313/04 and B01D 2313/041 should be considered in order to perform a complete search.
M	B01D 2313/042	<ul style="list-style-type: none">• Adhesives or glues <p><u>WARNING</u> Group B01D 2313/042 is incomplete pending reclassification of documents from group B01D 2313/04. Groups B01D 2313/04 and B01D 2313/042 should be considered in order to perform a complete search.</p>
M	B01D 2313/13	<ul style="list-style-type: none">• Specific connectors <p><u>WARNING</u> Group B01D 2313/13 is impacted by reclassification into group B01D 2313/131. Groups B01D 2313/13 and B01D 2313/131 should be considered in order to perform a complete search.</p>
M	B01D 2313/131	<ul style="list-style-type: none">• Quick connectors or quick-fit <p><u>WARNING</u> Group B01D 2313/131 is incomplete pending reclassification of documents from group B01D 2313/13. Groups B01D 2313/13 and B01D 2313/131 should be considered in order to perform a complete search.</p>
M	B01D 2313/20	<ul style="list-style-type: none">• Specific housing <p><u>WARNING</u> Group B01D 2313/20 is impacted by reclassification into groups B01D 2313/201, B01D 2313/2011, B01D 2313/203, B01D 2313/2031, B01D 2313/205, B01D 2313/206, B01D 2313/2061, B01D 2313/2062 and B01D 2313/208. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 2313/201	<ul style="list-style-type: none">• Closed housing, vessels or containers <p><u>WARNING</u> Groups B01D 2313/201 and B01D 2313/2011 are incomplete pending reclassification of documents from group B01D 2313/20. Groups B01D 2313/20, B01D 2313/201 and B01D 2313/2011 should be considered in order to perform a complete search.</p>
M	B01D 2313/203	<ul style="list-style-type: none">• Open housings <p><u>WARNING</u> Groups B01D 2313/203 and B01D 2313/2031 are incomplete pending reclassification of documents from group B01D 2313/20. Groups B01D 2313/20, B01D 2313/203 and B01D 2313/2031 should be considered in order to perform a complete search.</p>
M	B01D 2313/205	<ul style="list-style-type: none">• characterised by the shape <p><u>WARNING</u> Group B01D 2313/205 is incomplete pending reclassification of documents from group B01D 2313/20. Groups B01D 2313/20 and B01D 2313/205 should be considered in order to perform a complete search.</p>

M	B01D 2313/206	<ul style="list-style-type: none"> • characterised by the material <p><u>WARNING</u> Groups B01D 2313/206 – B01D 2313/2062 are incomplete pending reclassification of documents from group B01D 2313/20.– All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 2313/208	<ul style="list-style-type: none"> • Resilient or flexible housing walls, e.g. bags or foils <p><u>WARNING</u> Group B01D 2313/208 is incomplete pending reclassification of documents from group B01D 2313/20.– Groups B01D 2313/20 and B01D 2313/208 should be considered in order to perform a complete search.</p>
M	B01D 2313/22	<ul style="list-style-type: none"> • Cooling or heating elements <p><u>WARNING</u> Group B01D 2313/22 is impacted by reclassification into group B01D 2313/221.– Groups B01D 2313/22 and B01D 2313/221 should be considered in order to perform a complete search.</p>
M	B01D 2313/221	<ul style="list-style-type: none"> • Heat exchangers <p><u>WARNING</u> Group B01D 2313/221 is incomplete pending reclassification of documents from group B01D 2313/22.– Groups B01D 2313/22 and B01D 2313/221 should be considered in order to perform a complete search.</p>
M	B01D 2313/36	<ul style="list-style-type: none"> • Energy sources <p><u>WARNING</u> Group B01D 2313/36 is impacted by reclassification into group B01D 2313/367.– Groups B01D 2313/36 and B01D 2313/367 should be considered in order to perform a complete search.</p>
M	B01D 2313/367	<ul style="list-style-type: none"> • Renewable energy sources, e.g. wind or solar sources <p><u>WARNING</u> Group B01D 2313/367 is incomplete pending reclassification of documents from group B01D 2313/36.– Groups B01D 2313/36 and B01D 2313/367 should be considered in order to perform a complete search.</p>
M	B01D 2313/50	<ul style="list-style-type: none"> • Specific extra tanks <p><u>WARNING</u> Group B01D 2313/50 is impacted by reclassification into groups B01D 2313/501 and B01D 2313/502.– Groups B01D 2313/50, B01D 2313/501 and B01D 2313/502 should be considered in order to perform a complete search.</p>
M	B01D 2313/501	<ul style="list-style-type: none"> • Permeate storage tanks <p><u>WARNING</u> Group B01D 2313/501 is incomplete pending reclassification of documents from group B01D 2313/50.–</p>

		Groups B01D 2313/50 and B01D 2313/501 should be considered in order to perform a complete search.
M	B01D 2313/502	<ul style="list-style-type: none">Concentrate storage tanks <p><u>WARNING</u> Group B01D 2313/502 is incomplete pending reclassification of documents from group B01D 2313/50. Groups B01D 2313/50 and B01D 2313/502 should be considered in order to perform a complete search.</p>
M	B01D 2313/56	<ul style="list-style-type: none">Specific mechanisms for loading the membrane in a module <p><u>WARNING</u> Group B01D 2313/56 is impacted by reclassification into group B01D 2313/57. Groups B01D 2313/56 and B01D 2313/57 should be considered in order to perform a complete search.</p>
M	B01D 2313/57	<ul style="list-style-type: none">Tools used for removal of membranes <p><u>WARNING</u> Group B01D 2313/57 is incomplete pending reclassification of documents from group B01D 2313/56. Groups B01D 2313/56 and B01D 2313/57 should be considered in order to perform a complete search.</p>
M	B01D 2313/60	<ul style="list-style-type: none">Specific sensors or sensor arrangements <p><u>WARNING</u> Group B01D 2313/60 is incomplete pending reclassification of documents from groups B01D 2313/00 and B01D 2313/90. Groups B01D 2313/00, B01D 2313/90 and B01D 2313/60 should be considered in order to perform a complete search.</p>
M	B01D 2313/62	<ul style="list-style-type: none">Displays <p><u>WARNING</u> Group B01D 2313/62 is incomplete pending reclassification of documents from groups B01D 2313/00 and B01D 2313/90. Groups B01D 2313/00, B01D 2313/90 and B01D 2313/62 should be considered in order to perform a complete search.</p>
M	B01D 2313/64	<ul style="list-style-type: none">Bar codes; Data storage means; RFID <p><u>WARNING</u> Group B01D 2313/64 is incomplete pending reclassification of documents from group B01D 2313/00. Groups B01D 2313/00 and B01D 2313/64 should be considered in order to perform a complete search.</p>
M	B01D 2313/66	<ul style="list-style-type: none">Biodegradability of parts of the module <p><u>WARNING</u> Group B01D 2313/66 is incomplete pending reclassification of documents from group B01D 2313/00. Groups B01D 2313/00 and B01D 2313/66 should be considered in order to perform a complete search.</p>
M	B01D 2313/68	<ul style="list-style-type: none">Biocompatibility of parts of the module <p><u>WARNING</u> Group B01D 2313/68 is incomplete pending reclassification of documents from group B01D 2313/00.</p>

		Groups B01D 2313/00 and B01D 2313/68 should be considered in order to perform a complete search.
M	B01D 2313/70	<ul style="list-style-type: none"> Control means using a programmable logic controller [PLC] or a computer <p><u>WARNING</u> Groups B01D 2313/70 – B01D 2313/702 are incomplete pending reclassification of documents from groups B01D 2313/00 and B01D 2313/90. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 2313/90	<ul style="list-style-type: none"> Additional auxiliary systems integrated with the module or apparatus <p><u>WARNING</u> Group B01D 2313/90 is impacted by reclassification into groups B01D 2313/60, B01D 2313/62, B01D 2313/70, B01D 2313/701, B01D 2313/702, B01D 2313/901, B01D 2313/902 and B01D 2313/903. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 2313/901	<ul style="list-style-type: none"> Integrated prefilter <p><u>WARNING</u> Group B01D 2313/901 is incomplete pending reclassification of documents from group B01D 2313/90. Groups B01D 2313/90 and B01D 2313/901 should be considered in order to perform a complete search.</p>
M	B01D 2313/902	<ul style="list-style-type: none"> Integrated cleaning device <p><u>WARNING</u> Group B01D 2313/902 is incomplete pending reclassification of documents from group B01D 2313/90. Groups B01D 2313/90 and B01D 2313/902 should be considered in order to perform a complete search.</p>
M	B01D 2313/903	<ul style="list-style-type: none"> Integrated control or detection device <p><u>WARNING</u> Group B01D 2313/903 is incomplete pending reclassification of documents from group B01D 2313/90. Groups B01D 2313/90 and B01D 2313/903 should be considered in order to perform a complete search.</p>
M	B01D 2315/00	<p>Details relating to the membrane module operation</p> <p><u>WARNING</u> Group B01D 2315/00 is impacted by reclassification into groups B01D 2315/17, B01D 2315/22 and B01D 2315/24. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 2315/17	<ul style="list-style-type: none"> Depth filtration, asymmetric membranes arranged with wider pore size side towards feed <p><u>WARNING</u> Group B01D 2315/17 is incomplete pending reclassification of documents from group B01D 2315/00. Groups B01D 2315/00 and B01D 2315/17 should be considered in order to perform a complete search.</p>

M	B01D 2315/22	<ul style="list-style-type: none"> • Membrane contactor <p><u>WARNING</u> Group B01D 2315/22 is incomplete pending reclassification of documents from group B01D 2315/00. Groups B01D 2315/00 and B01D 2315/22 should be considered in order to perform a complete search.</p>
M	B01D 2315/24	<ul style="list-style-type: none"> • Counter-current operation <p><u>WARNING</u> Group B01D 2315/24 is incomplete pending reclassification of documents from group B01D 2315/00. Groups B01D 2315/00 and B01D 2315/24 should be considered in order to perform a complete search.</p>
M	B01D 2321/00	<p>Details relating to membrane cleaning, regeneration, sterilization or to the prevention of fouling</p> <p><u>WARNING</u> Group B01D 2321/00 is impacted by reclassification into groups B01D 2321/281, B01D 2321/282, B01D 2321/35, B01D 2321/42 and B01D 2321/44. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 2321/16	<ul style="list-style-type: none"> • Use of chemical agents <p><u>WARNING</u> Group B01D 2321/16 is impacted by reclassification into group B01D 2321/167. Groups B01D 2321/16 and B01D 2321/167 should be considered in order to perform a complete search.</p>
M	B01D 2321/167	<ul style="list-style-type: none"> • • Use of scale inhibitors <p><u>WARNING</u> Group B01D 2321/167 is incomplete pending reclassification of documents from group B01D 2321/16. Groups B01D 2321/16 and B01D 2321/167 should be considered in order to perform a complete search.</p>
M	B01D 2321/281	<ul style="list-style-type: none"> • by applying a special coating to the membrane or to any module element <p><u>WARNING</u> Group B01D 2321/281 is incomplete pending reclassification of documents from group B01D 2321/00. Groups B01D 2321/00 and B01D 2321/281 should be considered in order to perform a complete search.</p>
M	B01D 2321/282	<ul style="list-style-type: none"> • by spray flush or jet flush <p><u>WARNING</u> Group B01D 2321/282 is incomplete pending reclassification of documents from group B01D 2321/00. Groups B01D 2321/00 and B01D 2321/282 should be considered in order to perform a complete search.</p>
M	B01D 2321/35	<ul style="list-style-type: none"> • with acoustic waves <p><u>WARNING</u> Group B01D 2321/35 is incomplete pending reclassification of documents from group B01D 2321/00.</p>

Groups B01D 2321/00 and B01D 2321/35 should be considered in order to perform a complete search.

M B01D 2321/42

- Chemical regeneration

WARNING

Group B01D 2321/42 is incomplete pending reclassification of documents from group B01D 2321/00.

Groups B01D 2321/00 and B01D 2321/42 should be considered in order to perform a complete search.

M B01D 2321/44

- Specific cleaning apparatus

WARNING

Group B01D 2321/44 is incomplete pending reclassification of documents from group B01D 2321/00.

Groups B01D 2321/00 and B01D 2321/44 should be considered in order to perform a complete search.

M B01D 2323/00

Details relating to membrane preparation

WARNING

Group B01D 2323/00 is impacted by reclassification into groups B01D 2323/15, B01D 2323/216, B01D 2323/217, B01D 2323/218, B01D 2323/2181, B01D 2323/21811, B01D 2323/21813, B01D 2323/21815, B01D 2323/21817, B01D 2323/21819, B01D 2323/2182, B01D 2323/21821, B01D 2323/21822, B01D 2323/21823, B01D 2323/21824, B01D 2323/21825, B01D 2323/21826, B01D 2323/21827, B01D 2323/21828, B01D 2323/21829, B01D 2323/2183, B01D 2323/21831, B01D 2323/21832, B01D 2323/21833, B01D 2323/21834, B01D 2323/21835, B01D 2323/21836, B01D 2323/21837, B01D 2323/21838, B01D 2323/21839, B01D 2323/2185, B01D 2323/2187, B01D 2323/2189, B01D 2323/219, B01D 2323/226, B01D 2323/52, B01D 2323/54, B01D 2323/56, B01D 2323/58, B01D 2323/60, B01D 2323/62, B01D 2323/64 and B01D 2323/66.

All groups listed in this Warning should be considered in order to perform a complete search.

M B01D 2323/08

- Specific temperatures applied

WARNING

Group B01D 2323/08 is impacted by reclassification into groups B01D 2323/081 and B01D 2323/082.

Groups B01D 2323/08, B01D 2323/081 and B01D 2323/082 should be considered in order to perform a complete search.

M B01D 2323/081

- Heating

WARNING

Group B01D 2323/081 is incomplete pending reclassification of documents from group B01D 2323/08.

Groups B01D 2323/08 and B01D 2323/081 should be considered in order to perform a complete search.

M B01D 2323/082

- Cooling

WARNING

Group B01D 2323/082 is incomplete pending reclassification of documents from group B01D 2323/08.

Groups B01D 2323/08 and B01D 2323/082 should be considered in order to perform a complete search.

M	B01D 2323/15	<ul style="list-style-type: none"> • Use of additives <p><u>WARNING</u> Group B01D 2323/15 is incomplete pending reclassification of documents from group B01D 2323/00.- Groups B01D 2323/00 and B01D 2323/15 should be considered in order to perform a complete search.</p>
M	B01D 2323/216	<ul style="list-style-type: none"> • • Surfactants <p><u>WARNING</u> Group B01D 2323/216 is incomplete pending reclassification of documents from group B01D 2323/00.- Groups B01D 2323/00 and B01D 2323/216 should be considered in order to perform a complete search.</p>
M	B01D 2323/217	<ul style="list-style-type: none"> • • Emulgator or emulsion/foam forming agents <p><u>WARNING</u> Group B01D 2323/217 is incomplete pending reclassification of documents from group B01D 2323/00.- Groups B01D 2323/00 and B01D 2323/217 should be considered in order to perform a complete search.</p>
M	B01D 2323/218	<ul style="list-style-type: none"> • • Additive materials <p><u>WARNING</u> Group B01D 2323/218 is incomplete pending reclassification of documents from group B01D 2323/00.- Groups B01D 2323/00 and B01D 2323/218 should be considered in order to perform a complete search.</p>
M	B01D 2323/2181	<ul style="list-style-type: none"> • • • Inorganic additives <p><u>WARNING</u> Group B01D 2323/2181 is incomplete pending reclassification of documents from group B01D 2323/00.- Groups B01D 2323/00 and B01D 2323/2181 should be considered in order to perform a complete search.</p>
M	B01D 2323/21811	<ul style="list-style-type: none"> • • • • Metals <p><u>WARNING</u> Group B01D 2323/21811 is incomplete pending reclassification of documents from group B01D 2323/00.- Groups B01D 2323/00 and B01D 2323/21811 should be considered in order to perform a complete search.</p>
M	B01D 2323/21813	<ul style="list-style-type: none"> • • • • Metal oxides <p><u>WARNING</u> Group B01D 2323/21813 is incomplete pending reclassification of documents from group B01D 2323/00.- Groups B01D 2323/00 and B01D 2323/21813 should be considered in order to perform a complete search.</p>
M	B01D 2323/21815	<ul style="list-style-type: none"> • • • • Acids <p><u>WARNING</u> Group B01D 2323/21815 is incomplete pending reclassification of documents from group B01D 2323/00.-</p>

Groups B01D 2323/00 and B01D 2323/21815 should be considered in order to perform a complete search.

M B01D 2323/21817 . . . Salts

WARNING

Group B01D 2323/21817 is incomplete pending reclassification of documents from group B01D 2323/00.
Groups B01D 2323/00 and B01D 2323/21817 should be considered in order to perform a complete search.

M B01D 2323/21819 . . . Carbon, carbon nanotubes, graphene or derivatives thereof

WARNING

Group B01D 2323/21819 is incomplete pending reclassification of documents from group B01D 2323/00.
Groups B01D 2323/00 and B01D 2323/21819 should be considered in order to perform a complete search.

M B01D 2323/2182 . . Organic additives

WARNING

Group B01D 2323/2182 is incomplete pending reclassification of documents from group B01D 2323/00.
Groups B01D 2323/00 and B01D 2323/2182 should be considered in order to perform a complete search.

M B01D 2323/21821 . . . Alkanes

WARNING

Group B01D 2323/21821 is incomplete pending reclassification of documents from group B01D 2323/00.
Groups B01D 2323/00 and B01D 2323/21821 should be considered in order to perform a complete search.

M B01D 2323/21822 . . . Alkenes

WARNING

Group B01D 2323/21822 is incomplete pending reclassification of documents from group B01D 2323/00.
Groups B01D 2323/00 and B01D 2323/21822 should be considered in order to perform a complete search.

M B01D 2323/21823 . . . Alcohols or hydroxydes, e.g. ethanol, glycerol or phenol

WARNING

Group B01D 2323/21823 is incomplete pending reclassification of documents from group B01D 2323/00.
Groups B01D 2323/00 and B01D 2323/21823 should be considered in order to perform a complete search.

M B01D 2323/21824 . . . Aldehydes

WARNING

Group B01D 2323/21824 is incomplete pending reclassification of documents from group B01D 2323/00.
Groups B01D 2323/00 and B01D 2323/21824 should be considered in order to perform a complete search.

M B01D 2323/21825 . . . Ketones

WARNING

Group B01D 2323/21825 is incomplete pending reclassification of documents from group B01D 2323/00.
Groups B01D 2323/00 and B01D 2323/21825 should be considered in order to perform a complete search.

M B01D 2323/21826 . . . Acids, e.g. acetic acid

WARNING

Group B01D 2323/21826 is incomplete pending reclassification of documents from group B01D 2323/00.
Groups B01D 2323/00 and B01D 2323/21826 should be considered in order to perform a complete search.

M B01D 2323/21827 . . . Salts

WARNING

Group B01D 2323/21827 is incomplete pending reclassification of documents from group B01D 2323/00.
Groups B01D 2323/00 and B01D 2323/21827 should be considered in order to perform a complete search.

M B01D 2323/21828 . . . Ammonium Salts

WARNING

Group B01D 2323/21828 is incomplete pending reclassification of documents from group B01D 2323/00.
Groups B01D 2323/00 and B01D 2323/21828 should be considered in order to perform a complete search.

M B01D 2323/21829 . . . Acrylates

WARNING

Group B01D 2323/21829 is incomplete pending reclassification of documents from group B01D 2323/00.
Groups B01D 2323/00 and B01D 2323/21829 should be considered in order to perform a complete search.

M B01D 2323/2183 . . . Ethers

WARNING

Group B01D 2323/2183 is incomplete pending reclassification of documents from group B01D 2323/00.
Groups B01D 2323/00 and B01D 2323/2183 should be considered in order to perform a complete search.

M B01D 2323/21831 . . . Cyclic ethers comprising heterocyclic O-Ring

WARNING

Group B01D 2323/21831 is incomplete pending reclassification of documents from group B01D 2323/00.
Groups B01D 2323/00 and B01D 2323/21831 should be considered in order to perform a complete search.

M B01D 2323/21832 . . . Cyclic ethers comprising aromatic heterocyclic O-Ring

WARNING

Group B01D 2323/21832 is incomplete pending reclassification of documents from group B01D 2323/00.

Groups B01D 2323/00 and B01D 2323/21832 should be considered in order to perform a complete search.

M B01D 2323/21833 . . . Esters

WARNING

Group B01D 2323/21833 is incomplete pending reclassification of documents from group B01D 2323/00.
Groups B01D 2323/00 and B01D 2323/21833 should be considered in order to perform a complete search.

M B01D 2323/21834 . . . Amines

WARNING

Group B01D 2323/21834 is incomplete pending reclassification of documents from group B01D 2323/00.
Groups B01D 2323/00 and B01D 2323/21834 should be considered in order to perform a complete search.

M B01D 2323/21835 . . . Cyclic amines comprising heterocyclic N-Ring, e.g. pyridine

WARNING

Group B01D 2323/21835 is incomplete pending reclassification of documents from group B01D 2323/00.
Groups B01D 2323/00 and B01D 2323/21835 should be considered in order to perform a complete search.

M B01D 2323/21836 . . . Cyclic amines comprising aromatic heterocyclic N-Ring

WARNING

Group B01D 2323/21836 is incomplete pending reclassification of documents from group B01D 2323/00.
Groups B01D 2323/00 and B01D 2323/21836 should be considered in order to perform a complete search.

M B01D 2323/21837 . . . Amides

WARNING

Group B01D 2323/21837 is incomplete pending reclassification of documents from group B01D 2323/00.
Groups B01D 2323/00 and B01D 2323/21837 should be considered in order to perform a complete search.

M B01D 2323/21838 . . . Imides

WARNING

Group B01D 2323/21838 is incomplete pending reclassification of documents from group B01D 2323/00.
Groups B01D 2323/00 and B01D 2323/21838 should be considered in order to perform a complete search.

M B01D 2323/21839 . . . Polymeric additives

WARNING

Group B01D 2323/21839 is incomplete pending reclassification of documents from group B01D 2323/00.
Groups B01D 2323/00 and B01D 2323/21839 should be considered in order to perform a complete search.

M	B01D 2323/2185	<ul style="list-style-type: none"> • • • • Polyethylene glycol <p><u>WARNING</u> Group B01D 2323/2185 is incomplete pending reclassification of documents from group B01D 2323/00. Groups B01D 2323/00 and B01D 2323/2185 should be considered in order to perform a complete search.</p>
M	B01D 2323/2187	<ul style="list-style-type: none"> • • • • Polyvinylpyrrolidone <p><u>WARNING</u> Group B01D 2323/2187 is incomplete pending reclassification of documents from group B01D 2323/00. Groups B01D 2323/00 and B01D 2323/2187 should be considered in order to perform a complete search.</p>
M	B01D 2323/2189	<ul style="list-style-type: none"> • • • Metal-organic compounds or complexes <p><u>WARNING</u> Group B01D 2323/2189 is incomplete pending reclassification of documents from group B01D 2323/00. Groups B01D 2323/00 and B01D 2323/2189 should be considered in order to perform a complete search.</p>
M	B01D 2323/219	<ul style="list-style-type: none"> • Specific solvent system <p><u>WARNING</u> Group B01D 2323/219 is incomplete pending reclassification of documents from group B01D 2323/00. Groups B01D 2323/00 and B01D 2323/219 should be considered in order to perform a complete search.</p>
M	B01D 2323/226	<ul style="list-style-type: none"> • • Use of ionic liquids <p><u>WARNING</u> Group B01D 2323/226 is incomplete pending reclassification of documents from group B01D 2323/00. Groups B01D 2323/00 and B01D 2323/226 should be considered in order to perform a complete search.</p>
M	B01D 2323/52	<ul style="list-style-type: none"> • Use of a mould <p><u>WARNING</u> Group B01D 2323/52 is incomplete pending reclassification of documents from group B01D 2323/00. Groups B01D 2323/00 and B01D 2323/52 should be considered in order to perform a complete search.</p>
M	B01D 2323/54	<ul style="list-style-type: none"> • Recycling of scrap material from production process or membrane fragments <p><u>WARNING</u> Group B01D 2323/54 is incomplete pending reclassification of documents from group B01D 2323/00. Groups B01D 2323/00 and B01D 2323/54 should be considered in order to perform a complete search.</p>
M	B01D 2323/56	<ul style="list-style-type: none"> • Use of ultrasound <p><u>WARNING</u> Group B01D 2323/56 is incomplete pending reclassification of documents from group B01D 2323/00.</p>

		Groups B01D 2323/00 and B01D 2323/56 should be considered in order to perform a complete search.
M	B01D 2323/58	<ul style="list-style-type: none"> • Fusion; Welding <p><u>WARNING</u> Group B01D 2323/58 is incomplete pending reclassification of documents from group B01D 2323/00. Groups B01D 2323/00 and B01D 2323/58 should be considered in order to perform a complete search.</p>
M	B01D 2323/60	<ul style="list-style-type: none"> • Co-casting; Co-extrusion <p><u>WARNING</u> Group B01D 2323/60 is incomplete pending reclassification of documents from group B01D 2323/00. Groups B01D 2323/00 and B01D 2323/60 should be considered in order to perform a complete search.</p>
M	B01D 2323/62	<ul style="list-style-type: none"> • Cutting the membrane <p><u>WARNING</u> Group B01D 2323/62 is incomplete pending reclassification of documents from group B01D 2323/00. Groups B01D 2323/00 and B01D 2323/62 should be considered in order to perform a complete search.</p>
M	B01D 2323/64	<ul style="list-style-type: none"> • Use of a temporary support <p><u>WARNING</u> Group B01D 2323/64 is incomplete pending reclassification of documents from group B01D 2323/00. Groups B01D 2323/00 and B01D 2323/64 should be considered in order to perform a complete search.</p>
M	B01D 2323/66	<ul style="list-style-type: none"> • Avoiding penetration into pores of support of further porous layer with fluid or counter-pressure <p><u>WARNING</u> Group B01D 2323/66 is incomplete pending reclassification of documents from group B01D 2323/00. Groups B01D 2323/00 and B01D 2323/66 should be considered in order to perform a complete search.</p>
M	B01D 2325/00	<p>Details relating to properties of membranes</p> <p><u>WARNING</u> Group B01D 2325/00 is impacted by reclassification into groups B01D 2325/39, B01D 2325/43, B01D 2325/50, B01D 2325/52, B01D 2325/54, B01D 2325/56 and B01D 2325/58. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 2325/02	<ul style="list-style-type: none"> • Details relating to pores or porosity of the membranes <p><u>WARNING</u> Group B01D 2325/02 is impacted by reclassification into groups B01D 2325/0281, B01D 2325/0282, B01D 2325/0283, B01D 2325/02831, B01D 2325/02832, B01D 2325/02833 and B01D 2325/02834. All groups listed in this Warning should be considered in order to perform a complete search.</p>

M	B01D 2325/021	<ul style="list-style-type: none"> • Pore shapes <p><u>WARNING</u> Group B01D 2325/021 is impacted by reclassification into groups B01D 2325/0212 and B01D 2325/0214. Groups B01D 2325/021, B01D 2325/0212 and B01D 2325/0214 should be considered in order to perform a complete search.</p>
M	B01D 2325/0212	<ul style="list-style-type: none"> • Symmetric or isoporous membranes <p><u>WARNING</u> Group B01D 2325/0212 is incomplete pending reclassification of documents from group B01D 2325/021. Groups B01D 2325/021 and B01D 2325/0212 should be considered in order to perform a complete search.</p>
M	B01D 2325/0214	<ul style="list-style-type: none"> • Tapered pores <p><u>WARNING</u> Group B01D 2325/0214 is incomplete pending reclassification of documents from group B01D 2325/021. Groups B01D 2325/021 and B01D 2325/0214 should be considered in order to perform a complete search.</p>
M	B01D 2325/022	<ul style="list-style-type: none"> • Asymmetric membranes <p><u>WARNING</u> Group B01D 2325/022 is impacted by reclassification into groups B01D 2325/0231, B01D 2325/0232 and B01D 2325/0233. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 2325/0231	<ul style="list-style-type: none"> • Dense layers being placed on the outer side of the cross-section <p><u>WARNING</u> Group B01D 2325/0231 is incomplete pending reclassification of documents from group B01D 2325/022. Groups B01D 2325/022 and B01D 2325/0231 should be considered in order to perform a complete search.</p>
M	B01D 2325/0232	<ul style="list-style-type: none"> • Dense layer on both outer sides of the membrane <p><u>WARNING</u> Group B01D 2325/0232 is incomplete pending reclassification of documents from group B01D 2325/022. Groups B01D 2325/022 and B01D 2325/0232 should be considered in order to perform a complete search.</p>
M	B01D 2325/0233	<ul style="list-style-type: none"> • with clearly distinguishable layers <p><u>WARNING</u> Group B01D 2325/0233 is incomplete pending reclassification of documents from group B01D 2325/022. Groups B01D 2325/022 and B01D 2325/0233 should be considered in order to perform a complete search.</p>
M	B01D 2325/0281	<ul style="list-style-type: none"> • Fibril, or microfibril structures <p><u>WARNING</u> Group B01D 2325/0281 is incomplete pending reclassification of documents from group B01D 2325/02.</p>

		Groups B01D 2325/02 and B01D 2325/0281 should be considered in order to perform a complete search.
M	B01D 2325/0282	<ul style="list-style-type: none"> Dynamic pores-stimuli responsive membranes, e.g. thermoresponsive or pH-responsive <p><u>WARNING</u> Group B01D 2325/0282 is incomplete pending reclassification of documents from group B01D 2325/02. Groups B01D 2325/02 and B01D 2325/0282 should be considered in order to perform a complete search.</p>
M	B01D 2325/0283	<ul style="list-style-type: none"> Pore size <p><u>WARNING</u> Groups B01D 2325/0283 – B01D 2325/02834 are incomplete pending reclassification of documents from group B01D 2325/02. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B01D 2325/34	<ul style="list-style-type: none"> Molecular weight or degree of polymerisation <p><u>WARNING</u> Group B01D 2325/34 is impacted by reclassification into group B01D 2325/341. Groups B01D 2325/34 and B01D 2325/341 should be considered in order to perform a complete search.</p>
M	B01D 2325/341	<ul style="list-style-type: none"> At least two polymers of same structure but different molecular weight <p><u>WARNING</u> Group B01D 2325/341 is incomplete pending reclassification of documents from group B01D 2325/34. Groups B01D 2325/34 and B01D 2325/341 should be considered in order to perform a complete search.</p>
M	B01D 2325/39	<ul style="list-style-type: none"> Amphiphilic membranes <p><u>WARNING</u> Group B01D 2325/39 is incomplete pending reclassification of documents from group B01D 2325/00. Groups B01D 2325/00 and B01D 2325/39 should be considered in order to perform a complete search.</p>
M	B01D 2325/43	<ul style="list-style-type: none"> Specific optical properties <p><u>WARNING</u> Group B01D 2325/43 is incomplete pending reclassification of documents from groups B01D 2325/00 and B01D 2325/44. Groups B01D 2325/00, B01D 2325/44 and B01D 2325/43 should be considered in order to perform a complete search.</p>
M	B01D 2325/44	<ul style="list-style-type: none"> Specific light transmission <p><u>WARNING</u> Group B01D 2325/44 is impacted by reclassification into group B01D 2325/43. Groups B01D 2325/44 and B01D 2325/43 should be considered in order to perform a complete search.</p>

M	B01D 2325/50	<ul style="list-style-type: none"> • Membrane in gel form <p>WARNING Group B01D 2325/50 is incomplete pending reclassification of documents from group B01D 2325/00. Groups B01D 2325/00 and B01D 2325/50 should be considered in order to perform a complete search.</p>
M	B01D 2325/52	<ul style="list-style-type: none"> • Crystallinity <p>WARNING Group B01D 2325/52 is incomplete pending reclassification of documents from group B01D 2325/00. Groups B01D 2325/00 and B01D 2325/52 should be considered in order to perform a complete search.</p>
M	B01D 2325/54	<ul style="list-style-type: none"> • Interpenetration relationship between layers in supported or composite membranes <p>WARNING Group B01D 2325/54 is incomplete pending reclassification of documents from group B01D 2325/00. Groups B01D 2325/00 and B01D 2325/54 should be considered in order to perform a complete search.</p>
M	B01D 2325/56	<ul style="list-style-type: none"> • Biodegradability of membrane <p>WARNING Group B01D 2325/56 is incomplete pending reclassification of documents from group B01D 2325/00. Groups B01D 2325/00 and B01D 2325/56 should be considered in order to perform a complete search.</p>
M	B01D 2325/58	<ul style="list-style-type: none"> • Biocompatibility of membrane <p>WARNING Group B01D 2325/58 is incomplete pending reclassification of documents from group B01D 2325/00. Groups B01D 2325/00 and B01D 2325/58 should be considered in order to perform a complete search.</p>

Project: Unknown (B01J)

U	B01J 20/00	Solid sorbent compositions or filter aid compositions; Sorbents for chromatography; Processes for preparing, regenerating or reactivating thereof
U	B01J 20/02	<ul style="list-style-type: none"> • comprising inorganic material
	B01J 20/0203	<ul style="list-style-type: none"> • {comprising compounds of metals not provided for in B01J 20/04 (oxides or hydroxides thereof B01J 20/06)} <p>NOTE {Compounds classified in group B01J 20/0203 and subgroups are also classified in B01J 20/0274 according to the type of anion. }</p>
U	B01J 23/00	Catalysts comprising metals or metal oxides or hydroxides, not provided for in group B01J 21/00 (B01J 21/16 takes precedence)
	B01J 23/002	<ul style="list-style-type: none"> • {Mixed oxides other than spinels, e.g. perovskite} <p>NOTE {In group B01J 23/002, elements constituting the exemplified mixed oxide are further indexed under the form of a C-set with B01J 2523/00 as base symbol }</p>

using the relevant classification symbols of [B01J 2523/10](#) - [B01J 2523/847](#), in numerical order, as further symbols and separated by ",", e.g. the mixed oxide $\text{Mo}_a\text{V}_b\text{Te}_c\text{O}_x$ is classified as ([B01J 2523/00](#), [B01J 2523/55](#), [B01J 2523/64](#), [B01J 2523/68](#)).}

U B01J 31/00

Catalysts comprising hydrides, coordination complexes or organic compounds (catalyst compositions used only in polymerisation reactions [C08](#) {; catalytic antibodies [C12N 9/0002](#)})

NOTES

1. Group [B01J 31/003](#) takes precedence over groups [B01J 31/02](#) - [B01J 31/24](#) (catalytic antibodies [C12N 9/0002](#))
2. In this group, the following terms or expressions are used with the meanings indicated:
 - "Organic compound" a compound in which carbon is bonded to
 - (1)a second carbon;
 - (2)at least one atom of hydrogen or halogen; or
 - (3)nitrogen by a single or double bond; except cyanic acid (HOCN), cyanogen (NCCN), cyanamide (H₂NCN), cyanogen halide (HalCN), hydrocyanic acid (HCN) isocyanic acid (HNCO) fulminic acid (HCNO)and metal carbides (MCCM) (catalysts comprising any of these exceptions or their salts [B01J 27/20](#) - [B01J 27/26](#).
 - "Organometallic compounds" includes all organic compounds wherein a metal or metalloid atom is bonded directly to a carbon fragment, the latter being formally anionic, no further neutral ligands being coordinated to the metal and the compound requiring no further cations for charge balance; e.g. $\text{M}(\text{1-CR}_3)_n$ with M= main group metal, n= valency of metal and R= H or hydrocarbyl. (Compounds comprising anionic organonitrogen, organooxygen and organosulfur fragments, excluding carboxylates, with a metal bonded to these heteroatoms [B01J 31/02](#) - [B01J 31/0254](#); unsaturated carbon fragments in combination with transition metals [B01J 31/2282](#).
 - "Coordination complexes" includes any donor-acceptor compounds or complex ions comprising organic or inorganic, anionic or neutral Lewis basic ligands, attached to a Lewis acid central metal or metal ion through one or several complexing donor atoms with at least one lone-pair of electrons, e.g. N, O, S, P, to provide at least a Sigma-bond. Typically the maximum number of same or different ligands according to the coordination number, spatial requirements of the ligand and electronic configuration of the metal is bound in a predictable geometry. Complexes of neutral, cationic or anionic hydrocarbon ligands with delocalised charge and/or bonding site, e.g. Pd-olefin complexes or metallocenes, are also included (the following groups take precedence: simple hydrocarbyl metal compounds, e.g. of main group metal(loids) [B01J 31/12](#); oxoacid salts [B01J 31/04](#) - [B01J 31/10](#); other compounds comprising anionic organonitrogen, organooxygen and organosulfur fragments with a metal bonded to these heteroatoms [B01J 31/02](#) - [B01J 31/0254](#).
 - "Organometallic complexes" includes all coordination complexes comprising a M-C bond, e.g. metal carbonyls (complex cyanides such as $\text{M}_4[\text{Fe}(\text{CN})_6]$ [B01J 27/26](#)).Included are furthermore complexes which are not strictly organometallic *per se*, e.g. comprising only N, O, S and/or P coordinated ligands, but are described as involving, or known to involve, organometallic intermediates and/or transition states during use, e.g. Group 8-10 metal complexes for a variety of catalytic reactions or steps thereof, such as oxidative addition, e.g. of ArX, hydrogenation, carbonylation, epoxidation, etc.
 - "Organic complexes" includes all coordination complexes comprising organic ligands (groups [B01J 31/1608](#) - [B01J 31/1895](#) take precedence).

- "Polymer" includes any macromolecular substance (typically $M > 10000$ g/mol), which comprises repeating units made up of one or several kinds of atoms or groups of atoms, which are identically connected to one another. Oligomers, i.e. more than two identical repeating units connected to one another and typically $500 < M < 10000$ g/mol, are grouped with the respective polymers (polymers *per se* [C08](#)).

3. In this group, if two or more aspects are of equal importance, these are each classified, e.g. two components in a catalyst system such as:

- support and pendant or otherwise immobilised coordination complex; or
- coordination complex and essential additive.

However, if two components, even if separately added, are described as forming, or known to form, a coordination complex, only the latter is classified, e.g. phosphine and Group 8-10 metal such as rhodium. The groups [B01J 31/26](#) - [B01J 31/38](#) are not to be used for the central metals in coordination complexes but rather for separately added further inorganic ingredients. Each specifically disclosed alternative is separately classified, i.e. specifically disclosed by ways of worked examples, specific claims and/or explicit alternatives therein.

4. {When classifying in [B01J 31/00](#), additional information for the catalysts is provided as follows:

(4-1) the specifically disclosed intended uses are indexed in [B01J 2231/00](#);

(4-2) general aspects of the complexes of group [B01J 31/16](#) and the specifically disclosed central metal(s) therein, as well as additional information regarding any special solvents used for any catalyst system of this group are indexed in [B01J 2531/00](#).

(4-3) conceptual articles, e.g. reviews, are separately indexed in [B01J 2231/005](#) and [B01J 2531/001](#);

(4-4) additional information regarding the complexes or ligands classified in [B01J 31/16](#) - [B01J 31/24](#) and indexed in [B01J 2531/00](#) is indexed in [B01J 2540/00](#), e.g. non-coordinating substituents on the ligand periphery

}

B01J 31/003

- {containing enzymes}

NOTE

{In this group, the presence of water is disregarded for classification purposes.}

Project: Unknown (B05D)

U B05D 7/00

Processes, other than flocking, specially adapted for applying liquids or other fluent materials to particular surfaces or for applying particular liquids or other fluent materials {(coating of foodstuffs [A23P 20/17](#), [A23P 20/15](#), [A23P 20/18](#))}

B05D 7/50

- {Multilayers}

NOTE

{A possible inorganic pretreatment or coating on the substrate such as chromatation, phosphatation, plating, is not counted as a layer. This group covers mostly multilayers characterised by each layer and the succession of them (laminates in general [B32B](#)).}

Project: Unknown (B23D)

U B23D 36/00

Control arrangements specially adapted for machines for shearing or similar cutting, or for sawing, stock which the latter is travelling otherwise than in the direction of the cut

- B23D 36/0091 • {for machines with more than one cutting, shearing, or sawing devices}

NOTE

Broaching

{Broaching}

Project: Unknown (B29C)**U B29C 33/00 Moulds or cores; Details thereof or accessories therefor**

- B29C 33/0033 • {constructed for making articles provided with holes}

NOTE

{If the hole is made by cutting means associated with the mould, see the relevant moulding technique.}

U B29C 45/00 Injection moulding, i.e. forcing the required volume of moulding material through a nozzle into a closed mould; Apparatus therefor (injection blow-moulding [B29C 49/06](#))

- B29C 45/0001 • {characterised by the choice of material}

NOTE

{When classifying in this group, it is desirable to add the indexing codes of subclass [B29K](#) to identify the moulding materials and their properties. Documents concerning the choice of moulding materials having a particular influence on the moulding technique should be classified in this group if of interest.}

U B29C 51/00 Shaping by thermoforming {, i.e. shaping sheets or sheet like preforms after heating}, e.g. shaping sheets in matched moulds or by deep-drawing; Apparatus therefor {(blow moulding of tubular preforms [B29C 49/00](#), deforming of tubular or hollow preforms [B29C 67/0014](#))}

- B29C 51/002 • {characterised by the choice of material}

NOTE

{When classifying in this group, it is desirable to add the indexing codes of subclass [B29K](#) to identify the moulding materials and their properties. Documents concerning the choice of moulding materials having a particular influence on the moulding technique should be classified in this group if of interest.}

U B29C 53/00 Shaping by bending, folding, twisting, straightening or flattening; Apparatus therefor ([B29C 61/10](#) takes precedence)

- B29C 53/005 • {characterised by the choice of material ([B29C 53/36](#) and [B29C 53/56](#) take precedence)}

NOTE

{When classifying in this group, it is desirable to add the indexing codes of subclass [B29K](#) to identify the moulding materials and their properties. Documents concerning the choice of moulding materials having a particular influence on the moulding technique should be classified in this group if of interest.}

U B29C 55/00 Shaping by stretching, e.g. drawing through a die; Apparatus therefor ([B29C 61/08](#) takes precedence)

- B29C 55/005 • {characterised by the choice of materials}
- NOTE
 {When classifying in this group, it is desirable to add the indexing codes of subclass [B29K](#) to identify the moulding materials and their properties. Documents concerning the choice of moulding materials having a particular influence on the moulding technique should be classified in this group if of interest.}
- U B29C 59/00 Surface shaping {of articles}, e.g. embossing; Apparatus therefor {(in-mould printing [B29C 37/0025](#); by using liquids [B29C 71/0009](#); by using gases without chemical reaction [B29C 71/009](#); for decorating in general [B44](#); abrasive blasting [B24C](#); chemical aspects [C08J 7/00](#))}**
- B29C 59/005 • {characterised by the choice of material}
- NOTE
 {Documents in which moulding materials are mentioned are indexed using indexing codes of subclass [B29K](#). However, when, for example, documents concerning the choice of moulding material having a particular influence on the moulding technique cannot be satisfactorily indexed, the documents may be classified in this group if of interest. }
- U B29C 61/00 Shaping by liberation of internal stresses; Making preforms having internal stresses; Apparatus therefor (for surface shaping [B29C 59/18](#); for lining articles [B29C 63/38](#); for joining preformed parts [B29C 65/66](#) {; for packaging [B65B 53/00](#); connecting arrangements or other fittings for plastics pipes using shrink-down material [F16L 47/22](#), electrical connections insulated using heat shrinking insulating sleeves [H01R 4/72](#); cable junctions protected by sleeves [H02G 15/18](#))}**
- B29C 61/003 • {characterised by the choice of material}
- NOTE
 {When classifying in this group, it is desirable to add the indexing codes of subclass [B29K](#) to identify the moulding materials and their properties. Documents concerning the choice of moulding materials having a particular influence on the moulding technique should be classified in this group if of interest.}
- U B29C 63/00 Lining or sheathing, i.e. applying preformed layers or sheathings of plastics; Apparatus therefor ([B29C 73/00](#) takes precedence; by blowing [B29C 49/00](#); by thermoforming [B29C 51/00](#))**
- B29C 63/0017 • {characterised by the choice of the material}
- NOTE
 {When classifying in this group, it is desirable to add the indexing codes of subclass [B29K](#) to identify the moulding materials and their properties. Documents concerning the choice of moulding materials having a particular influence on the moulding technique should be classified in this group if of interest.}
- U B29C 65/00 Joining {or sealing} of preformed parts {, e.g. welding of plastics materials}; Apparatus therefor {(general aspects of processes or apparatus for joining preformed parts [B29C 66/00](#); using porous material formed by internal pressure generated therein for joining preformed parts [B29C 44/1228](#), [B29C 44/326](#))}**
- U B29C 65/56 • using mechanical means {or mechanical connections, e.g. form-fits}**

- U B29C 65/64
- • Joining a non-plastics element to a plastics element, e.g. by force ([B29C 65/44](#) takes precedence)
- NOTE
When classifying in this group, compositions of the non-plastics element are additionally classified in the relevant groups, i.e. in [B29C 66/74](#) and subgroups

- B29C 65/645
- • • {using friction or ultrasonic vibrations}
- NOTE
{When classifying in this group, compositions of the non-plastics element are additionally classified in the relevant groups, i.e. in [B29C 66/74](#) and subgroups. }

Project: Unknown (B29D)

- U B29D 11/00 **Producing optical elements, e.g. lenses or prisms (grinding or polishing of optical elements [B24B](#); constructional form of optical elements [G02B](#); {optical parts of spectacles [G02C 7/00](#)})**
- B29D 11/0073
- {Optical laminates}
- NOTE
{Classification in this group must be supplemented, in so far as any product is concerned, by classification in [B32B](#). }

Project: Unknown (B41C)

- U B41C 1/00 **Forme preparation**
- U B41C 1/02
- B41C 1/025
- Engraving; Heads therefor (recording on record carriers, heads therefor [G11B](#))
 - • {characterised by means for the liquid etching of substrates for the manufacturing of relief or intaglio printing forms, already provided with resist pattern}
- NOTE
{Attention is drawn to the title of class [B41](#) and to subclass [H04N](#), in particular to the Notes following the title of that subclass and to the group [H04N 1/00](#)}
- U B41C 1/04
- B41C 1/05
- • using heads controlled by an electric information signal
 - • • Heat-generating engraving heads, e.g. laser beam, electron beam
- NOTE
{The fabrication of lithographic forms, screen printing forms or stencils with a laser beam or another high energetic radiation beam is not considered as involving an engraving. The preparation of such forms is covered by [B41C 1/10](#) and [B41C 1/14](#)}

Project: Unknown (B60C)

- U B60C 23/00 **Devices for measuring, signalling, controlling, or distributing tyre pressure or temperature, specially adapted for mounting on vehicles; Arrangement of tyre inflating devices on vehicles, e.g. of pumps or of tanks; Tyre cooling arrangements**
- B60C 23/005
- {Devices specially adapted for special wheel arrangements}
- NOTE
{[B60C 23/001](#), [B60C 23/02](#), [B60C 23/04](#), [B60C 23/06](#) or [B60C 23/08](#)}

- U B60C 25/00** **Apparatus or tools adapted for mounting, removing or inspecting tyres (testing of tyres [G01M 17/02](#))**
- B60C 25/002
- {Inspecting tyres}
- NOTE
{When classifying in this group, classification is also made in the appropriate subgroups of [B60C 25/0548](#).}

Project: RP10471-F (B60N)

- U B60N 2/00** **Seats specially adapted for vehicles; Arrangement or mounting of seats in vehicles (railway seats [B61D 33/00](#); cycle seats [B62J 1/00](#); aircraft seats [B64D 11/06](#), [B64D 25/04](#), [B64D 25/10](#))**
- M B60N 2/002
- {Seats provided with an occupancy detection means mounted therein or thereon (detection means responsive to presence or absence of children [B60N 2/266](#))}
- WARNING
Group B60N 2/002 is impacted by reclassification into groups B60N 2/0021 – B60N 2/0035, B60N 2/266 – B60N 2/272, B60N 2210/00 – B60N 2210/50, B60N 2220/00 – B60N 2220/30, and B60N 2230/00 – B60N 2230/30. All groups listed in this Warning should be considered in order to perform a complete search.
- M B60N 2/0021
- • {characterised by the type of sensor or measurement}
- NOTE
{In this group, it is mandatory to add the indexing codes of groups [B60N 2210/00](#) - [B60N 2210/50](#)}
- WARNING
Groups B60N 2/0021 – B60N 2/0035 are incomplete pending reclassification of documents from group B60N 2/002. All groups listed in this Warning should be considered in order to perform a complete search.
- U B60N 2/02
- the seat or part thereof being movable, e.g. adjustable (adjustable arm-rests [B60N 2/75](#); adjustable head-rests [B60N 2/806](#))
- M B60N 2/0224
- • {Non-manual adjustments, e.g. with electrical operation}
- WARNING
Group B60N 2/0224 is impacted by reclassification into groups B60N 2/0226, B60N 2/0229, B60N 2/0231, B60N 2/0233, B60N 2/0235, B60N 2/0237, B60N 2/0239, B60N 2/0241, B60N 2/0273, B60N 2/0274, B60N 2/0277, and B60N 2/0278 – B60N 2/0279. All groups listed in this Warning should be considered in order to perform a complete search.
- M B60N 2/0226
- • • {User interfaces specially adapted for seat adjustment}
- WARNING
Group B60N 2/0226 is incomplete pending reclassification of documents from group B60N 2/0224. Groups B60N 2/0224 and B60N 2/0226 should be considered in order to perform a complete search.

M	B60N 2/0228	<ul style="list-style-type: none"> • • • {Hand-activated mechanical switches (B60N 2/0229 takes precedence)} <p><u>WARNING</u> Group B60N 2/0228 is impacted by reclassification into groups B60N 2/0229, B60N 2/0231, B60N 2/0233, B60N 2/0235, B60N 2/0237, B60N 2/0239, B60N 2/0241, B60N 2/0277, and B60N 2/0278-B60N 2/0279. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B60N 2/0229	<ul style="list-style-type: none"> • • • {characterised by the shape, e.g. switches having cushion or backrest shape} <p><u>WARNING</u> Group B60N 2/0229 is incomplete pending reclassification of documents from groups B60N 2/0224 and B60N 2/0228. Groups B60N 2/0224, B60N 2/0228, and B60N 2/0229 should be considered in order to perform a complete search.</p>
M	B60N 2/0231	<ul style="list-style-type: none"> • • • {concealed interfaces, e.g. hidden below seat cover} <p><u>WARNING</u> Group B60N 2/0231 is incomplete pending reclassification of documents from groups B60N 2/0224 and B60N 2/0228. Groups B60N 2/0224, B60N 2/0228, and B60N 2/0231 should be considered in order to perform a complete search.</p>
M	B60N 2/0233	<ul style="list-style-type: none"> • • • {Touchscreens} <p><u>WARNING</u> Group B60N 2/0233 is incomplete pending reclassification of documents from groups B60N 2/0224 and B60N 2/0228. Groups B60N 2/0224, B60N 2/0228, and B60N 2/0233 should be considered in order to perform a complete search.</p>
M	B60N 2/0235	<ul style="list-style-type: none"> • • • {Joysticks} <p><u>WARNING</u> Group B60N 2/0235 is incomplete pending reclassification of documents from groups B60N 2/0224 and B60N 2/0228. Groups B60N 2/0224, B60N 2/0228, and B60N 2/0235 should be considered in order to perform a complete search.</p>
M	B60N 2/0237	<ul style="list-style-type: none"> • • • {using portable terminals, e.g. smartphones} <p><u>WARNING</u> Group B60N 2/0237 is incomplete pending reclassification of documents from groups B60N 2/0224 and B60N 2/0228. Groups B60N 2/0224, B60N 2/0228, and B60N 2/0237 should be considered in order to perform a complete search.</p>
M	B60N 2/0239	<ul style="list-style-type: none"> • • • {using movement detection or gesture recognition} <p><u>WARNING</u> Group B60N 2/0239 is incomplete pending reclassification of documents from groups B60N 2/0224 and B60N 2/0228. Groups B60N 2/0224, B60N 2/0228, and B60N 2/0239 should be considered in order to perform a complete search.</p>

M	B60N 2/0241	<ul style="list-style-type: none"> • • • {using augmented or virtual reality} <p><u>WARNING</u> Group B60N 2/0241 is incomplete pending reclassification of documents from groups B60N 2/0224 and B60N 2/0228. Groups B60N 2/0224, B60N 2/0228, and B60N 2/0241 should be considered in order to perform a complete search.</p>
M	B60N 2/0244	<ul style="list-style-type: none"> • • • {with logic circuits} <p><u>WARNING</u> Group B60N 2/0244 is impacted by reclassification into groups B60N 2/0273, B60N 2/0274, B60N 2/0277, and B60N 2/0278 – B60N 2/0279. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B60N 2/0248	<ul style="list-style-type: none"> • • • {with memory of positions} <p><u>WARNING</u> Group B60N 2/0248 is impacted by reclassification into groups B60N 2/0273, B60N 2/0277, and B60N 2/0278 – B60N 2/0279. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B60N 2/0252	<ul style="list-style-type: none"> • • • {with relations between different adjustments, e.g. height of headrest following longitudinal position of seat} <p><u>WARNING</u> Group B60N 2/0252 is impacted by reclassification into groups B60N 2/0273, B60N 2/0277, and B60N 2/0278 – B60N 2/0279. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B60N 2/0273	<ul style="list-style-type: none"> • • • {taking into account user data, e.g. knee height or physical state} <p><u>WARNING</u> Group B60N 2/0273 is incomplete pending reclassification of documents from groups B60N 2/0224, B60N 2/0244, B60N 2/0248, and B60N 2/0252. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B60N 2/0274	<ul style="list-style-type: none"> • • • {movement of the seat following a virtual reality simulation} <p><u>WARNING</u> Group B60N 2/0274 is incomplete pending reclassification of documents from groups B60N 2/0224 and B60N 2/0244. Groups B60N 2/0224, B60N 2/0244, and B60N 2/0274 should be considered in order to perform a complete search.</p>
M	B60N 2/0277	<ul style="list-style-type: none"> • • • {characterised by the calculation method or calculation flow chart of sensor data for adjusting the seat} <p><u>WARNING</u> Group B60N 2/0277 is incomplete pending reclassification of documents from groups B60N 2/0224, B60N 2/0228, B60N 2/0244, B60N 2/0248, and B60N 2/0252. All groups listed in this Warning should be considered in order to perform a complete search.</p>

M	B60N 2/0278	<ul style="list-style-type: none"> • • • {using sensors external to the seat for measurements in relation to the seat adjustment, e.g. for identifying the presence of obstacles or the appropriateness of the occupants position} <p><u>WARNING</u> Groups B60N 2/0278 and B60N 2/0279 are incomplete pending reclassification of documents from groups B60N 2/0224, B60N 2/0228, B60N 2/0244, B60N 2/0248, and B60N 2/0252. All groups listed in this Warning should be considered in order to perform a complete search.</p>
U	B60N 2/24	<ul style="list-style-type: none"> • for particular purposes or particular vehicles
M	B60N 2/26	<ul style="list-style-type: none"> • • for children (B60N 2/30 takes precedence) <p><u>WARNING</u> Group B60N 2/26 is impacted by reclassification into groups B60N 2/266 - B60N 2/272, B60N 2/273, and B60N 2/274. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B60N 2/266	<ul style="list-style-type: none"> • • • {with detection or alerting means responsive to presence or absence of children; with detection or alerting means responsive to improper locking or installation of the child seats or parts thereof} <p><u>WARNING</u> Groups B60N 2/266 - B60N 2/272 are incomplete pending reclassification of documents from groups B60N 2/002, B60N 2/26, B60N 2/28, B60N 2/2803, B60N 2/2806, B60N 2/2809, B60N 2/2812, and B60N 2002/2815. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B60N 2/273	<ul style="list-style-type: none"> • • • {with detection or alerting means responsive to crashes} <p><u>WARNING</u> Group B60N 2/273 is incomplete pending reclassification of documents from groups B60N 2/26, B60N 2/28, B60N 2/2803, B60N 2/2806, B60N 2/2809, B60N 2/2812, and B60N 2002/2815. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B60N 2/274	<ul style="list-style-type: none"> • • • {characterised by the communication means between the child seat and another entity, e.g. vehicle or portable device} <p><u>WARNING</u> Group B60N 2/274 is incomplete pending reclassification of documents from groups B60N 2/26, B60N 2/28, B60N 2/2803, B60N 2/2806, B60N 2/2809, B60N 2/2812, and B60N 2002/2815. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B60N 2/28	<ul style="list-style-type: none"> • • • Seats readily mountable on, and dismountable from, existing seats {or other parts} of the vehicle <p><u>WARNING</u> Group B60N 2/28 is impacted by reclassification into groups B60N 2/266 - B60N 2/272, B60N 2/273, and B60N 2/274. All groups listed in this Warning should be considered in order to perform a complete search.</p>

M	B60N 2/2803	<ul style="list-style-type: none"> • • • {Adaptations for seat belts} <p><u>WARNING</u> Group B60N 2/2803 is impacted by reclassification into groups B60N 2/266 – B60N 2/272, B60N 2/273, and B60N 2/274. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B60N 2/2806	<ul style="list-style-type: none"> • • • • {for securing the child seat to the vehicle} <p><u>WARNING</u> Group B60N 2/2806 is impacted by reclassification into groups B60N 2/266 – B60N 2/272, B60N 2/273, and B60N 2/274. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B60N 2/2809	<ul style="list-style-type: none"> • • • • • {with additional tether connected to the top of the child seat and passing above the top of the back-rest} <p><u>WARNING</u> Group B60N 2/2809 is impacted by reclassification into groups B60N 2/266 – B60N 2/272, B60N 2/273, and B60N 2/274. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B60N 2/2812	<ul style="list-style-type: none"> • • • • • {for securing the child to the child seat} <p><u>WARNING</u> Group B60N 2/2812 is impacted by reclassification into groups B60N 2/266 – B60N 2/272, B60N 2/273, and B60N 2/274. All groups listed in this Warning should be considered in order to perform a complete search.</p>
D	B60N 2002/2815 —(Frozen)	<ul style="list-style-type: none"> • • • • • {with additional belt accessories, e.g. a belt tension detector} <p><u>WARNING</u> Group B60N 2002/2815 is no longer used for the classification of documents as of August 1, 2023. The content of this group is being reclassified into groups B60N 2/266 – B60N 2/272, B60N 2/273, B60N 2/274, and B60N 2/2816. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B60N 2/2816	<ul style="list-style-type: none"> • • • • • {with additional belt accessories, e.g. belt tension detectors} <p><u>WARNING</u> Group B60N 2/2816 is incomplete pending reclassification of documents from group B60N 2002/2815. Groups B60N 2002/2815 and B60N 2/2816 should be considered in order to perform a complete search.</p>
M	B60N 2210/00	<p>Sensor types, e.g. for passenger detection systems or for controlling seats</p> <p><u>WARNING</u> Groups B60N 2210/00 – B60N 2210/50 are incomplete pending reclassification of documents from group B60N 2/002. All groups listed in this Warning should be considered in order to perform a complete search.</p>

M B60N 2220/00 Computerised treatment of data for controlling of seats**WARNING**

Groups B60N 2220/00 – B60N 2220/30 are incomplete pending reclassification of documents from group B60N 2/002.
All groups listed in this Warning should be considered in order to perform a complete search.

M B60N 2230/00 Communication or electronic aspects**WARNING**

Groups B60N 2230/00 – B60N 2230/30 are incomplete pending reclassification of documents from group B60N 2/002.
All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP10482-F (B61L)**U B61L 27/00 Central railway traffic control systems; Trackside control; Communication systems specially adapted therefor****M B61L 27/04** • Automatic systems, e.g. controlled by train; Change-over to manual control**WARNING**

Group B61L 27/04 is impacted by reclassification into group B61L 99/002.
All groups listed in this Warning should be considered in order to perform a complete search.

M B61L 99/00 Subject matter not provided for in other groups of this subclass**WARNING**

Group B61L 99/00 is impacted by reclassification into group B61L 99/002.
All groups listed in this Warning should be considered in order to perform a complete search.

M B61L 99/002 • {Autonomous vehicles, i.e. under distributed traffic control}**WARNING**

Group B61L 99/002 is incomplete pending reclassification of documents from groups B61L 27/04 and B61L 99/00.
All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP11941-F (B64C)**M B64C 1/00 Fuselages; Constructional features common to fuselages, wings, stabilising surfaces or the like****WARNING**

Group B64C 1/00 is impacted by reclassification into groups B64U 10/00 – B64U 10/80, B64U 20/00 – B64U 20/98, B64U 30/00 – B64U 30/40, B64U 40/00 – B64U 40/20, B64U 50/00 – B64U 50/39, B64U 60/00 – B64U 60/70, B64U 70/00 – B64U 70/99 and B64U 80/00 – B64U 80/86.
All groups listed in this Warning should be considered in order to perform a complete search.

M B64C 1/0009 • {Aerodynamic aspects}**WARNING**

Group B64C 1/0009 is impacted by reclassification into groups B64U 10/00 – B64U 10/80, B64U 20/00 – B64U 20/98, B64U 30/00 – B64U 30/40, B64U 40/00

~~-B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.-~~
All groups listed in this Warning should be considered in order to perform a complete search.

M B64C 1/06

- Frames; Stringers; Longerons {; Fuselage sections}

WARNING

Group B64C 1/06 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00-B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00-B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.-
All groups listed in this Warning should be considered in order to perform a complete search.

M B64C 1/061

- {Frames}

WARNING

Group B64C 1/061 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00-B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00-B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.-
All groups listed in this Warning should be considered in order to perform a complete search.

M B64C 1/062

- {specially adapted to absorb crash loads}

WARNING

Group B64C 1/062 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00 - B64U 30/40, B64U 40/00-B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.-
All groups listed in this Warning should be considered in order to perform a complete search.

M B64C 1/063

- {Folding or collapsing to reduce overall dimensions, e.g. foldable tail booms}

WARNING

Group B64C 1/063 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00 - B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.-
All groups listed in this Warning should be considered in order to perform a complete search.

M B64C 1/064

- {Stringers; Longerons}

WARNING

Group B64C 1/064 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00 - B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.-
All groups listed in this Warning should be considered in order to perform a complete search.

M B64C 1/065

- {Spars}

WARNING

Group B64C 1/065 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00 - B64U 30/40,

B64U 40/00 – B64U 40/20, B64U 50/00 – B64U 50/39, B64U 60/00 – B64U 60/70, B64U 70/00 – B64U 70/99 and B64U 80/00 – B64U 80/86.
All groups listed in this Warning should be considered in order to perform a complete search.

M B64C 1/068

- {Fuselage sections}

WARNING

Group B64C 1/068 is impacted by reclassification into groups B64U 10/00 – B64U 10/80, B64U 20/00 – B64U 20/98, B64U 30/00 – B64U 30/40, B64U 40/00 – B64U 40/20, B64U 50/00 – B64U 50/39, B64U 60/00 – B64U 60/70, B64U 70/00 – B64U 70/99 and B64U 80/00 – B64U 80/86.
All groups listed in this Warning should be considered in order to perform a complete search.

M B64C 1/069

- • {Joining arrangements therefor}

WARNING

Group B64C 1/069 is impacted by reclassification into groups B64U 10/00 – B64U 10/80, B64U 20/00 – B64U 20/98, B64U 30/00 – B64U 30/40, B64U 40/00 – B64U 40/20, B64U 50/00 – B64U 50/39, B64U 60/00 – B64U 60/70, B64U 70/00 – B64U 70/99 and B64U 80/00 – B64U 80/86.
All groups listed in this Warning should be considered in order to perform a complete search.

M B64C 1/26

- Attaching the wing or tail units or stabilising surfaces

WARNING

Group B64C 1/26 is impacted by reclassification into groups B64U 20/50 and B64U 30/12 – B64U 30/16.
Groups B64C 1/26, B64U 20/50 and B64U 30/12 – B64U 30/16 should be considered in order to perform a complete search.

M B64C 1/30

- Parts of fuselage relatively movable to reduce overall dimensions of aircraft

WARNING

Group B64C 1/30 is impacted by reclassification into group B64U 20/50.
Groups B64C 1/30 and B64U 20/50 should be considered in order to perform a complete search.

U B64C 3/00

Wings (ornithopter wings [B64C 33/02](#))

U B64C 3/38

- Adjustment of complete wings or parts thereof

M B64C 3/56

- • Folding or collapsing to reduce overall dimensions of aircraft

WARNING

Group B64C 3/56 is impacted by reclassification into groups B64U 20/50 and B64U 30/12 – B64U 30/16.
Groups B64C 3/56, B64U 20/50 and B64U 30/12 – B64U 30/16 should be considered in order to perform a complete search.

U B64C 27/00

Rotorcraft; Rotors peculiar thereto

U B64C 27/04

- Helicopters

M B64C 27/08

- • with two or more rotors

WARNING

Group B64C 27/08 is impacted by reclassification into groups B64U 10/00 – B64U 10/80, B64U 20/00 – B64U 20/98, B64U 30/00 – B64U 30/40, B64U 40/00 – B64U 40/20, B64U 50/00 – B64U 50/39, B64U 60/00 – B64U 60/70, B64U 70/00 – B64U 70/99 and B64U 80/00 – B64U 80/86.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64C 27/10

- • arranged coaxially

WARNING

Group B64C 27/10 is impacted by reclassification into groups B64U 10/00 – B64U 10/80, B64U 20/00 – B64U 20/98, B64U 30/00 – B64U 30/40, B64U 40/00 – B64U 40/20, B64U 50/00 – B64U 50/39, B64U 60/00 – B64U 60/70, B64U 70/00 – B64U 70/99 and B64U 80/00 – B64U 80/86. All groups listed in this Warning should be considered in order to perform a complete search.

M B64C 27/20

- Rotorcraft characterised by having shrouded rotors, e.g. flying platforms

WARNING

Group B64C 27/20 is impacted by reclassification into groups B64U 10/00 – B64U 10/80, B64U 20/00 – B64U 20/98, B64U 30/00 – B64U 30/40, B64U 40/00 – B64U 40/20, B64U 50/00 – B64U 50/39, B64U 60/00 – B64U 60/70, B64U 70/00 – B64U 70/99 and B64U 80/00 – B64U 80/86. All groups listed in this Warning should be considered in order to perform a complete search.

M B64C 33/00

Ornithopters

WARNING

Group B64C 33/00 is impacted by reclassification into group B64U 10/40. Groups B64C 33/00 and B64U 10/40 should be considered in order to perform a complete search.

M B64C 39/00

Aircraft not otherwise provided for

WARNING

Group B64C 39/00 is impacted by reclassification into groups B64U 10/00 – B64U 10/80, B64U 20/00 – B64U 20/98, B64U 30/00, B64U 30/10 – B64U 30/16, B64U 30/20 – B64U 30/299, B64U 30/30, B64U 30/40, B64U 40/00 – B64U 40/20, B64U 50/00 – B64U 50/39, B64U 60/00 – B64U 60/70, B64U 70/00 – B64U 70/99 and B64U 80/00 – B64U 80/86. All groups listed in this Warning should be considered in order to perform a complete search.

M B64C 39/001

- {Flying saucers}

WARNING

Group B64C 39/001 is impacted by reclassification into groups B64U 10/00 – B64U 10/80, B64U 20/00 – B64U 20/98, B64U 30/00, B64U 30/10 – B64U 30/16, B64U 30/20 – B64U 30/299, B64U 30/30, B64U 30/40, B64U 40/00 – B64U 40/20, B64U 50/00 – B64U 50/39, B64U 60/00 – B64U 60/70, B64U 70/00 – B64U 70/99 and B64U 80/00 – B64U 80/86. All groups listed in this Warning should be considered in order to perform a complete search.

M B64C 39/003

- {with wings, paddle wheels, bladed wheels, moving or rotating in relation to the fuselage (rotorcraft [B64C 27/00](#); ornithopters [B64C 33/00](#))}

WARNING

Group B64C 39/003 is impacted by reclassification into groups B64U 10/00 – B64U 10/80, B64U 20/00 – B64U 20/98, B64U 30/00, B64U 30/10 – B64U 30/16, B64U 30/20 – B64U 30/299, B64U 30/30, B64U 30/40, B64U 40/00 – B64U 40/20, B64U 50/00 – B64U 50/39, B64U 60/00 – B64U 60/70, B64U 70/00 – B64U 70/99 and B64U 80/00 – B64U 80/86.

All groups listed in this Warning should be considered in order to perform a complete search:

M B64C 39/005

- {about a horizontal transversal axis}

WARNING

Group B64C 39/005 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00, B64U 30/10-B64U 30/16, B64U 30/20-B64U 30/299, B64U 30/30, B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.

All groups listed in this Warning should be considered in order to perform a complete search:

M B64C 39/006

- {about a vertical axis}

WARNING

Group B64C 39/006 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00, B64U 30/10-B64U 30/16, B64U 30/20-B64U 30/299, B64U 30/30, B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.

All groups listed in this Warning should be considered in order to perform a complete search:

M B64C 39/008

- {about a longitudinal axis}

WARNING

Group B64C 39/008 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00, B64U 30/10-B64U 30/16, B64U 30/20-B64U 30/299, B64U 30/30, B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.

All groups listed in this Warning should be considered in order to perform a complete search:

M B64C 39/02

- characterised by special use

WARNING

Group B64C 39/02 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00, B64U 30/10-B64U 30/16, B64U 30/20-B64U 30/299, B64U 30/30, B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.

All groups listed in this Warning should be considered in order to perform a complete search:

M B64C 39/022

- {Tethered aircraft}

WARNING

Group B64C 39/022 is impacted by reclassification into group B64U 10/60. Groups B64C 39/022 and B64U 10/60 should be considered in order to perform a complete search:

M B64C 39/024

- {of the remote controlled vehicle type, i.e. RPV}

WARNING

Group B64C 39/024 is impacted by reclassification into groups B64U 10/00 - B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00,

~~B64U 30/10-B64U 30/16, B64U 30/20-B64U 30/299, B64U 30/30,
B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39,
B64U 60/00 - B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 -
B64U 80/86.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

- M B64C 39/028 • {Micro-sized aircraft}

WARNING

~~Group B64C 39/028 is impacted by reclassification into group B64U 10/80.
Groups B64C 39/028 and B64U 10/80 should be considered in order to
perform a complete search.~~

- M B64C 39/029 • {Asymmetrical aircraft}

WARNING

~~Group B64C 39/029 is impacted by reclassification into groups B64U 10/00 -
B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00, B64U 30/10-B64U 30/16,
B64U 30/20-B64U 30/299, B64U 30/30, B64U 30/40, B64U 40/00 -
B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 - B64U 60/70, B64U 70/00
- B64U 70/99 and B64U 80/00 - B64U 80/86.~~

~~All groups listed in this Warning should be considered in order to perform a
complete search.~~

Project: RP11941-F (B64D)

- U B64D 47/00 **Equipment not otherwise provided for**

- M B64D 47/08 • Arrangements of cameras

WARNING

~~Group B64D 47/08 is impacted by reclassification into group B64U 20/87.
Groups B64D 47/08 and B64U 20/87 should be considered in order to perform
a complete search.~~

Project: RP11941-F (B64U)

- M B64U 10/00 **Type of UAV**

WARNING

~~Group B64U 10/00 is incomplete pending reclassification of documents from
groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062,
B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08,
B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003,
B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024 and
B64C 39/029.~~

~~Group B64U 10/00 is also impacted by reclassification into groups B64U 10/10 -
B64U 10/17, B64U 10/20, B64U 10/25, B64U 10/30, B64U 10/40, B64U 10/50,
B64U 10/60, B64U 10/70, B64U 10/80, B64U 20/00 - B64U 20/98, B64U 30/00 -
B64U 30/40, B64U 40/00 - B64U 40/20, B64U 50/00 - B64U 50/39, B64U 60/00 -
B64U 60/70, B64U 70/00 - B64U 70/99 and B64U 80/00 - B64U 80/86.~~

~~All groups listed in this Warning should be considered in order to perform a
complete search.~~

- M B64U 10/10 • Rotorcrafts

WARNING

~~Group B64U 10/10 is incomplete pending reclassification of documents from
groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062,
B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08,~~

B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029 and B64U 10/00.
Group B64U 10/10 is also impacted by reclassification into groups B64U 10/11, B64U 10/13 – B64U 10/16 and B64U 10/17.
All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 10/11

- Autogyros

WARNING

Group B64U 10/11 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 10/10.
All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 10/13

- Flying platforms

WARNING

Group B64U 10/13 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 10/10.
Group B64U 10/13 is also impacted by reclassification into groups B64U 10/14 and B64U 10/16.
All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 10/14

- with four distinct rotor axes, e.g. quadcopters

WARNING

Group B64U 10/14 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00, B64U 10/10 and B64U 10/13.
All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 10/16

- with five or more distinct rotor axes, e.g. octocopters

WARNING

Group B64U 10/16 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00, B64U 10/10 and B64U 10/13.
All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 10/17

- Helicopters (flying platforms [B64U 10/13](#))

WARNING

Group B64U 10/17 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 10/10.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 10/20

- Vertical take-off and landing [VTOL] aircraft (flying platforms [B64U 10/13](#); helicopters [B64U 10/17](#))

WARNING

Group B64U 10/20 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029 and B64U 10/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 10/25

- Fixed-wing aircraft (VTOL aircraft [B64U 10/20](#))

WARNING

Group B64U 10/25 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029 and B64U 10/00.

Group B64U 10/25 is also impacted by reclassification into group B64U 30/10.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 10/30

- Lighter-than-air aircraft, e.g. aerostatic aircraft

WARNING

Group B64U 10/30 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029 and B64U 10/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 10/40

- Ornithopters

WARNING

Group B64U 10/40 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 33/00, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029 and B64U 10/00.

All groups listed in this Warning should be considered in order to perform a complete search.

- M B64U 10/50
- Glider-type UAVs, e.g. with parachute, parasail or kite (for landing [B64U 70/83](#))
- WARNING
Group B64U 10/50 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029 and B64U 10/00.
All groups listed in this Warning should be considered in order to perform a complete search.
- M B64U 10/60
- Tethered aircraft
- WARNING
Group B64U 10/60 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/022, B64C 39/024, B64C 39/029 and B64U 10/00.
All groups listed in this Warning should be considered in order to perform a complete search.
- M B64U 10/70
- Convertible aircraft, e.g. convertible into land vehicles
- WARNING
Group B64U 10/70 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029 and B64U 10/00.
All groups listed in this Warning should be considered in order to perform a complete search.
- M B64U 10/80
- UAVs characterised by their small size, e.g. micro air vehicles [MAV]
- WARNING
Group B64U 10/80 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/028, B64C 39/029 and B64U 10/00.
All groups listed in this Warning should be considered in order to perform a complete search.
- M B64U 20/00
- Constructional aspects of UAVs (of lift-producing means [B64U 30/00](#))**
- WARNING
Groups B64U 20/00, B64U 20/10, B64U 20/20, B64U 20/30, B64U 20/40, B64U 20/60, B64U 20/65, B64U 20/70, B64U 20/73, B64U 20/75, B64U 20/77, B64U 20/80, B64U 20/83, B64U 20/90, B64U 20/92, B64U 20/94, B64U 20/96 and B64U 20/98 are incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029 and B64U 10/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 20/50

- Foldable or collapsible UAVs (with frangible components [B64U 20/30](#))

WARNING

Group B64U 20/50 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 1/26, B64C 1/30, B64C 3/56, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029 and B64U 10/00.

All groups listed in this Warning should be considered in order to perform a complete search.

U B64U 20/80

- Arrangement of on-board electronics, e.g. avionics systems or wiring

M B64U 20/87

- Mounting of imaging devices, e.g. mounting of gimbals

WARNING

Group B64U 20/87 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64D 47/08 and B64U 10/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 30/00

Means for producing lift; Empennages; Arrangements thereof

WARNING

Group B64U 30/00 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029 and B64U 10/00.

Group B64U 30/00 is also impacted by reclassification into groups B64U 30/10 – B64U 30/16, B64U 30/20 – B64U 30/299, B64U 30/30 and B64U 30/40.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 30/10

- Wings

WARNING

Group B64U 30/10 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00, B64U 10/25 and B64U 30/00.

Group B64U 30/10 is also impacted by reclassification into groups B64U 30/12 – B64U 30/16.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 30/12

- Variable or detachable wings, e.g. wings with adjustable sweep

WARNING

Group B64U 30/12 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062,

~~B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 1/26, B64C 1/30, B64C 3/56, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00, B64U 30/00 and B64U 30/10.~~

~~Group B64U 30/12 is also impacted by reclassification into groups B64U 30/14 and B64U 30/16.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M B64U 30/14

- • detachable

WARNING

~~Group B64U 30/14 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 1/26, B64C 1/30, B64C 3/56, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00, B64U 30/00, B64U 30/10 and B64U 30/12.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M B64U 30/16

- • movable along the UAV body

WARNING

~~Group B64U 30/16 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 1/26, B64C 1/30, B64C 3/56, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00, B64U 30/00, B64U 30/10 and B64U 30/12.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M B64U 30/20

- Rotors; Rotor supports

WARNING

~~Group B64U 30/20 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 30/00.~~

~~Group B64U 30/20 is also impacted by reclassification into groups B64U 30/21, B64U 30/24, B64U 30/26, B64U 30/27 and B64U 30/29 – B64U 30/299.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M B64U 30/21

- • Rotary wings

WARNING

~~Group B64U 30/21 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00, B64U 30/00 and B64U 30/20.~~

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 30/24

- Coaxial rotors

WARNING

Group B64U 30/24 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00, B64U 30/00 and B64U 30/20. All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 30/26

- Ducted or shrouded rotors

WARNING

Group B64U 30/26 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00, B64U 30/00 and B64U 30/20. All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 30/27

- Rim-driven rotors

WARNING

Group B64U 30/27 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00, B64U 30/00 and B64U 30/20. All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 30/29

- Constructional aspects of rotors or rotor supports; Arrangements thereof

WARNING

Groups B64U 30/29 -- B64U 30/299 are incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00, B64U 30/00 and B64U 30/20. All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 30/30

- Lift-producing means using radial airflow

WARNING

Group B64U 30/30 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 30/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 30/40

- Empennages, e.g. V-tails (foldable or collapsible UAVs [B64U 20/50](#))

WARNING

Group B64U 30/40 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 30/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 40/00

On-board mechanical arrangements for adjusting control surfaces or rotors; On-board mechanical arrangements for in-flight adjustment of the base configuration (control of position, course, altitude or attitude of air or space vehicles, e.g. automatic pilot, [G05D 1/00](#))

WARNING

Groups B64U 40/00 - B64U 40/20 are incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029 and B64U 10/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 50/00

Propulsion; Power supply

WARNING

Group B64U 50/00 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029 and B64U 10/00.

Group B64U 50/00 is also impacted by reclassification into groups B64U 50/10 - B64U 50/19, B64U 50/20 - B64U 50/27 and B64U 50/30 - B64U 50/39.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 50/10

- Propulsion (rotors specially adapted for rotorcraft or VTOL [B64U 30/20](#))

WARNING

Groups B64U 50/10, B64U 50/11, B64U 50/12, B64U 50/15, B64U 50/16 and B64U 50/18 are incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 50/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 50/13

- using external fans or propellers

WARNING

Group B64U 50/13 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 50/00.

Group B64U 50/13 is also impacted by reclassification into group B64U 50/14.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 50/14

- ducted or shrouded

WARNING

Group B64U 50/14 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00, B64U 50/00 and B64U 50/13.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 50/19

- using electrically powered motors

WARNING

Group B64U 50/19 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 50/00.

Group B64U 50/19 is also impacted by reclassification into groups B64U 50/30 – B64U 50/39.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 50/20

- Transmission of mechanical power to rotors or propellers

WARNING

Groups B64U 50/20 – B64U 50/27 are incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 50/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 50/30

- Supply or distribution of electrical power

WARNING

Groups B64U 50/30, B64U 50/32 and B64U 50/33 are incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008,

B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00, B64U 50/00 and B64U 50/19.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 50/31

- generated by photovoltaics

WARNING

Group [B64U 50/31](#) is incomplete pending reclassification of documents from groups ~~B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00, B64U 50/00, B64U 50/19 and [B64D 27/353](#).~~ Groups [B64U 50/31](#) and [B64D 27/353](#)

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 50/34

- In-flight charging (photovoltaics [B64U 50/31](#))

WARNING

Group B64U 50/34 is incomplete pending reclassification of documents from groups ~~B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00, B64U 50/00 and B64U 50/19.~~

Group B64U 50/34 is also impacted by reclassification into groups ~~B64U 50/35, B64U 50/36, B64U 50/37 – B64U 50/38 and B64U 50/39.~~

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 50/35

- by wireless transmission, e.g. by induction

WARNING

Group B64U 50/35 is incomplete pending reclassification of documents from groups ~~B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00, B64U 50/00, B64U 50/19 and B64U 50/34.~~

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 50/36

- by wind turbines, e.g. ram air turbines [RAT]

WARNING

Group B64U 50/36 is incomplete pending reclassification of documents from groups ~~B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00, B64U 50/00, B64U 50/19 and B64U 50/34.~~

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 50/37

- Charging when not in flight

WARNING

Groups B64U 50/37 and B64U 50/38 are incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00, B64U 50/00, B64U 50/19 and B64U 50/34.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 50/39

- Battery swapping

WARNING

Group B64U 50/39 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00, B64U 50/00, B64U 50/19 and B64U 50/34.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 60/00

Undercarriages**WARNING**

Groups B64U 60/00 - B64U 60/70 are incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029 and B64U 10/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 70/00

Launching, take-off or landing arrangements**WARNING**

Group B64U 70/00 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029 and B64U 10/00.

Group B64U 70/00 is also impacted by reclassification into groups B64U 70/10, B64U 70/20, B64U 70/30, B64U 70/40, B64U 70/50, B64U 70/60, B64U 70/70, B64U 70/80-B64U 70/87 and B64U 70/90 - B64U 70/99.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 70/10

- for releasing or capturing UAVs by hand

WARNING

Group B64U 70/10 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003,

B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024,
B64C 39/029, B64U 10/00 and B64U 70/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 70/20

- for releasing or capturing UAVs in flight by another aircraft

WARNING

Group B64U 70/20 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 70/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 70/30

- for capturing UAVs in flight by ground or sea-based arresting gear, e.g. by a cable or a net

WARNING

Group B64U 70/30 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 70/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 70/40

- Landing characterised by flight manoeuvres, e.g. deep stall

WARNING

Group B64U 70/40 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 70/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 70/50

- Launching from storage containers, e.g. from submarine missile tubes

WARNING

Group B64U 70/50 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 70/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 70/60

- Take-off or landing of UAVs from a runway using their own power

WARNING

Group B64U 70/60 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003,

~~B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 70/00.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M B64U 70/70

- Launching or landing using catapults, tracks or rails (launching from storage containers [B64U 70/50](#))

WARNING

~~Group B64U 70/70 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 70/00.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M B64U 70/80

- Vertical take-off or landing, e.g. using rockets (rotorcrafts [B64U 10/10](#); VTOL aircraft [B64U 10/20](#))

WARNING

~~Group B64U 70/80 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 70/00.~~

~~Group B64U 70/80 is also impacted by reclassification into group B64U 70/83. All groups listed in this Warning should be considered in order to perform a complete search.~~

M B64U 70/83

- • using parachutes, balloons or the like

WARNING

~~Group B64U 70/83 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00, B64U 70/00 and B64U 70/80.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M B64U 70/87

- • using inflatable cushions

WARNING

~~Group B64U 70/87 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 70/00.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M B64U 70/90

- Launching from or landing on platforms

WARNING

~~Groups B64U 70/90 – B64U 70/99 are incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069,~~

B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 70/00.
All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 80/00

Transport or storage specially adapted for UAVs

WARNING

Group B64U 80/00 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029 and B64U 10/00.

Group B64U 80/00 is also impacted by reclassification into groups B64U 80/10, B64U 80/20-B64U 80/25, B64U 80/30, B64U 80/40, B64U 80/50, B64U 80/60, B64U 80/70 and B64U 80/80-B64U 80/86.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 80/10

- with means for moving the UAV to a supply or launch location, e.g. robotic arms or carousels

WARNING

Group B64U 80/10 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 80/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 80/20

- with arrangements for servicing the UAV

WARNING

Groups B64U 80/20 and B64U 80/25 are incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 80/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 80/30

- with arrangements for data transmission

WARNING

Group B64U 80/30 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 80/00.

All groups listed in this Warning should be considered in order to perform a complete search.

- M B64U 80/40
- for two or more UAVs

WARNING

Group B64U 80/40 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 80/00.

All groups listed in this Warning should be considered in order to perform a complete search.

- M B64U 80/50
- the UAVs being disassembled

WARNING

Group B64U 80/50 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 80/00.

All groups listed in this Warning should be considered in order to perform a complete search.

- M B64U 80/60
- by wearable objects, e.g. garments or helmets

WARNING

Group B64U 80/60 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 80/00.

All groups listed in this Warning should be considered in order to perform a complete search.

- M B64U 80/70
- in containers ([B64U 80/60](#) takes precedence)

WARNING

Group B64U 80/70 is incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 80/00.

All groups listed in this Warning should be considered in order to perform a complete search.

- M B64U 80/80
- by vehicles

WARNING

Groups B64U 80/80 - B64U 80/86 are incomplete pending reclassification of documents from groups B64C 1/00, B64C 1/0009, B64C 1/06, B64C 1/061, B64C 1/062, B64C 1/063, B64C 1/064, B64C 1/065, B64C 1/068, B64C 1/069, B64C 27/08, B64C 27/10, B64C 27/20, B64C 39/00, B64C 39/001, B64C 39/003, B64C 39/005, B64C 39/006, B64C 39/008, B64C 39/02, B64C 39/024, B64C 39/029, B64U 10/00 and B64U 80/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 2101/00 UAVs specially adapted for particular uses or applications**WARNING**

Group B64U 2101/00 is impacted by reclassification into groups B64U 2101/05, B64U 2101/10, B64U 2101/15 - B64U 2101/19, B64U 2101/20 - B64U 2101/24, B64U 2101/25 - B64U 2101/29, B64U 2101/30 - B64U 2101/32, B64U 2101/35, B64U 2101/40, B64U 2101/45 - B64U 2101/47, B64U 2101/55 - B64U 2101/58, B64U 2101/60 - B64U 2101/69, B64U 2101/70 and B64U 2101/75.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 2101/05

- for sports or gaming, e.g. drone racing

WARNING

Group B64U 2101/05 is incomplete pending reclassification of documents from group B64U 2101/00.

Groups B64U 2101/00 and B64U 2101/05 should be considered in order to perform a complete search.

M B64U 2101/10

- for generating power to be supplied to a remote station, e.g. UAVs with solar panels

WARNING

Group B64U 2101/10 is incomplete pending reclassification of documents from group B64U 2101/00.

Groups B64U 2101/00 and B64U 2101/10 should be considered in order to perform a complete search.

M B64U 2101/15

- for conventional or electronic warfare

WARNING

Group B64U 2101/15 is incomplete pending reclassification of documents from group B64U 2101/00.

Group B64U 2101/15 is also impacted by reclassification into groups B64U 2101/16, B64U 2101/17, B64U 2101/18 and B64U 2101/19.

All groups listed in this Warning should be considered in order to perform a complete search.

M B64U 2101/16

- for controlling, capturing or immobilising other vehicles

WARNING

Group B64U 2101/16 is incomplete pending reclassification of documents from groups B64U 2101/00 and B64U 2101/15.

Groups B64U 2101/00, B64U 2101/15 and B64U 2101/16 should be considered in order to perform a complete search.

M B64U 2101/17

- for detecting, disrupting or countering communications

WARNING

Group B64U 2101/17 is incomplete pending reclassification of documents from groups B64U 2101/00 and B64U 2101/15.

Groups B64U 2101/00, B64U 2101/15 and B64U 2101/17 should be considered in order to perform a complete search.

M B64U 2101/18

- for dropping bombs; for firing ammunition

WARNING

Group B64U 2101/18 is incomplete pending reclassification of documents from groups B64U 2101/00 and B64U 2101/15.

Groups B64U 2101/00, B64U 2101/15 and B64U 2101/18 should be considered in order to perform a complete search.

M	B64U 2101/19	<ul style="list-style-type: none">• for use as targets or decoys <p><u>WARNING</u> Group B64U 2101/19 is incomplete pending reclassification of documents from groups B64U 2101/00 and B64U 2101/15. Groups B64U 2101/00, B64U 2101/15 and B64U 2101/19 should be considered in order to perform a complete search.</p>
M	B64U 2101/20	<ul style="list-style-type: none">• for use as communications relays, e.g. high-altitude platforms <p><u>WARNING</u> Group B64U 2101/20 is incomplete pending reclassification of documents from group B64U 2101/00. Group B64U 2101/20 is also impacted by reclassification into groups B64U 2101/21, B64U 2101/23 and B64U 2101/24. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B64U 2101/21	<ul style="list-style-type: none">• for providing Internet access <p><u>WARNING</u> Group B64U 2101/21 is incomplete pending reclassification of documents from groups B64U 2101/00 and B64U 2101/20. Groups B64U 2101/00, B64U 2101/20 and B64U 2101/21 should be considered in order to perform a complete search.</p>
M	B64U 2101/23	<ul style="list-style-type: none">• for providing telephone services <p><u>WARNING</u> Group B64U 2101/23 is incomplete pending reclassification of documents from groups B64U 2101/00 and B64U 2101/20. Groups B64U 2101/00, B64U 2101/20 and B64U 2101/23 should be considered in order to perform a complete search.</p>
M	B64U 2101/24	<ul style="list-style-type: none">• for use as flying displays, e.g. advertising or billboards <p><u>WARNING</u> Group B64U 2101/24 is incomplete pending reclassification of documents from groups B64U 2101/00 and B64U 2101/20. Groups B64U 2101/00, B64U 2101/20 and B64U 2101/24 should be considered in order to perform a complete search.</p>
M	B64U 2101/25	<ul style="list-style-type: none">• for manufacturing or servicing <p><u>WARNING</u> Groups B64U 2101/25 – B64U 2101/29 are incomplete pending reclassification of documents from group B64U 2101/00. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B64U 2101/30	<ul style="list-style-type: none">• for imaging, photography or videography <p><u>WARNING</u> Group B64U 2101/30 is incomplete pending reclassification of documents from group B64U 2101/00. Group B64U 2101/30 is also impacted by reclassification into groups B64U 2101/31 and B64U 2101/32. All groups listed in this Warning should be considered in order to perform a complete search.</p>

M	B64U 2101/31	<ul style="list-style-type: none"> • for surveillance <p><u>WARNING</u> Group B64U 2101/31 is incomplete pending reclassification of documents from groups B64U 2101/00 and B64U 2101/30. Groups B64U 2101/00, B64U 2101/30 and B64U 2101/31 should be considered in order to perform a complete search.</p>
M	B64U 2101/32	<ul style="list-style-type: none"> • for cartography or topography <p><u>WARNING</u> Group B64U 2101/32 is incomplete pending reclassification of documents from groups B64U 2101/00 and B64U 2101/30. Groups B64U 2101/00, B64U 2101/30 and B64U 2101/32 should be considered in order to perform a complete search.</p>
M	B64U 2101/35	<ul style="list-style-type: none"> • for science, e.g. meteorology <p><u>WARNING</u> Group B64U 2101/35 is incomplete pending reclassification of documents from group B64U 2101/00. Groups B64U 2101/00 and B64U 2101/35 should be considered in order to perform a complete search.</p>
M	B64U 2101/40	<ul style="list-style-type: none"> • for agriculture or forestry operations <p><u>WARNING</u> Group B64U 2101/40 is incomplete pending reclassification of documents from group B64U 2101/00. Groups B64U 2101/00 and B64U 2101/40 should be considered in order to perform a complete search.</p>
M	B64U 2101/45	<ul style="list-style-type: none"> • for releasing liquids or powders in-flight, e.g. crop-dusting <p><u>WARNING</u> Groups B64U 2101/45 and B64U 2101/47 are incomplete pending reclassification of documents from group B64U 2101/00. Groups B64U 2101/00, B64U 2101/45 and B64U 2101/47 should be considered in order to perform a complete search.</p>
M	B64U 2101/55	<ul style="list-style-type: none"> • for life-saving or rescue operations; for medical use <p><u>WARNING</u> Groups B64U 2101/55 – B64U 2101/58 are incomplete pending reclassification of documents from group B64U 2101/00. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B64U 2101/60	<ul style="list-style-type: none"> • for transporting passengers; for transporting goods other than weapons <p><u>WARNING</u> Group B64U 2101/60 is incomplete pending reclassification of documents from group B64U 2101/00. Group B64U 2101/60 is also impacted by reclassification into groups B64U 2101/61, B64U 2101/64-B64U 2101/66, B64U 2101/67 and B64U 2101/69. All groups listed in this Warning should be considered in order to perform a complete search.</p>

M	B64U 2101/61	<ul style="list-style-type: none"> • for transporting passengers <p>WARNING Group B64U 2101/61 is incomplete pending reclassification of documents from groups B64U 2101/00 and B64U 2101/60. Groups B64U 2101/00, B64U 2101/60 and B64U 2101/61 should be considered in order to perform a complete search.</p>
M	B64U 2101/64	<ul style="list-style-type: none"> • for parcel delivery or retrieval <p>WARNING Groups B64U 2101/64 and B64U 2101/66 are incomplete pending reclassification of documents from groups B64U 2101/00 and B64U 2101/60. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B64U 2101/67	<ul style="list-style-type: none"> • the UAVs comprising tethers for lowering the goods <p>WARNING Group B64U 2101/67 is incomplete pending reclassification of documents from groups B64U 2101/00 and B64U 2101/60. Groups B64U 2101/00, B64U 2101/60 and B64U 2101/67 should be considered in order to perform a complete search.</p>
M	B64U 2101/69	<ul style="list-style-type: none"> • the UAVs provided with means for airdropping goods, e.g. deploying a parachute during descent <p>WARNING Group B64U 2101/69 is incomplete pending reclassification of documents from groups B64U 2101/00 and B64U 2101/60. Groups B64U 2101/00, B64U 2101/60 and B64U 2101/69 should be considered in order to perform a complete search.</p>
M	B64U 2101/70	<ul style="list-style-type: none"> • for use inside enclosed spaces, e.g. in buildings or in vehicles <p>WARNING Group B64U 2101/70 is incomplete pending reclassification of documents from group B64U 2101/00. Groups B64U 2101/00 and B64U 2101/70 should be considered in order to perform a complete search.</p>
M	B64U 2101/75	<ul style="list-style-type: none"> • for extra-terrestrial use, e.g. on the Moon or Mars <p>WARNING Group B64U 2101/75 is incomplete pending reclassification of documents from group B64U 2101/00. Groups B64U 2101/00 and B64U 2101/75 should be considered in order to perform a complete search.</p>

Project: Unknown (B81B)**B81B**

MICROSTRUCTURAL DEVICES OR SYSTEMS, e.g. MICROMECHANICAL DEVICES (piezoelectric, electrostrictive or magnetostrictive elements per se [H10N 30/00](#))

NOTES

1. This subclass does not cover:

- purely electrical or electronic devices per se which are covered by section [H](#), e.g. subclass [H01L](#) or class [H10](#);
- purely optical devices per se which are covered by subclasses [G02B](#) or [G02F](#);

- essentially two-dimensional structures, e.g. layered products which are covered by subclass [B32B](#);
- chemical or biological structures per se which are covered by section [C](#);
- structures in atomic scale produced by manipulation of single atoms or molecules, which are covered by group [B82B 1/00](#).

2. Devices or systems classified in this subclass are also classified in appropriate subclasses providing for their structural or functional features, if such features are of interest.

3. {Attention is drawn to the following places:

A61K 9/50	Microcapsules for medicinal preparations
B25J 7/00	Micromanipulators
G02B 21/32	Micromanipulators combined with microscopes
G11B 5/127	Magnetic heads
H01P 3/08	Waveguide microstrips.

}

4. {In this subclass, local "residual" subgroups, e.g. [B81B 7/0077](#), are used with the following purpose:

When classifying a document which does not fit in any of a set of subgroups with the same dot-level, the document should be classified in the residual group, if present, and not in the group at the hierarchical level one dot above.

In the example, the document shall be classified in [B81B 7/0077](#) and not in [B81B 7/0032](#) as [B81B 7/0077](#) is "residual" to [B81B 7/0035-B81B 7/0074](#)}

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

U B81B 7/00

Microstructural systems; {Auxiliary parts of microstructural devices or systems}

B81B 7/008

- {MEMS characterised by an electronic circuit specially adapted for controlling or driving the same ([B81B 7/0087](#) takes precedence; arrangements for starting, regulating, braking, or otherwise controlling an actuator [H02N](#); control arrangements or circuits for visual indicators [G09G 3/00](#))}

NOTES

1. {This group covers: only MEMS with an electronic circuit which is not specific to a particular application. }
2. {This group does not cover: electronic circuits per se, e.g. for controlling or driving application specific MEMS. }

Project: Unknown (C01B)

- U C01B 3/00** **Hydrogen; Gaseous mixtures containing hydrogen; Separation of hydrogen from mixtures containing it (separation of gases by physical means [B01D](#)); Purification of hydrogen (production of water gas or synthesis gas from solid carbonaceous material [C10J](#); purifying or modifying the chemical compositions of combustible technical gases containing carbon monoxide [C10K](#))**

NOTES

1. In this group it is desirable to add the indexing codes of groups [B01J 2208/00](#) and [B01J 2219/00](#), for details relating to the reactors used in the generation of hydrogen or synthesis gas.
2. In groups [C01B 3/12](#) - [C01B 3/18](#) and in groups [C01B 3/22](#) - [C01B 3/586](#) it is desirable to add the indexing codes of group [C01B 2203/00](#), for aspects relating to hydrogen or synthesis gas generation processes.

- U C01B 3/0005** • {Reversible uptake of hydrogen by an appropriate medium, i.e. based on physical or chemical sorption phenomena or on reversible chemical reactions, e.g. for hydrogen storage purposes (purification of hydrogen [C01B 3/508](#)); Reversible gettering of hydrogen; Reversible uptake of hydrogen by electrodes}

- U C01B 3/001** • • {characterised by the uptaking medium; Treatment thereof}
- C01B 3/0026** • • • {of one single metal or a rare earth metal; Treatment thereof}

NOTES

1. {In all of the groups [C01B 3/0026](#) - [C01B 3/0084](#), the metallic storage materials may contain minor quantities of non-metals such as B, C, O, S, Se, Si; e.g. [C01B 3/0036](#) "only containing iron and titanium" includes Fe-Ti compositions comprising non-metals.}
2. {In the groups [C01B 3/0026](#) and [C01B 3/0047](#) - [C01B 3/0068](#) a "rare-earth metal" means one single metal or a combination of metals selected from the lanthanides, Sc or Y.}

- U C01B 13/00** **Oxygen; Ozone; Oxides or hydroxides in general**

- U C01B 13/02** • Preparation of oxygen (by liquefying [F25J](#))
- C01B 13/0229** • • {Purification or separation processes}

NOTE

{In groups [C01B 13/0229](#) - [C01B 13/0288](#), additional features relating to the purification or separation processes are indexed with codes chosen from [C01B 2210/0026](#) - [C01B 2210/0098](#).}

- C01B 13/0288** • • • {Combined chemical and physical processing}

NOTE

{In this group, processing steps are indexed with codes chosen from [C01B 2210/0001](#) - [C01B 2210/0025](#).}

- U C01B 21/00** **Nitrogen; Compounds thereof**

- U C01B 21/04** • Purification or separation of nitrogen (by liquefying [F25J](#))
- C01B 21/0405** • • {Purification or separation processes}

NOTE

{In this group, additional features relating to the purification or separation processes are indexed with codes chosen from [C01B 2210/0026](#) - [C01B 2210/0098](#).}

- C01B 21/0494 • • • {Combined chemical and physical processing}
- NOTE
{In this group, processing steps are indexed with codes chosen from [C01B 2210/0001](#) - [C01B 2210/0025](#).}
- U C01B 23/00 Noble gases; Compounds thereof (liquefying [F25J](#) {; noble gases obtained by rectification [F25J 3/028](#)})**
- U C01B 23/001 • {Purification or separation processes of noble gases}
- C01B 23/0094 • • {Combined chemical and physical processing}
- NOTE
{In this group, processing steps are indexed with codes chosen from [C01B 2210/0001](#) - [C01B 2210/0025](#).}
- U C01B 25/00 Phosphorus; Compounds thereof ({[C01B 6/00](#)}, [C01B 21/00](#), [C01B 23/00](#) take precedence; perphosphates [C01B 15/16](#))**
- U C01B 25/16 • Oxyacids of phosphorus; Salts thereof (peroxyacids or salts thereof [C01B 15/00](#))
- U C01B 25/46 • • Preparation involving solvent-solvent extraction (solvent extraction in general [B01D 11/00](#))
- C01B 25/461 • • • {the phosphoric acid present in the medium obtained after reaction being first extracted from the liquid phase formed or separated then re-extracted as free acid by using water or as a phosphate by using a basic compound (selective extraction of impurities contained in acid [C01B 25/237](#))}
- NOTES
1. {The extracting agent may be diluted with a compound or a mixture of compounds which are not solvents for phosphoric acid, e.g. a hydrocarbon.}
2. {Documents which belong to more than one subgroup of [C01B 25/462](#) - [C01B 25/466](#) are classified by a combination, e.g. [C01B 25/462](#) +**B4**+**B8**.}
- U C01B 33/00 Silicon; Compounds thereof ({[C01B 6/00](#)}, [C01B 21/00](#), [C01B 23/00](#) take precedence; persilicates [C01B 15/14](#); carbides [C01B 32/956](#))**
- U C01B 33/20 • Silicates (persilicates [C01B 15/14](#) {; containing aluminium [C01B 33/26](#)})
- U C01B 33/32 • • Alkali metal silicates ({[C01B 33/24](#)}, [C01B 33/26](#) take precedence)
- C01B 33/325 • • • {After-treatment, e.g. purification or stabilisation of solutions, granulation; Dissolution; Obtaining solid silicate, e.g. from a solution by spray-drying, flashing off water or adding a coagulant}
- NOTE
{In this group, obtaining solid silicate, e.g. as a hydrate of a crystalline silicate, from a solution or a hydrate melt by heating or cooling with or without seeding, is not considered as after-treatment, but classified in group [C01B 33/32](#).}

Project: Unknown (C02F)

- U C02F 1/00 Treatment of water, waste water, or sewage ([C02F 3/00](#) - [C02F 9/00](#) take precedence)**
- U C02F 1/46 • by electrochemical methods
- U C02F 1/461 • • by electrolysis
- U C02F 1/46104 • • • {Devices therefor; Their operating or servicing}

C02F 1/46109 . . . {Electrodes}

NOTE

{When classifying in group [C02F 1/46109](#), details of devices for electrolysis can be further indexed by using indexing codes chosen from [C02F 2001/46119](#) - [C02F 2001/46166](#).}

C02F 1/4618 . . . {for producing "ionised" acidic or basic water}

NOTE

{When classifying in group [C02F 1/4618](#), details relating to the production of "ionised" acidic or basic water using electrolysis devices can be further indexed by using indexing codes chosen from [C02F 2001/46185](#) - [C02F 2001/46195](#).}

Project: Unknown (C03B)

U C03B 35/00 **Transporting of glass products during their manufacture, {e.g. hot glass lenses, prisms}(conveying systems for fragile sheets, e.g. glass [B65G 49/06](#))**

U C03B 35/14 . Transporting hot glass sheets {or ribbons, e.g. by heat-resistant conveyor belts or bands}

U C03B 35/16 . . by roller conveyors

U C03B 35/18 . . . Construction of the conveyor rollers {; Materials, coatings or coverings thereof}

C03B 35/185 . . . {having a discontinuous surface for contacting the sheets or ribbons other than cloth or fabric, e.g. having protrusions or depressions, spirally wound cable, projecting discs or tires}

NOTE

{Disc rollers having a discontinuous surface are also classified in [C03B 35/189](#).}

C03B 35/189 . . . {Disc rollers}

NOTE

{ Disc rollers having a discontinuous surface are also classified in [C03B 35/185](#).}

Project: RP11836 (C04B)

U C04B 20/00 **Use of materials as fillers for mortars, concrete or artificial stone according to more than one of groups [C04B 14/00](#) - [C04B 18/00](#) and characterised by shape or grain distribution; Treatment of materials according to more than one of the groups [C04B 14/00](#) - [C04B 18/00](#) specially adapted to enhance their filling properties in mortars, concrete or artificial stone; Expanding or defibrillating materials**

NOTE

Fillers with a well-defined shape other than granular are considered to be reinforcing elements and thus are classified in [E04C 5/00](#). However, if they are only characterised by their composition, classification is made in [C04B](#) only

U C04B 20/02 . Treatment

C C04B 20/023 . . {Chemical treatment}

WARNING

Group [C04B 20/023](#) is impacted by reclassification into group [C04B 20/0232](#).

Groups [C04B 20/023](#) and [C04B 20/0232](#) should be considered in order to perform a complete search.

N C04B 20/0232

- • {with carbon dioxide}

WARNING

Group [C04B 20/0232](#) is incomplete pending reclassification of documents from group [C04B 20/023](#).

Groups [C04B 20/023](#) and [C04B 20/0232](#) should be considered in order to perform a complete search.

M C04B 22/00

Use of inorganic materials as active ingredients for mortars, concrete or artificial stone, e.g. accelerators {~~or~~ shrinkage compensating agents}

U C04B 22/08

- Acids or salts thereof {([C04B 22/0013](#) takes precedence)}

C C04B 22/10

- • containing carbon in the anion, e.g. *carbonates*

WARNING

Group [C04B 22/10](#) is impacted by reclassification into group [C04B 22/103](#). Groups [C04B 22/10](#) and [C04B 22/103](#) should be considered in order to perform a complete search.

T C04B 22/103

- • {Acids~~}; Carbonic acids, e.g. from carbon dioxide}~~

WARNING

Group [C04B 22/103](#) is incomplete pending reclassification of documents from group [C04B 22/10](#).

Groups [C04B 22/103](#) and [C04B 22/10](#) should be considered in order to perform a complete search.

Project: Unknown (C04B)

U C04B 35/00

Shaped ceramic products characterised by their composition {(porous ceramic products [C04B 38/00](#); ceramic articles characterised by particular shape, see the relevant classes, e.g. linings for casting ladles, tundishes, cups or the like [B22D 41/02](#); ceramic substrates for microelectronic semi-conductors [H01L 23/15](#)); Ceramics compositions (containing free metal bonded to carbides, diamond, oxides, borides, nitrides, silicides, e.g. cermets, or other metal compounds, e.g. oxynitrides or sulfides other than as macroscopic reinforcing agents [C22C](#); {shaping of ceramics [B28B](#)); Processing powders of inorganic compounds preparatory to the manufacturing of ceramic products {(chemical preparation of powders of inorganic compounds [C01](#); infiltration of sintered ceramic preforms with molten metal [C04B 41/51](#))}

NOTES

1. In this group, in the absence of an indication to the contrary, compositions are classified according to the constituent present in the highest proportion by weight.
2. In this group, magnesium is considered as an alkaline earth metal.
3. In this group, a composite is considered as a sintered material containing more than one phase, where the secondary phases are not resulting from sintering aids
4. In this group, fine ceramics are considered as products having a polycrystalline, fine-grained microstructure, e.g. of dimensions below 100 micrometers.
5. The production of ceramic powder is classified in this group in so far as it relates to the preparation of powder with specific characteristics.
6. In groups [C04B 35/00](#) - [C04B 35/83](#), from 01-01-2005 onwards, the indexing codes of groups [C04B 2235/00](#) - [C04B 2235/9692](#) are used to identify aspects relating to ceramic starting mixtures and sintered ceramic products

- U C04B 35/622
- Forming processes; Processing powders of inorganic compounds preparatory to the manufacturing of ceramic products
- NOTE
In groups [C04B 35/622](#) and subgroups indexing codes are given for aspects relating to the preparation, properties or mechanical treatment or to heat treatments of green bodies. The codes are chosen from [C04B 2235/60](#) - [C04B 2235/668](#)
- U C04B 35/626
- Preparing or treating the powders individually or as batches {(pigments for ceramics [C09C 1/0009](#)); preparing or treating macroscopic reinforcing agents for ceramic products, e.g. fibres; mechanical aspects section [B](#)}
- U C04B 35/63
- using additives specially adapted for forming the products {, e.g.. binder binders}
- U C04B 35/632
- Organic additives
- U C04B 35/634
- Polymers ([C04B 35/636](#) takes precedence)
- U C04B 35/63448
- {obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds}
- C04B 35/63472
- {Condensation polymers of aldehydes or ketones}
- NOTE
{In this group the following term is used with the meaning indicated:
 - "aldehydes" also covers other organic compounds reacting as aldehydes, e.g. glyoxylic acid.
}
- U C04B 38/00
- Porous mortars, concrete, artificial stone or ceramic ware; Preparation thereof (treating slag with gases or gas generating material [C04B 5/06](#) {; expanded graphite [C04B 35/536](#)})**
- NOTES
- Porous mortars, concrete, artificial stone or ceramic ware characterised by the ingredients or compositions are also classified in groups [C04B 2/00](#) - [C04B 35/00](#).
 - {Porous materials based on fibres, i.e. materials where the porosity is due to the spaces between the fibres, are not classified in this maingroup, but in one or more of the other relevant maingroups of this subclass, e.g. in [C04B 30/02](#).}
- C04B 38/0067
- {characterised by the density of the end product}
- NOTE
{This group is mainly used for classification using Combination Sets in [C04B 38/00](#).}
- C04B 38/007
- {characterised by the pore distribution, e.g. inhomogeneous distribution of pores}
- NOTE
{This group is mainly used for classification using Combination Sets in [C04B 38/00](#).}
- U C04B 38/06
- by burning-out added substances {by burning natural expanding materials or by sublimating or melting out added substances}
- NOTE
Documents in which the characteristic feature is the choice of meltable or sublimable material or the physical aspects of the porous body obtained are classified accordingly, and symbols [C04B 38/0605](#) or [C04B 38/061](#) are allocated in Combination Sets.

- U C04B 38/063 • • {Preparing or treating the raw materials individually or as batches}
- U C04B 38/0635 • • • {Compounding ingredients ([C04B 38/0615](#) takes precedence)}
- U C04B 38/0645 • • • • {Burnable, meltable, sublimable materials}
- C04B 38/065 • • • • • {characterised by physical aspects, e.g. shape, size or porosity}

NOTE

{Documents having this group as classification symbol or as part of a Combination Set can also get symbol [C04B 38/0051](#) in the Combination Set, if the importance of the size of the pores obtained is emphasized.}

- C04B 38/066 • • • • • {characterised by distribution, e.g. for obtaining inhomogeneous distribution of pores}

NOTE

{Documents having this group as classification symbol or as part of a Combination Set can also get symbol [C04B 38/007](#) in the Combination Set, if the importance of the distribution of the pores is emphasized.}

Project: RP11836 (C04B)

- U C04B 40/0089 • {making use of vacuum or reduced pressure}
- N C04B 40/0091 • {Processes of mixing characterised by carbon dioxide treatment}

WARNING

Group [C04B 40/0091](#) is incomplete pending reclassification of documents from group [C04B 40/0231](#).

Groups [C04B 40/0091](#) and [C04B 40/0231](#) should be considered in order to perform a complete search.

- U C04B 40/02 • Selection of the hardening environment

NOTE

In this group the following term is used with the meaning indicated:

- "hardening" covers also setting, pre-curing and curing

- C C04B 40/0231 • • {Carbon dioxide hardening}

WARNING

Group [C04B 40/0231](#) is impacted by reclassification into group [C04B 40/0091](#).

Groups [C04B 40/0231](#) and [C04B 40/0091](#) should be considered in order to perform a complete search.

Project: Unknown (C04B)

- U C04B 41/00 **After-treatment of mortars, concrete, artificial stone or ceramics; Treatment of natural stone (conditioning of the materials prior to shaping [C04B 40/00](#); applying liquids or other fluent materials to surfaces, in general [B05](#); grinding or polishing [B24](#); apparatus or processes for treating or working shaped articles of clay or other ceramic compositions, slag or mixtures containing cementitious material [B28B 11/00](#); working stone or stone-like materials [B28D](#); glazes, other than cold glazes, [C03C 8/00](#); etching, surface-brightening or pickling compositions [C09K 13/00](#))**

NOTES

1. In this group, the following terms or expressions are used with the meanings indicated:

- "mortars", "concrete" and "artificial stone" cover materials after primary shaping.
2. Treating, e.g. coating or impregnating, a material with the same material or with a substance that ultimately is transformed into the same material is not considered aftertreatment for this group but is classified as preparation of the material, e.g. a carbon body impregnated with a carbonisable substance is classified in [C04B 35/52](#).
 3. In groups [C04B 41/45](#) - [C04B 41/80](#), the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place.
 4. {In this group, multiple classification is made according to the following rules:
 - when the substrate to be treated is of the artificial stone type, e.g. concrete, classification is made in the range [C04B 41/00](#) - [C04B 41/5392](#) as well as in the range [C04B 41/60](#) - [C04B 41/72](#)
 - when the substrate to be treated is of the ceramic type, classification is made in the range [C04B 41/00](#) - [C04B 41/5392](#) as well as in the range [C04B 41/80](#) - [C04B 41/91](#)
 - when the substrate to be treated is aspecific, classification is made only in the range [C04B 41/00](#) - [C04B 41/5392](#)
 5. {In groups [C04B 41/0018](#) - [C04B 41/53](#), in the absence of an indication to the contrary, classification is made in the last appropriate place.}
 6. {In groups [C04B 41/00](#) - [C04B 41/53](#), it is desirable to add the indexing codes relating to the nature of the substrate being treated. The indexing codes that are chosen from groups [C04B 26/00](#) - [C04B 38/00](#) should be unlinked.}
 7. {In groups [C04B 41/00](#) - [C04B 41/53](#), it is desirable to add the indexing codes relating to aspects of the coating composition or to the method of application. The indexing codes that are chosen from groups [C04B 41/00](#) - [C04B 41/5392](#) should be unlinked.}
 8. {Attention is drawn to internal Note (2) following the title of subclass [C04B](#).}
- C04B 41/0009 • {Demolition agents based on cementitious or like materials}
- NOTE
{Products classified in group [C04B 41/0009](#) should also be classified according to their composition, e.g. in [C04B 28/00](#).}
- C04B 41/0063 • {Cooling, e.g. freezing}
- NOTE
{In this group the term "cooling" is used in the sense of an additional cooling treatment, different from the traditional cooling step in the fabrication of materials involving a heating step, such as sintering of ceramics.}
- U C04B 41/45 • Coating or impregnating (paints [C09D](#)), {e.g. injection in masonry, partial coating of green or fired ceramics, organic coating compositions for adhering together two concrete elements ([ion-implantation C04B 41/0027](#))}
- NOTES
1. In group [C04B 41/45](#) and sub-groups, as a general rule, classification is made according to the end products, rather than according to the starting materials, in the coating or impregnating compositions.
 2. In groups [C04B 41/45](#) - [C04B 41/528](#) the following term is used with the meaning indicated:
 - "coating" covers material applied to the substrates as powdery material or applied from the gas or liquid phase, e.g. as a slurry; it only covers the use of preformed sheet-like elements in so far as the thickness of these

sheets is small compared with the thickness of the substrate and so far as the resulting product is not exclusively one of the type classifiable in [B32B](#)

- U C04B 41/4505 • • {characterised by the method of application}
- C04B 41/4523 • • • {applied from the molten state (vitreous materials [C04B 41/5022](#)); Thermal spraying, e.g. plasma spraying}
- NOTE
{Coating or impregnating with a specific material in the molten state is classified according to the specific material and get symbol [C04B 41/4523](#) in Combination Sets.}
- C04B 41/4529 • • • {applied from the gas phase}
- NOTE
{Coating or impregnating with a specific material from the gas phase is classified according to the specific material and symbol [C04B 41/4529](#) is allocated in Combination Sets.}
- C04B 41/4535 • • • {applied as a solution, emulsion, dispersion or suspension}
- NOTE
{Coating or impregnation with a solution or a suspension of a specific material is classified according to the specific material and symbol [C04B 41/4535](#) is allocated in Combination Sets.}
- C04B 41/4545 • • • {applied as a powdery material}
- NOTE
{Coating or impregnation with a specific powdery material is classified according to the specific material and symbols [C04B 41/4545](#) - [C04B 41/4549](#) are allocated in Combination Sets.}
- U C04B 41/46 • • with organic materials
- U C04B 41/48 • • • Macromolecular compounds
- C04B 41/4811 • • • • {Condensation polymers of aldehydes or ketones}
- NOTE
{In this group the following term is used with the meaning indicated:
• "aldehydes" also covers other organic compounds reacting as aldehydes, e.g. glyoxylic acid.
}
- U C04B 41/50 • • with inorganic materials
- C04B 41/5022 • • • {with vitreous materials (composition of vitreous glazes and enamels [C03C](#); ceramic pigments [C09C 1/0009](#))}
- NOTE
{Glazing of concrete, natural or artificial stone or ceramics is only classified in [C04B 41/5022](#) when non-compositional aspects are important, e.g. aspects relating to the method of application or the choice of the substrate.}
- C04B 41/5025 • • • {with ceramic materials (copper oxide or solid solutions thereof [C04B 41/5074](#))}
- NOTE
{In this subgroup, the materials considered as ceramic materials are those covered by groups [C04B 33/00](#) - [C04B 35/83](#).}
- U C04B 2103/00 **Function or property of ingredients for mortars, concrete or artificial stone**

- U C04B 2103/0068 • {Ingredients with a function or property not provided for elsewhere in [C04B 2103/00](#)}
- C04B 2103/0088 • • {Compounds chosen for their latent hydraulic characteristics, e.g. pozzuolanes}
- NOTE**
 {Code [C04B 2103/0088](#) is only used when the chemical nature of the latent hydraulic material is not specified, when no specific group in subclass [C04B](#) exists for defining the material or when it is chosen from an important number of alternatives.}

Project: RP11836 (C04B)

- U C04B 2111/00 Mortars, concrete or artificial stone or mixtures to prepare them, characterised by specific function, property or use**
- C C04B 2111/00017 • {Aspects relating to the protection of the environment}
- N C04B 2111/00019 • • {Carbon dioxide sequestration}

Project: Unknown (C04B)

- U C04B 2111/00034 • {Physico-chemical characteristics of the mixtures}
- C04B 2111/00043 • • {Anhydrous mixtures}
- NOTE**
 {Code [C04B 2111/00043](#) is only used in combination with groups [C04B 26/00](#) - [C04B 26/32](#).}

Project: Unknown (C07F)

- U C07F 7/00 Compounds containing elements of Groups 4 or 14 of the Periodic Table**
- U C07F 7/02 • Silicon compounds
- U C07F 7/08 • • Compounds having one or more C—Si linkages
- U C07F 7/12 • • • Organo silicon halides
- C07F 7/121 • • • {Preparation or treatment not provided for in [C07F 7/14](#), [C07F 7/16](#) or [C07F 7/20](#)}
- NOTE**
 {The silicon atom involved in the reaction that is attached or becomes attached to the highest number of halide atoms determines classification.}

Project: Unknown (C07J)

- U C07J 41/00 Normal steroids containing one or more nitrogen atoms not belonging to a hetero ring**
- C07J 41/0033 • {not covered by [C07J 41/0005](#)}
- NOTE**
 {In groups [C07J 41/0038](#) - [C07J 41/0094](#) all references to substituents in position 17-beta of the steroid skeleton include substituents at the 17-position when there is a double bond to or from position 17, and all references to an amide group include all nitrogen substituted carbonyl groups.}

Project: Unknown (C07K)

- U C07K 1/00 General methods for the preparation of peptides {, i.e. processes for the organic chemical preparation of peptides or proteins of any length}**

- U C07K 1/14 • Extraction; Separation; Purification
- U C07K 1/30 • • by precipitation
- C07K 1/306 • • • {by crystallization}

NOTE

{Large single crystals of proteins from solutions are classified in [C30B 7/00](#) for the method and in [C30B 29/58](#) for the crystal.}

Project: RP11531-F (C07K)

- U C07K 16/00 **Immunoglobulins [IGs], e.g. monoclonal or polyclonal antibodies**
{{antibodies with enzymatic activity, e.g. abzymes [C12N 9/0002](#)}}

NOTES

1. Documents characterised by the technical aspects of the construction of an antibody or fragment thereof, should be classified in [C07K 16/00](#) - [C07K 16/065](#) or [C07K 16/46](#) - [C07K 16/468](#)
2. Documents not characterised by the technical aspects of the construction of an antibody or fragment thereof, should be classified only according to their specificity, where necessary accompanied by one or more appropriate indexing codes

- U C07K 16/08 • against material from viruses
- U C07K 16/081 • • {from DNA viruses}
- U C07K 16/085 • • • {Herpetoviridae, e.g. pseudorabies virus, Epstein-Barr virus}
- M C07K 16/088 • • • • {Varicella-zoster virus}

WARNING

Group C07K 16/088 is impacted by reclassification into group C07K 16/089.
Groups C07K 16/088 and C07K 16/089 should be considered in order to perform a complete search.

- M C07K 16/089 • • • • {Cytomegalovirus}

WARNING

Group C07K 16/089 is incomplete pending reclassification of documents from group C07K 16/088.
Groups C07K 16/088 and C07K 16/089 should be considered in order to perform a complete search.

- M C07K 16/10 • • from RNA viruses

WARNING

Group C07K 16/10 is impacted by reclassification into groups C07K 16/1002 and C07K 16/1003.
Groups C07K 16/10, C07K 16/1002 and C07K 16/1003 should be considered in order to perform a complete search.

- M C07K 16/1002 • • • {Coronaviridae}

WARNING

Groups C07K 16/1002 and C07K 16/1003 are incomplete pending reclassification of documents from group C07K 16/10.
Groups C07K 16/10, C07K 16/1002 and C07K 16/1003 should be considered in order to perform a complete search.

- U C07K 16/12 • against material from bacteria
- U C07K 16/1203 • • {from Gram-negative bacteria}

M C07K 16/1217 • • • {from Neisseriaceae (F)}

WARNING

Group C07K 16/1217 is impacted by reclassification into group C07K 16/1218.
Groups C07K 16/1217 and C07K 16/1218 should be considered in order to perform a complete search.

M C07K 16/1218 • • • {from Acinetobacter}

WARNING

Group C07K 16/1218 is incomplete pending reclassification of documents from group C07K 16/1217.
Groups C07K 16/1217 and C07K 16/1218 should be considered in order to perform a complete search.

Project: RP12019 (C08C)

M C08C

TREATMENT OR CHEMICAL MODIFICATION OF RUBBERS

NOTE

This subclass ~~covers:~~covers:

- processes directed to natural rubber or to conjugated diene rubbers
- processes directed to rubbers in general.

WARNING

The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

C08C 1/16 covered by C08C 1/14

U C08C 1/00

Treatment of rubber latex

C C08C 1/14

- Coagulation

WARNING

Group C08C 1/14 is impacted by reclassification into group C08C 1/16.
Groups C08C 1/14 and C08C 1/16 should be considered in order to perform a complete search.

U C08C 1/15

- characterised by the coagulants used

N C08C 1/16

- in floc form

WARNING

Group C08C 1/16 is incomplete pending reclassification of documents from group C08C 1/14.

Groups C08C 1/14 and C08C 1/16 should be considered in order to perform a complete search.

U C08C 2/00

Treatment of rubber solutions

M C08C 2/06

- ~~Wining~~Winning of rubber from solutions

C C08C 19/00

Chemical modification of rubber

NOTE

In the absence of an indication to the contrary a process is classified in the last appropriate place

{In this group the last place rule is not applied. A process is classified at all appropriate places.}

WARNING

Group C08C 19/00 is impacted by reclassification into group C08C 19/085.

Groups [C08C 19/00](#) and [C08C 19/085](#) should be considered in order to perform a complete search.

C C08C 19/08

- Depolymerisation

WARNING

Group [C08C 19/08](#) is impacted by reclassification into group [C08C 19/085](#). Groups [C08C 19/08](#) and [C08C 19/085](#) should be considered in order to perform a complete search.

N C08C 19/085

- {Devulcanisation}

WARNING

Group [C08C 19/085](#) is incomplete pending reclassification of documents from groups [C08C 19/00](#) and [C08C 19/08](#). All groups listed in this Warning should be considered in order to perform a complete search.

D C08C 2019/09

- {Metathese}

<administratively transferred to [C08C 19/00](#)>

Project: Unknown (C08F)

U C08F 4/00

Polymerisation catalysts

NOTE

{In this group, C-Sets are used. The detailed information about the C-Sets construction and the associated syntax rules is present in the Definitions of [C08F](#).}

C08F 4/005

- {Friedel-Crafts catalysts in general}

NOTE

{Where a carrier is considered of particular interest a further classification may be made in group [C08F 4/02](#).}

U C08F 4/42

- Metals; Metal hydrides; Metallo-organic compounds; Use thereof as catalyst precursors

U C08F 4/44

- • selected from light metals, zinc, cadmium, mercury, copper, silver, gold, boron, gallium, indium, thallium, rare earths or actinides

U C08F 4/60

- • • together with refractory metals, iron group metals, platinum group metals, manganese, rhenium {technetium} or compounds thereof

C08F 4/60003

- • • {the metallic compound containing a multidentate ligand, i.e. a ligand capable of donating two or more pairs of electrons to form a coordinate or ionic bond}

NOTE

{For monoanionic compounds, the charge is on the last mentioned atom; for dianionic compounds, the charge is on the first and the last mentioned atoms except for compounds marked with * where the charge is on the marked atom.}

U C08F 4/62

- • • • Refractory metals or compounds thereof

U C08F 4/64

- • • • Titanium, zirconium, hafnium or compounds thereof

NOTE

Group [C08F 4/64003](#) takes precedence over groups [C08F 4/642](#) - [C08F 4/659](#)

- C08F 4/64003 {the metallic compound containing a multidentate ligand, i.e. a ligand capable of donating two or more pairs of electrons to form a coordinate or ionic bond}
- NOTE
{For monoanionic compounds, the charge is on the last mentioned atom; for dianionic compounds, the charge is on the first and the last mentioned atoms except for compounds marked with * where the charge is on the marked atom.}
- U C08F 4/68 Vanadium, niobium, tantalum or compounds thereof
- C08F 4/68008 {the metallic compound containing a multidentate ligand, i.e. a ligand capable of donating two or more pairs of electrons to form a coordinate or ionic bond}
- NOTE
{For monoanionic compounds, the charge is on the last mentioned atom; for dianionic compounds, the charge is on the first and the last mentioned atoms except for compounds marked with * where the charge is on the marked atom.}
- U C08F 4/69 Chromium, molybdenum, tungsten or compounds thereof
- C08F 4/69008 {the metallic compound containing a multidentate ligand, i.e. a ligand capable of donating two or more pairs of electrons to form a coordinate or ionic bond}
- NOTE
{For monoanionic compounds, the charge is on the last mentioned atom; for dianionic compounds, the charge is on the first and the last mentioned atoms except for compounds marked with * where the charge is on the marked atom.}
- U C08F 4/70 Iron group metals, platinum group metals or compounds thereof
- C08F 4/7001 {the metallic compound containing a multidentate ligand, i.e. a ligand capable of donating two or more pairs of electrons to form a coordinate or ionic bond}
- NOTE
{For monoanionic compounds, the charge is on the last mentioned atom; for dianionic compounds, the charge is on the first and the last mentioned atoms except for compounds marked with * where the charge is on the marked atom.}

Project: Unknown (C08G)

- U C08G 65/00 **Macromolecular compounds obtained by reactions forming an ether link in the main chain of the macromolecule**
- U C08G 65/02 . from cyclic ethers by opening of the heterocyclic ring
- U C08G 65/26 . from cyclic ethers and other compounds
- C08G 65/2642 . . . {characterised by the catalyst used}
- NOTES
- {In this group classification is made according to the metal in the compounds, if any.}
 - {In this group boron is considered a metal and magnesium as an alkaline earth metal.}

Project: Unknown (C09C)

- U C09C 1/00** **Treatment of specific inorganic materials other than fibrous fillers (tenebrescent materials [C09K 9/00](#); luminescent materials [C09K 11/00](#)); Preparation of carbon black**
- C09C 1/0015
- {Pigments exhibiting interference colours, e.g. transparent platelets of appropriate thinness or flaky substrates, e.g. mica, bearing appropriate thin transparent coatings}
- NOTES**
1. {The optical properties of the interference pigments are depending on the order of the different layers applied on the substrate in view of their refractive indices; A refractive index $< \text{or} = 1.8$ is considered low, a refractive index > 1.8 is considered high; A dye is always an organic, coloured material. An aluminium lake compound would for classification purposes also fall under this definition, as well as any coloured metal chelate or metal complex with organic ligands; An interference pigment can e.g. have a flaky, spherical or ellipsoidal core; A pigment comprising a core consisting of a metal is only considered as an interference pigment if it shows properties typical for interference pigments.}
 2. {In groups [C09C 1/0015](#) - [C09C 1/0075](#) it is desirable to add indexing codes relating to the compositional and structural details chosen from groups [C09C 2200/00](#) - [C09C 2220/20](#).}
- U C09C 1/36**
- Compounds of titanium {([C09C 1/0009](#), [C09C 1/0015](#), [C09C 1/0078](#) take precedence)}
- C09C 1/3607
- {Titanium dioxide}
- NOTES**
1. {Combinations of treatment steps, characterised by the sequence or the nature of two or more individual steps, are classified in [C09C 1/3692](#).}
 2. {The individual steps are classified with symbols chosen from groups [C09C 1/3615](#) - [C09C 1/3684](#).}
- U C09C 3/00** **Treatment in general of inorganic materials, other than fibrous fillers, to enhance their pigmenting or filling properties**
- C09C 3/006
- {Combinations of treatments provided for in groups [C09C 3/04](#) - [C09C 3/12](#)}
- NOTE**
- {When classifying in this group, it is desirable to classify the individual treatment steps with symbols chosen from groups [C09C 3/04](#) - [C09C 3/12](#).}

Project: RP11804 (C10M)

- M C10M** **LUBRICATING COMPOSITIONS (well drilling compositions [C09K 8/02](#)); USE OF CHEMICAL SUBSTANCES EITHER ALONE OR AS LUBRICATING INGREDIENTS IN A LUBRICATING COMPOSITION (~~lubricants for medical use A61~~); mould release, i.e. separating, agents for metals [B22C 3/00](#), for plastics or substances in a plastic state, in general [B29C 33/56](#), for glass [C03B 40/02](#); ~~use of particular substances in particular apparatus or conditions, see F16N or the relevant groups for the application, e.g. [A21D 8/08](#), [B21C 9/00](#), [H01B 3/18](#)~~; *textile lubricating compositions [D06M 11/00](#), [D06M 13/00](#), [D06M 15/00](#)*; immersion oils for microscopy [G02B 21/33](#))**
- NOTES**
1. In this subclass, the following terms are used with the meanings indicated:
 - "lubricant" or "lubricating composition" includes cutting oils, hydraulic fluids, metal drawing compositions, flushing oils, slushing oils, or the like;

- "aliphatic" includes "cycloaliphatic".

~~2. In respect of the classification of mixtures, attention is drawn to Note (4) (e) below:~~

~~3.2.~~ In this subclass, in the absence of an indication to the contrary, classification is made in the last appropriate place. Thus, a compound having an aromatic ring is classified as aromatic regardless of whether the substituent(s) of interest are on the ring or on an aliphatic part of the molecule.

~~4.3.~~ In this subclass:—

- a. metal or ammonium salts of a compound are classified as that compound;
- b. salts or adducts formed between two or more organic compounds are classified according to all compounds forming the salt or adduct, if of interest;
- c. a specified compound, e.g. phenols, acids, substituted by a macromolecular hydrocarbon radical is classified as that compound;
- d. base-materials or thickeners or additives consisting of a mixture for which no specific main group is provided are classified in the most indented group covering all essential constituents of the mixture, for example,—
 - a base-material mixture of ketone and amide - group [C10M 105/00](#);
 - a base-material mixture of ketone and ether - group [C10M 105/08](#);
 - an additive mixture of long and short chain esters - group [C10M 129/00](#);
 - an additive mixture of short chain aliphatic and aromatic carboxylic acids - group [C10M 129/26](#);
- e. except for aqueous lubricating compositions containing more than 10% water, which are classified separately, classification is made according to the type of ingredient or mixture of types of ~~ingredient~~*ingredients* (base-material, thickener or additive) which characterises the composition. Attention is drawn to the fact that a mixture of essential ingredients characterised by only one of its components, rather than by the mixture as a whole, is not classified as a mixture, e.g. a lubricating composition consisting of:
 - a known base-material and a new additive is classified only in the "additive" part of the classification scheme;
 - a known base-material with both a thickener and a further additive as essential ingredients, which may be individually classified as a mixture of thickener and additive;
 - *a* known base-material with a combination of additives as essential ingredients, which may be individually known or not, is classified in the appropriate place for the additive mixture.

4. Any part of a composition which is not identified by the classification according to Notes (2) or (3) above, and which itself is determined to be novel and non-obvious, must also be classified in the last appropriate place. The part can be either a single ingredient or a composition in itself.

5. Any part of a composition which is not identified by the classification according to Notes (2) to (4) above, and which is considered to represent information of interest for search, may also be classified in the last appropriate place. This can, for example, be the case when it is considered of interest to enable searching of compositions using a combination of classification symbols. Such non-obligatory classification should be given as "additional information".

~~5.6.~~ In this subclass, it is desirable to add the indexing codes of: *subclass C10N*

- ~~subclass C10M, relating to the chemical constitution of individual compounds of the lubricating compositions;~~
- ~~subclass C10N, relating to physico-chemical aspects of the lubricating compositions or of their compounding ingredients.~~

For more information about the way of allocating these indexing codes, see the notes after the titles of the respective subclasses.

7. {In respect of the classification of mixtures, attention is drawn to Note (3) (e) above.}

8. {In this subclass, it is desirable to add the indexing codes of subclass C10M, relating to the chemical constitution of individual compounds of the lubricating compositions.}

~~6-9.~~ {In this subclass, combination sets [C-Sets] are used. The detailed information about the C-Sets construction and the associated syntax rules are until May 2003, indexing codes were added, relating to:

- each of the essential ingredients of a mixture. However, in the case of an aqueous lubricating composition covered by group C10M 173/00, the presence of water is not indicated;
- each of the essential reactants of a reaction product covered by groups C10M 109/02, C10M 121/04 or C10M 159/12

The indexing codes, which are chosen from groups ~~C10M 101/00 - found in the Definitions for C10M 109/00, C10M 113/00 - C10M 121/00, C10M 125/00 - C10M 139/00, C10M 143/00 - C10M 155/00, C10M 159/00 or C10M 163/00 - C10M 167/00, were given using Combination Sets~~C10M.-}

~~7.~~ In this subclass, until May 2003, the indexing codes of subclass C10N were added.-

~~Documents classified with Combination Sets according to internal Notes 2), 3) and 5) are in the state of being reclassified according to Note 1).~~

WARNING

~~1.~~ The following groups are no longer used for the classification of new documents from January, 1978:-

~~— C10M 1/00 - C10M 7/00 —~~

The backlog of these groups is continuously being reclassified in groups C10M 101/00 - C10M 177/00.

~~2-1.~~ {In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

D C10M 1/00 -
C10M 7/00

F C10M 1/00
(Frozen)

IPC3 groups

{Liquid compositions essentially based on mineral lubricating oils or fatty oils; Their use as lubricants}

WARNING

Group C10M 1/00 is no longer used for the classification of documents as of May 1, 2025.

The content of this group is being reclassified into groups C10M 101/00 - C10M 177/00.

Groups C10M 1/00 and C10M 101/00 - C10M 177/00 should be considered in order to perform a complete search.

F C10M 1/08
(Frozen)

- {with additives}

WARNING

Group C10M 1/08 is no longer used for the classification of documents as of May 1, 2025.

The content of this group is being reclassified into groups C10M 101/00 - C10M 177/00.

Groups C10M 1/08 and C10M 101/00 - C10M 177/00 should be considered in order to perform a complete search.

- F C10M 3/00 (Frozen)** {Liquid compositions essentially based on lubricating components other than mineral lubricating oils or fatty oils and their use as lubricants; Use as lubricants of single liquid substances (compositions in general essentially based on macromolecular compounds [C08L](#))}
- WARNING
*Group C10M 3/00 is no longer used for the classification of documents as of May 1, 2025.
 The content of this group is being reclassified into groups C10M 101/00 - C10M 177/00.
 Groups C10M 3/00 and C10M 101/00 - C10M 177/00 should be considered in order to perform a complete search.*
- F C10M 5/00 (Frozen)** {Solid or semi-solid compositions containing as the essential lubricating ingredient mineral lubricating oils or fatty oils and their use}
- WARNING
*Group C10M 5/00 is no longer used for the classification of documents as of May 1, 2025.
 The content of this group is being reclassified into groups C10M 101/00 - C10M 177/00 and C10N 2050/10.
 Groups C10M 5/00, C10M 101/00 - C10M 177/00 and C10N 2050/10 should be considered in order to perform a complete search.*
- F C10M 7/00 (Frozen)** {Solid or semi-solid compositions essentially based on lubricating components other than mineral lubricating oils or fatty oils and their use as lubricants; Use as lubricants of single solid or semi-solid substances (compositions in general essentially based on macromolecular compounds [C08L](#))}
- WARNING
*Group C10M 7/00 is no longer used for the classification of documents as of May 1, 2025.
 The content of this group is being reclassified into groups C10M 101/00 - C10M 177/00 and C10N 2050/10.
 Groups C10M 7/00, C10M 101/00 - C10M 177/00 and C10N 2050/10 should be considered in order to perform a complete search.*
- M C10M 101/00** Lubricating compositions characterised by the base-material being a mineral or fatty oil (containing more than 10% water [C10M 173/00](#))
- WARNING
*Groups C10M 101/00 - C10M 101/04 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
 All groups listed in this Warning should be considered in order to perform a complete search.*
- M C10M 103/00** Lubricating compositions characterised by the base-material being an inorganic material (containing more than 10% water [C10M 173/00](#))
- WARNING
*Groups C10M 103/00 - C10M 103/06 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
 All groups listed in this Warning should be considered in order to perform a complete search.*

- M C10M 105/00** Lubricating compositions characterised by the base-material being a non-macromolecular organic compound

WARNING

Groups C10M 105/00 - C10M 105/80 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.

All groups listed in this Warning should be considered in order to perform a complete search.

- M C10M 107/00** Lubricating compositions characterised by the base-material being a macromolecular compound

WARNING

Groups C10M 107/00 - C10M 107/54 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.

All groups listed in this Warning should be considered in order to perform a complete search.

- M C10M 109/00** Lubricating compositions characterised by the base-material being a compound of unknown or incompletely defined constitution ([C10M 101/00](#) takes precedence)

WARNING

Groups C10M 109/00 - C10M 109/02 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.

All groups listed in this Warning should be considered in order to perform a complete search.

- M C10M 111/00** Lubrication compositions characterised by the base-material being a mixture of two or more compounds covered by more than one of the main groups [C10M 101/00](#) - [C10M 109/00](#), each of these compounds being essential

WARNING

Groups C10M 111/00 - C10M 111/06 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.

All groups listed in this Warning should be considered in order to perform a complete search.

- M C10M 113/00** Lubricating compositions characterised by the thickening agent being an inorganic material

WARNING

Groups C10M 113/00 - C10M 113/16 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.

All groups listed in this Warning should be considered in order to perform a complete search.

- M C10M 115/00** Lubricating compositions characterised by the thickener being a non-macromolecular organic compound other than a carboxylic acid or salt thereof
- WARNING
Groups C10M 115/00 - C10M 115/12 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
All groups listed in this Warning should be considered in order to perform a complete search.
- M C10M 117/00** Lubricating compositions characterised by the thickener being a non-macromolecular carboxylic acid or salt thereof
- WARNING
Groups C10M 117/00 - C10M 117/10 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
All groups listed in this Warning should be considered in order to perform a complete search.
- M C10M 119/00** Lubricating compositions characterised by the thickener being a macromolecular compound
- WARNING
Groups C10M 119/00 - C10M 119/30 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
All groups listed in this Warning should be considered in order to perform a complete search.
- M C10M 121/00** Lubricating compositions characterised by the thickener being a compound of unknown or incompletely defined constitution
- WARNING
Groups C10M 121/00 - C10M 121/04 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
All groups listed in this Warning should be considered in order to perform a complete search.
- M C10M 123/00** Lubricating compositions characterised by the thickener being a mixture of two or more compounds covered by more than one of the main groups [C10M 113/00](#) - [C10M 121/00](#), each of these compounds being essential (inorganic materials coated with organic compounds [C10M 113/16](#))
- WARNING
Groups C10M 123/00 - C10M 123/06 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
All groups listed in this Warning should be considered in order to perform a complete search.

M C10M 125/00 Lubricating compositions characterised by the additive being an inorganic material

WARNING

Groups C10M 125/00 - C10M 125/30 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M C10M 127/00 Lubricating compositions characterised by the additive being a non-macromolecular hydrocarbon (petroleum fractions [C10M 159/04](#))

WARNING

Groups C10M 127/00 - C10M 127/06 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M C10M 129/00 Lubricating compositions characterised by the additive being an organic non-macromolecular compound containing oxygen

WARNING

Groups C10M 129/00 - C10M 129/95 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M C10M 131/00 Lubricating compositions characterised by the additive being an organic non-macromolecular compound containing halogen

WARNING

Groups C10M 131/00 - C10M 131/14 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M C10M 133/00 Lubricating compositions characterised by the additive being an organic non-macromolecular compound containing nitrogen

WARNING

Groups C10M 133/00 - C10M 133/58 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M C10M 135/00 Lubricating compositions characterised by the additive being an organic non-macromolecular compound containing sulfur, selenium or tellurium

WARNING

Groups C10M 135/00 - C10M 135/36 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.

All groups listed in this Warning should be considered in order to perform a complete search.

- M C10M 137/00** Lubricating compositions characterised by the additive being an organic non-macromolecular compound containing phosphorus
- WARNING
*Groups C10M 137/00 - C10M 137/16 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
All groups listed in this Warning should be considered in order to perform a complete search.*
- M C10M 139/00** Lubricating compositions characterised by the additive being an organic non-macromolecular compound containing atoms of elements not provided for in groups [C10M 127/00](#) - [C10M 137/00](#)
- WARNING
*Groups C10M 139/00 - C10M 139/06 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
All groups listed in this Warning should be considered in order to perform a complete search.*
- M C10M 141/00** Lubricating compositions characterised by the additive being a mixture of two or more compounds covered by more than one of the main groups [C10M 125/00](#) - [C10M 139/00](#), each of these compounds being essential
- WARNING
*Groups C10M 141/00 - C10M 141/12 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
All groups listed in this Warning should be considered in order to perform a complete search.*
- M C10M 143/00** Lubricating compositions characterised by the additive being a macromolecular hydrocarbon or such hydrocarbon modified by oxidation
- WARNING
*Groups C10M 143/00 - C10M 143/18 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
All groups listed in this Warning should be considered in order to perform a complete search.*
- M C10M 145/00** Lubricating compositions characterised by the additive being a macromolecular compound containing oxygen (oxidised hydrocarbons [C10M 143/18](#))
- WARNING
*Groups C10M 145/00 - C10M 145/40 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
All groups listed in this Warning should be considered in order to perform a complete search.*

- M C10M 147/00** Lubricating compositions characterised by the additive being a macromolecular compound containing halogen
- WARNING
*Groups C10M 147/00 - C10M 147/04 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
All groups listed in this Warning should be considered in order to perform a complete search.*
- M C10M 149/00** Lubricating compositions characterised by the additive being a macromolecular compound containing nitrogen
- WARNING
*Groups C10M 149/00 - C10M 149/22 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
All groups listed in this Warning should be considered in order to perform a complete search.*
- M C10M 151/00** Lubricating compositions characterised by the additive being a macromolecular compound containing sulfur, selenium or tellurium
- WARNING
*Groups C10M 151/00 - C10M 151/04 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
All groups listed in this Warning should be considered in order to perform a complete search.*
- M C10M 153/00** Lubricating compositions characterised by the additive being a macromolecular compound containing phosphorus
- WARNING
*Groups C10M 153/00 - C10M 153/04 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
All groups listed in this Warning should be considered in order to perform a complete search.*
- M C10M 155/00** Lubricating compositions characterised by the additive being a macromolecular compound containing atoms of elements not provided for in groups [C10M 143/00](#) - [C10M 153/00](#)
- WARNING
*Groups C10M 155/00 - C10M 155/04 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
All groups listed in this Warning should be considered in order to perform a complete search.*

- M C10M 157/00** Lubricating compositions characterised by the additive being a mixture of two or more macromolecular compounds covered by more than one of the main groups [C10M 143/00](#) - [C10M 155/00](#), each of these compounds being essential
- WARNING
*Groups C10M 157/00 - C10M 157/10 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
All groups listed in this Warning should be considered in order to perform a complete search.*
- M C10M 159/00** Lubricating compositions characterised by the additive being of unknown or incompletely defined constitution (carboxylic acids with less than 30 carbon atoms in the chain, of unknown or incompletely defined constitution [C10M 129/56](#))
- WARNING
*Groups C10M 159/00 - C10M 159/24 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
All groups listed in this Warning should be considered in order to perform a complete search.*
- M C10M 161/00** Lubricating compositions characterised by the additive being a mixture of a macromolecular compound and a non-macromolecular compound, each of these compounds being essential
- WARNING
*Group C10M 161/00 is incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
All groups listed in this Warning should be considered in order to perform a complete search.*
- M C10M 163/00** Lubricating compositions characterised by the additive being a mixture of a compound of unknown or incompletely defined constitution and a non-macromolecular compound, each of these compounds being essential
- NOTE
{ Compositions containing compounds covered by [C10M 159/005](#) as compounds of unknown or incompletely defined constitution are classified in [C10M 161/00](#)}
- WARNING
*Group C10M 163/00 is incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
All groups listed in this Warning should be considered in order to perform a complete search.*
- M C10M 165/00** Lubricating compositions characterised by the additive being a mixture of a macromolecular compound and a compound of unknown or incompletely defined constitution, each of these compounds being essential
- NOTE
{ Compositions containing compounds covered by [C10M 159/005](#), as compounds of unknown or incompletely defined constitution are classified in [C10M 157/00](#)}
- WARNING
Group C10M 165/00 is incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M C10M 167/00

Lubricating compositions characterised by the additive being a mixture of a macromolecular compound, a non-macromolecular compound and a compound of unknown or incompletely defined constitution, each of these compounds being essential

NOTE

{ Compositions containing compounds covered by [C10M 159/005](#), as compounds of unknown or incompletely defined constitution are classified in [C10M 161/00](#)}

WARNING

*Group C10M 167/00 is incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
All groups listed in this Warning should be considered in order to perform a complete search.*

M C10M 169/00

Lubricating compositions characterised by containing as components a mixture of at least two types of ingredient selected from base-materials, thickeners or additives, covered by the preceding groups, each of these compounds being essential

WARNING

*Groups C10M 169/00 - C10M 169/06 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
All groups listed in this Warning should be considered in order to perform a complete search.*

M C10M 171/00

Lubricating compositions characterised by purely physical criteria, e.g. containing as base-material, thickener or additive, ingredients which are characterised exclusively by their numerically specified physical properties, i.e. containing ingredients which are physically well-defined but for which the chemical nature is either unspecified or only very vaguely indicated (chemically defined ingredients [C10M 101/00](#) - [C10M 169/00](#); petroleum fractions [C10M 101/02](#), [C10M 121/02](#), [C10M 159/04](#))

WARNING

*Groups C10M 171/00 - C10M 171/06 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
All groups listed in this Warning should be considered in order to perform a complete search.*

M C10M 173/00

Lubricating compositions containing more than 10% water

WARNING

*Groups C10M 173/00 - C10M 173/025 are incomplete pending reclassification of documents from groups C10M 1/00, C10M 1/08, C10M 3/00, C10M 5/00 and C10M 7/00.
All groups listed in this Warning should be considered in order to perform a complete search.*

- M C10M 175/00** Working-up used lubricants to recover useful products {(destructive distillation [C10B](#); extraction and elimination of PCBs [C10G 7/006](#), [C10G 21/006](#), [C10G 25/006](#); combustion processes [F23G](#); filtration, filters in general [B01D](#)); Cleaning (in a mechanical way [B08B](#); integrated processes [C23](#); solid waste [B09B](#))}
- WARNING
Groups [C10M 175/00](#) - [C10M 175/06](#) are incomplete pending reclassification of documents from groups [C10M 1/00](#), [C10M 1/08](#), [C10M 3/00](#), [C10M 5/00](#) and [C10M 7/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- M C10M 177/00** Special methods of preparation of lubricating compositions; Chemical modification by after-treatment of components or of the whole of a lubricating composition, not covered by other classes
- WARNING
Group [C10M 177/00](#) is incomplete pending reclassification of documents from groups [C10M 1/00](#), [C10M 1/08](#), [C10M 3/00](#), [C10M 5/00](#) and [C10M 7/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- M C10M 2201/00** Inorganic compounds or elements as ingredients in lubricant compositions
- NOTE
In this group, C-Sets are used. Detailed information about C-Sets construction and the associated syntax rules is found in the Definitions.
- M C10M 2205/00** Organic macromolecular hydrocarbon compounds or fractions, whether or not modified by oxidation as ingredients in lubricant compositions
- NOTE
Copolymers are indexed with the symbol for the main monomer always being present, (e.g. [C10M 2205/026](#), [C10M 2205/022](#)) according to the last place rule, followed by the symbol of the other monomers, (e.g. [C10M 2205/022](#), [C10M 2205/00](#))
- In groups [C10M 2205/00](#) - [C10M 2205/226](#), C-Sets are used. Detailed information about C-Sets construction and the associated syntax rules is found in the Definitions.
- M C10M 2209/00** Organic macromolecular compounds containing oxygen as ingredients in lubricant compositions
- NOTE
In groups [C10M 2209/00](#) - [C10M 2209/126](#), C-Sets are used. Detailed information about C-Sets construction and the associated syntax rules is found in the Definitions.
- U C10M 2209/10** • Macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds
- U C10M 2209/103** • • Polyethers, i.e. containing di- or higher polyoxyalkylene groups
- M C10M 2209/108** • • • etherified

NOTE

When applying indexing code [C10M 2209/108](#), it should be linked to the appropriate code for identifying the alkylene oxide involved, chosen from groups [C10M 2209/104](#) - [C10M 2209/107](#) and by using alpha-numerical order in the combination.

Example:
C10M 2209/107 + C10M 2209/108

M C10M 2209/109 • • esterified

NOTE

When applying indexing code C10M 2209/109, it should be linked to the appropriate code for identifying the alkylene oxide involved, chosen from groups C10M 2209/104 – C10M 2209/107 and by using alpha-numerical order in the combination.

Example:
C10M 2209/107 + C10M 2209/109

M C10M 2213/00 Organic macromolecular compounds containing halogen as ingredients in lubricant compositions

NOTE

In groups C10M 2213/00 - C10M 2213/0626, C-Sets are used. Detailed information about C-Sets construction and the associated syntax rules is found in the Definitions.

U C10M 2215/00 Organic non-macromolecular compounds containing nitrogen as ingredients in lubricant Compositions

M C10M 2215/08 • Amides [having hydrocarbon substituents containing less than thirty carbon atoms]

M C10M 2215/086 • Imides [having hydrocarbon substituents containing less than thirty carbon atoms]

U C10M 2215/24 • having hydrocarbon substituents containing thirty or more carbon atoms, e.g. nitrogen derivatives of substituted succinic acid

U C10M 2215/245 • • used as base material

M C10M 2215/26 • Amines

M C10M 2215/265 • • used as base material

M C10M 2215/28 • Amides; Imides

M C10M 2215/285 • • used as base material

M C10M 2215/30 • Heterocyclic compounds

M C10M 2215/305 • • used as base material

M C10M 2217/00 Organic macromolecular compounds containing nitrogen as ingredients in lubricant compositions

NOTE

In groups C10M 2217/00 - C10M 2217/065, C-Sets are used. Detailed information about C-Sets construction and the associated syntax rules is found in the Definitions.

M C10M 2221/00 Organic macromolecular compounds containing sulfur, selenium or tellurium as ingredients in lubricant compositions

NOTE

In groups C10M 2221/00 - C10M 2221/043, C-Sets are used. Detailed information about C-Sets construction and the associated syntax rules is found in the Definitions.

M C10M 2225/00 Organic macromolecular compounds containing phosphorus as ingredients in lubricant compositions

NOTE

In groups C10M 2225/00 - C10M 2225/041, C-Sets are used. Detailed information about C-Sets construction and the associated syntax rules is found in the Definitions.

M C10M 2229/00 Organic macromolecular compounds containing atoms of elements not provided for in groups [C10M 2205/00](#), [C10M 2209/00](#), [C10M 2213/00](#), [C10M 2217/00](#), [C10M 2221/00](#) or [C10M 2225/00](#) as ingredients in lubricant compositions

NOTE

In groups C10M 2229/00 - C10M 2229/0545, C-Sets are used. Detailed information about C-Sets construction and the associated syntax rules is found in the Definitions.

U C10M 2290/00 Mixtures of base materials or thickeners or additives

D C10M 2290/02 • Mineral base oils; Mixtures of fractions

D C10M 2290/026 • Fuels

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U C10N 2040/00 Specified use or application for which the lubricating composition is intended

U C10N 2040/25 • Internal-combustion engines

U C10N 2040/255 • • {Gasoline engines}

U C10N 2040/28 • • • Rotary {engines}

N C10N 2040/29 • {Hybrid or electric engines}

N C10N 2040/291 • • {Hybrid engines}

N C10N 2040/292 • • {Electric engines}

U C10N 2050/00 Form in which the lubricant is applied to the material being lubricated

T C10N 2050/10 • ~~Semi-solids~~semi-solid; greasy

WARNING

Group C10N 2050/10 is incomplete pending reclassification of documents from groups C10M 5/00 and C10M 7/00.

Groups C10M 5/00, C10M 7/00 and C10N 2050/10 should be considered in order to perform a complete search.

Project: Unknown (C12N)

U C12N 5/00 Undifferentiated human, animal or plant cells, e.g. cell lines; Tissues; Cultivation or maintenance thereof; Culture media therefor; (plant reproduction by tissue culture techniques [A01H 4/00](#))

NOTE

In this group, the following words are used with the meanings indicated:

- a "totipotent" cell can differentiate into all somatic lineages (ectoderm, mesoderm, endoderm), the germ line and extra-embryonic tissues such as the placenta;
- a "pluripotent" cell is a somatic stem cell which can differentiate into cells of at least two of the three somatic lineages (ectoderm, mesoderm, endoderm);
- a "multipotent" cell is restricted to one lineage;

- "progenitor" and "precursor" cells are further restricted within the lineage. If not explicitly foreseen, totipotent cells are classified with pluripotent cells. Multipotent cells should not be classified with pluripotent cells. Unless provided for otherwise, committed progenitors are classified with their progeny.

U C12N 5/06

- {Animal cells or tissues; Human cells or tissues (preservation of excised living parts [A01N 1/10](#))}

NOTE

{In this group, the following words are used with the meanings indicated:

- a "totipotent" cell can differentiate into all somatic lineages (ectoderm, mesoderm, endoderm), the germ line and extra-embryonic tissues such as the placenta;
- a "pluripotent" cell is a somatic stem cell which can differentiate into cells of at least two of the three somatic lineages (ectoderm, mesoderm, endoderm);
- a "multipotent" cell is restricted to one lineage.

"Progenitor" and "precursor" cells are further restricted within the lineage. If not explicitly foreseen, totipotent cells are classified with pluripotent cells. Multipotent cells should not be classified with pluripotent cells. The last place priority rule does not apply between the subgroups of this group}

C12N 5/0602

- {Vertebrate cells}

NOTE

{Three-dimensional culture, tissue culture or organ culture are classified with the corresponding cells, if not specially provided for.}

C12N 5/0634

- • {Cells from the blood or the immune system}

NOTE

{Committed progenitors are classified with their progeny.}

Project: RP11657 (C12N)

U C12N 9/00

Enzymes; Proenzymes; Compositions thereof (preparations containing enzymes for cleaning teeth [A61K 8/66](#), [A61Q 11/00](#); medicinal preparations containing enzymes or proenzymes [A61K 38/43](#); enzyme containing detergent compositions [C11D](#); {enzymes with nucleic acid structure, e.g. ribozymes, [C12N 15/113](#)}); Processes for preparing, activating, inhibiting, separating or purifying enzymes (preparation of malt [C12C 1/00](#))

NOTE

Enzymes are generally categorized below according to the "Nomenclature and Classification of Enzymes" of the International Commission on Enzymes. Where appropriate, this designation appears in the groups below in parenthesis.

U C12N 9/14

- Hydrolases (3)

U C12N 9/16

- • acting on ester bonds (3.1)

C C12N 9/22

- • Ribonucleases ~~{RNases, DNases [RNase]}~~ ~~{catalytic nucleic acids C12N 15/113}~~; Deoxyribonucleases [DNase]}

WARNING

Group C12N 9/22 is incomplete pending reclassification of documents from group C12N 2310/20.

Group C12N 9/22 is also impacted by reclassification into groups C12N 9/222 - C12N 9/226.

Groups C12N 9/22, C12N 9/222 - C12N 9/226 and C12N 2310/20 should be considered in order to perform a complete search.

- N C12N 9/222 . . . {Clustered regularly interspaced short palindromic repeats [CRISPR]-associated [CAS] enzymes}
- WARNING
Groups [C12N 9/222](#) - [C12N 9/226](#) are incomplete pending reclassification of documents from groups [C12N 9/22](#) and [C12N 2310/20](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N C12N 9/224 {Class 1 CAS enzyme complex, e.g. multi-enzyme}
- N C12N 9/226 {Class 2 CAS enzyme complex, e.g. single CAS protein}
- U C12N 15/00 **Mutation or genetic engineering; DNA or RNA concerning genetic engineering, vectors, e.g. plasmids, or their isolation, preparation or purification; Use of hosts therefor (mutants or genetically engineered microorganisms, per se [C12N 1/00](#), [C12N 5/00](#), [C12N 7/00](#); new plants per se [A01H](#); plant reproduction by tissue culture techniques [A01H 4/00](#); new animals per se [A01K 67/00](#); use of medicinal preparations containing genetic material which is inserted into cells of the living body to treat genetic diseases, gene therapy [A61K 48/00](#))**
- U C12N 15/09 . Recombinant DNA-technology
- M C12N 15/11 . . DNA or RNA fragments; Modified forms thereof (DNA or RNA not used in recombinant technology, [C07H 21/00](#)); {Non-coding nucleic acids having a biological activity}

NOTE

~~Documents relating to DNA or its corresponding RNA and their use in recombinant DNA technology or the preparation of specific peptides, e.g. enzymes, are classified in subclass C07K or in group C12N 9/00 according to the peptides, with the appropriate indexing codes relating to their use in recombinant technology. Groups C12N 15/11–C12N 15/117 cover also the use of non-coding nucleic acids as active ingredients in medicinal preparations. The C12N 2303/00-IGO scheme has to be applied to these groups. When documents classifiable in one or more subgroups disclose general principles of the technology applicable to the whole field, classification is also made in group C12N 15/111~~

{Documents relating to DNA or its corresponding RNA and their use in recombinant DNA technology or the preparation of specific peptides, e.g. enzymes, are classified in subclass [C07K](#) or in group [C12N 9/00](#) according to the peptides, with the appropriate indexing codes relating to their use in recombinant technology. Groups [C12N 15/11](#) - [C12N 15/117](#) cover also the use of non-coding nucleic acids as active ingredients in medicinal preparations. The [C12N 2300/00](#) indexing scheme has to be applied to these groups. When documents classifiable in one or more subgroups disclose general principles of the technology applicable to the whole field, classification is also made in group [C12N 15/111](#).}

Project: Unknown (C12N)

- U C12N 15/63 . . Introduction of foreign genetic material using vectors; Vectors; Use of hosts therefor; Regulation of expression
- U C12N 15/79 . . Vectors or expression systems specially adapted for eukaryotic hosts

NOTE

This group covers the use of eukaryotes as hosts.

- U C12N 15/82 for plant cells {, e.g. plant artificial chromosomes (PACs)}
- WARNING
Documents are being continuously reclassified into this new classification scheme. See Warning notes below
- U C12N 15/8201 {Methods for introducing genetic material into plant cells, e.g. DNA, RNA, stable or transient incorporation, tissue culture methods adapted for transformation}
- C12N 15/8209 {Selection, visualisation of transformants, reporter constructs, e.g. antibiotic resistance markers}
- NOTE
{Standard selectable markers such as neomycin phosphotransferase (NPT) are not systematically classified in [C12N 15/8209](#).}
- U C12N 15/8241 {Phenotypically and genetically modified plants via recombinant DNA technology}
- U C12N 15/8242 {with non-agronomic quality (output) traits, e.g. for industrial processing; Value added, non-agronomic traits}
- U C12N 15/8243 {involving biosynthetic or metabolic pathways, i.e. metabolic engineering, e.g. nicotine, caffeine}
- C12N 15/825 {involving pigment biosynthesis}
- NOTE
{Transgenic plants with altered flower morphology are also classified in this group.}
- U C12N 15/85 for animal cells
- C12N 15/8509 {for producing genetically modified animals, e.g. transgenic}
- NOTE
{Additional aspects of the modified animals are classified in the groups [A01K 2207/00](#) - [A01K 2267/00](#).}

Project: RP11657 (C12N)

- N C12N 2300/00 - C12N 2330/00** **Active non-coding nucleic acids**
- N C12N 2300/00** **Indexing codes associated with general methodologies in the field of biologically active non-coding nucleic acids**
- NOTE
Indexing codes of group [C12N 2300/00](#) are only used in combination with groups [C12N 15/11](#) - [C12N 15/117](#). An exception is made for [C12N 2310/20](#), which may be applied to CRISPR with any appropriate [C12N](#) main trunk symbol.
- D C12N 2303/00** **Indexing codes associated with general methodologies in the field of biologically active non-coding nucleic acids**
- NOTE
Indexing codes of group C12N 2303/00 are only used in combination with group C12N 15/111
- <administratively transferred to [C12N 2300/00](#) ADD>

U C12N 2310/00 Structure or type of the nucleic acid**NOTE**

In groups [C12N 2310/00](#) - [C12N 2310/533](#), C-Sets are used for classification. The detailed information about the C-Sets construction and the associated syntax rules are found in the Definitions of [C12N](#).

- U C12N 2310/10 • Type of nucleic acid
- M C12N 2310/14 • • interfering **N.A.nucleic acids [NA]**
- C C12N 2310/20 • • involving clustered regularly interspaced short palindromic repeats **[CRISPRsCRISPR]**

WARNING

Group C12N 2310/20 is impacted by reclassification into groups [C12N 9/22](#), [C12N 9/222](#), [C12N 9/224](#) and [C12N 9/226](#). All groups listed in this Warning should be considered in order to perform a complete search.

N C12N 2500/00 - C12N 2539/00 Cell culture; Cell-based diagnostics; Cell differentiation**Project: Unknown (C22C)****U C22C 1/00 Making non-ferrous alloys (by electrothermic methods [C22B 4/00](#); by electrolysis [C25C 1/24](#), [C25C 3/36](#))**

- U C22C 1/10 • Alloys containing non-metals ([C22C 1/05](#), [C22C 1/08](#) take precedence)

WARNING

Group [C22C 1/10](#) is impacted by reclassification into group [C22C 1/059](#). Groups [C22C 1/10](#) and [C22C 1/059](#) should be considered in order to perform a complete search.

- C22C 1/1094 • • {comprising an after-treatment}

NOTE

{Documents classified in group [C22C 1/1094](#) are also classified in subclass [C22F](#).}

WARNING

Group [C22C 1/1094](#) is impacted by reclassification into group [C22C 1/059](#). Groups [C22C 1/1094](#) and [C22C 1/059](#) should be considered in order to perform a complete search.

Project: Unknown (D06M)**U D06M 2101/00 Chemical constitution of the fibres, threads, yarns, fabrics or fibrous goods made from such materials, to be treated****NOTES**

1. This subclass constitutes an internal scheme for indexing only.
 2. The indexing codes relate to the fibres to be treated and are to be used with the groups [D06M 11/00](#), [D06M 13/00](#), [D06M 15/00](#), [D06M 16/00](#) and [D06M 23/00](#)
- Examples:

- the swelling of cellulose with alkaline hydroxides is classified and indexed in [D06M 11/38](#) // [D06M 2101/06](#)
- the treatment of cellulose with amines is classified and indexed in [D06M 13/325](#) // [D06M 2101/06](#)
- the treatment of polyester fibres with polyester is classified and indexed in [D06M 15/507](#) // [D06M 2101/32](#)

- the treatment of wool with pepsin is classified and indexed in [D06M 16/00](#) // [D06M 2101/12](#)
- the treatment of cellulose with silicon tetrachloride in the form of a foam is classified and indexed in [D06M 11/78](#), [D06M 23/04](#) // [D06M 2101/06](#).

D06M 2101/005

- {Asbestos fibres}

NOTE

{Blends of fibres are indexed according to each constituent fibre.}

Project: RP10450-F (F02B)

U F02B 31/00

Modifying induction systems for imparting a rotation to the charge in the cylinder (air intakes or induction systems for internal-combustion engines [F02M 35/10](#))

D F02B 2031/006
—(Frozen)

- {having multiple air intake valves}

WARNING

Group F02B 2031/006 is no longer used for the classification of documents as of May 1, 2024.

The content of this group is being reclassified into groups F02B 31/085 and F02B 31/087.

Groups F02B 2031/006, F02B 31/085 and F02B 31/087 should be considered in order to perform a complete search.

M F02B 31/02

- in engines having inlet valves arranged eccentrically to cylinder axis ([F02B 31/08](#) takes precedence)

WARNING

Group F02B 31/02 is impacted by reclassification into groups F02B 31/042, F02B 31/08, F02B 31/085 and F02B 31/087.

All groups listed in this Warning should be considered in order to perform a complete search.

M F02B 31/04

- by means within the induction channel, e.g. deflectors

WARNING

Group F02B 31/04 is impacted by reclassification into group F02B 31/042.

Groups F02B 31/04 and F02B 31/042 should be considered in order to perform a complete search.

M F02B 31/042

- • {induction channel having a helical shape around the intake valve axis}

WARNING

Group F02B 31/042 is incomplete pending reclassification of documents from groups F02B 31/02, F02B 31/04 and F02B 31/082.

All groups listed in this Warning should be considered in order to perform a complete search.

M F02B 31/08

- having multiple air inlets

WARNING

Group F02B 31/08 is incomplete pending reclassification of documents from groups F02B 31/02 and F02B 31/082.

Groups F02B 31/02, F02B 31/082 and F02B 31/08 should be considered in order to perform a complete search.

- D F02B 31/082
—(*Frozen*)
- {the main passage having a helical shape around the intake valve axis; Engines characterised by provision of driven charging or scavenging pumps (introducing fuel into cylinders by air pressure F02B 13/00; after-charging F02B 29/06; arrangements of such pumps or other auxiliary apparatus on engines F02B 67/00; combined engine pump control, control dependent on variables other than those generic to pump F02D)}
- WARNING
Group F02B 31/082 is no longer used for the classification of documents as of May 1, 2024.
The content of this group is being reclassified into groups F02B 31/08 and F02B 31/042.
Groups F02B 31/082, F02B 31/08 and F02B 31/042 should be considered in order to perform a complete search.
- M F02B 31/085
- {having two inlet valves}
- WARNING
Group F02B 31/085 is incomplete pending reclassification of documents from groups F02B 2031/006 and F02B 31/02.
Groups F02B 2031/006, F02B 31/02 and F02B 31/085 should be considered in order to perform a complete search.
- M F02B 31/087
- {having three or more inlet valves}
- WARNING
Group F02B 31/087 is incomplete pending reclassification of documents from groups F02B 2031/006 and F02B 31/02.
Groups F02B 2031/006, F02B 31/02 and F02B 31/087 should be considered in order to perform a complete search.

Project: MP12247 (F02F)

- M F02F
- CYLINDERS, PISTONS OR CASINGS, FOR COMBUSTION ENGINES; ARRANGEMENTS OF SEALINGS IN COMBUSTION ENGINES**
- NOTES
1. Attention is drawn to the notes preceding class [F01](#).
 2. In considering the relationship between class [F16](#) and subclass [F02F](#), class [F16](#) will take precedence unless the subject-matter is specific to combustion engines.
 3. {In this subclass, it is desirable to add the indexing codes of subclass [F05C](#) for specific details or properties of materials.}
- M F02F 5/00
- Piston rings, e.g. associated with piston crown** ~~{(not used see F16J 9/00)}~~
- NOTE
{Details of piston rings or related details of the pistons, piston crowns or cylinders are classified in group [F16J 9/00](#).}
- M F02F 7/00
- Casings, e.g. crankcases** ~~{or frames}~~
- M F02F 11/00
- Arrangements of sealings in combustion engines** ~~{(piston rings {or ring sealings of similar construction [F16J 9/00](#)})}~~

N F02F 2200/00 - Indexing scheme relating to manufacturing
F02F 2200/00

Project: MP12294 (F02N)

M F02N **STARTING OF COMBUSTION ENGINES; STARTING AIDS FOR SUCH ENGINES, NOT OTHERWISE PROVIDED FOR**

NOTES

1. Attention is drawn to the ~~notes~~Notes preceding class [F01](#).
2. The starting of engines which are not explicitly stated to be combustion engines ~~will be~~is classified in this subclass ~~insofar~~in so far as their starting is equivalent to that of combustion engines.

3. {In this subclass, it is desirable to add the indexing codes of groups F02N 2200/00 - F02N 2300/00 relating to

- i. Parameters used for control of starting apparatus.
- ii. Problems related to engine starting or engine's starting apparatus.
- iii. Control related aspects of engine starting.

}

U F02N 11/00 **Starting of engines by means of electric motors**

M F02N 11/08 • Circuits ~~{or control means}~~ specially adapted for starting of engines

M F02N 99/00 **Subject matter not provided for in ~~the~~ other groups of this subclass**

N F02N 2200/00 - Indexing codes relating to engine starting associated with subclass [F02N](#)
F02N 2300/00

D F02N 2250/00 - Muscle-operated starting apparatus
F02N 2300/00

Project: RP0241-F (F16B)

M F16B 45/00 **Hooks; Eyes (if the attaching parts or means are concerned, groups [F16B 13/00](#), [F16B 15/00](#), [F16B 19/00](#), [F16B 25/00](#), [F16B 35/00](#), [F16B 47/00](#) take precedence; for hanging pictures or the like [A47G 1/16](#); towing hooks for ships [B63B 21/58](#); for hoisting or hauling purposes [B66C](#); hooks or eyes with integral parts designed to facilitate quick attachment to cables or ropes at any point [F16G 11/14](#))**

WARNING

Group F16B-45/00 is impacted by reclassification into groups F16B-45/002; F16B-45/005; F16B-45/008; F16B-45/012 and F16B-45/015.

All groups listed in this Warning should be considered in order to perform a complete search.

M F16B 45/002 • {Eyes}

WARNING

Group F16B-45/002 is incomplete pending reclassification of documents from group F16B-45/00.

Groups F16B-45/00 and F16B-45/002 should be considered in order to perform a complete search.

M F16B 45/005 • {characterised by the material}

WARNING

Groups F16B-45/005; F16B-45/008; F16B-45/012; and F16B-45/015 are incomplete pending reclassification of documents from groups F16B-45/00; F16B-45/02; F16B-45/021 and F16B-45/04.

All groups listed in this Warning should be considered in order to perform a complete search.

M F16B 45/02

- Hooks with pivoting {or elastically bending} closing member

WARNING

Group F16B 45/02 is impacted by reclassification into groups F16B 45/005, F16B 45/008, F16B 45/012, F16B 45/015, F16B 45/021, F16B 45/022, F16B 45/023, F16B 45/024, F16B 45/026, F16B 45/027, F16B 45/028, F16B 45/029, F16B 45/031, F16B 45/032, F16B 45/033, F16B 45/034, F16B 45/035, F16B 45/036 and F16B 45/037.

All groups listed in this Warning should be considered in order to perform a complete search.

M F16B 45/021

- {the closing member being operable remotely, e.g. by cables, chains or rods}

WARNING

Group F16B 45/021 is incomplete pending reclassification of documents from groups F16B 45/02.

Group F16B 45/021 is also impacted by reclassification into groups F16B 45/005, F16B 45/008, F16B 45/012, F16B 45/015, F16B 45/022, F16B 45/023, F16B 45/024, F16B 45/026, F16B 45/027, F16B 45/028, F16B 45/029, F16B 45/031, F16B 45/032, F16B 45/033, F16B 45/034, F16B 45/035, F16B 45/036 and F16B 45/037.

All groups listed in this Warning should be considered in order to perform a complete search.

M F16B 45/022

- {the closing member pivoting about an axis lying in the plane of the hook}

WARNING

Group F16B 45/022 is incomplete pending reclassification of documents from group F16B 45/02.

All groups listed in this Warning should be considered in order to perform a complete search.

M F16B 45/023

- {the closing member pivoting about an axis perpendicular to the plane of the hook}

WARNING

Group F16B 45/023 is incomplete pending reclassification of documents from group F16B 45/02.

All groups listed in this Warning should be considered in order to perform a complete search.

M F16B 45/024

- {and having means biasing the closing member about the pivot}

WARNING

Groups F16B 45/024 and F16B 45/026 are incomplete pending reclassification of documents from group F16B 45/02.

All groups listed in this Warning should be considered in order to perform a complete search.

M F16B 45/027

- {and having position-locking means for the closing member}

WARNING

Groups F16B 45/027, F16B 45/028 and F16B 45/029 are incomplete pending reclassification of documents from group F16B 45/02.

All groups listed in this Warning should be considered in order to perform a complete search.

M	F16B 45/031	<ul style="list-style-type: none"> • {the closing member closing when a structure to be secured is tensioned} <p><u>WARNING</u> Group F16B 45/031 is incomplete pending reclassification of documents from group F16B 45/02. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	F16B 45/032	<ul style="list-style-type: none"> • {whereby the closing member is slidable relative to the pivot} <p><u>WARNING</u> Group F16B 45/032 is incomplete pending reclassification of documents from group F16B 45/02. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	F16B 45/033	<ul style="list-style-type: none"> • {the closing member being revolvably mounted and having a disc shape} <p><u>WARNING</u> Group F16B 45/033 is incomplete pending reclassification of documents from group F16B 45/02. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	F16B 45/034	<ul style="list-style-type: none"> • {the closing member constituting the hook shaped portion of the hook} <p><u>WARNING</u> Group F16B 45/034 is incomplete pending reclassification of documents from group F16B 45/02. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	F16B 45/035	<ul style="list-style-type: none"> • {the hook forming a loop or ring when interlocked with the closing member, i.e. the entire structure of the hook being loop shaped} <p><u>WARNING</u> Group F16B 45/035 is incomplete pending reclassification of documents from group F16B 45/02. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	F16B 45/036	<ul style="list-style-type: none"> • {with an elastically bending closing member} <p><u>WARNING</u> Group F16B 45/036 is incomplete pending reclassification of documents from group F16B 45/02. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	F16B 45/037	<ul style="list-style-type: none"> • {Multiple locking cavities, each having a pivoting closing member} <p><u>WARNING</u> Group F16B 45/037 is incomplete pending reclassification of documents from group F16B 45/02. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	F16B 45/04	<ul style="list-style-type: none"> • Hooks with sliding closing member <p><u>WARNING</u> Group F16B 45/04 is impacted by reclassification into groups F16B 45/005, F16B 45/008, F16B 45/012, F16B 45/015, F16B 45/043, F16B 45/045,</p>

~~F16B 45/047, F16B 45/049, F16B 45/051, F16B 45/053, F16B 45/055,
F16B 45/057 and F16B 45/059.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

- | | | |
|---|-------------|--|
| M | F16B 45/043 | <ul style="list-style-type: none">• {the closing member being operable remotely, e.g. by cables, chains or rods} <p><u>WARNING</u>
Group F16B 45/043 is incomplete pending reclassification of documents from group F16B 45/04.
All groups listed in this Warning should be considered in order to perform a complete search.</p> |
| M | F16B 45/045 | <ul style="list-style-type: none">• {provided with position-locking means for the closing member} <p><u>WARNING</u>
Groups F16B 45/045 and F16B 45/047 are incomplete pending reclassification of documents from group F16B 45/04.
Groups F16B 45/04 and F16B 45/045 should be considered in order to perform a complete search.</p> |
| M | F16B 45/049 | <ul style="list-style-type: none">• {provided with means biasing the closing member} <p><u>WARNING</u>
Group F16B 45/049 is incomplete pending reclassification of documents from group F16B 45/04.
Groups F16B 45/04 and F16B 45/049 should be considered in order to perform a complete search.</p> |
| M | F16B 45/051 | <ul style="list-style-type: none">• {provided with a guide of the closing member encircling a shank of the hook} <p><u>WARNING</u>
Group F16B 45/051 is incomplete pending reclassification of documents from group F16B 45/04.
Groups F16B 45/04 and F16B 45/051 should be considered in order to perform a complete search.</p> |
| M | F16B 45/053 | <ul style="list-style-type: none">• {provided with a cavity in a shank of the hook forming a track or way for the closing member} <p><u>WARNING</u>
Group F16B 45/053 is incomplete pending reclassification of documents from group F16B 45/04.
Groups F16B 45/04 and F16B 45/053 should be considered in order to perform a complete search.</p> |
| M | F16B 45/055 | <ul style="list-style-type: none">• {the closing member constituting the hook-shaped portion of the hook} <p><u>WARNING</u>
Group F16B 45/055 is incomplete pending reclassification of documents from group F16B 45/04.
Groups F16B 45/04 and F16B 45/055 should be considered in order to perform a complete search.</p> |
| M | F16B 45/057 | <ul style="list-style-type: none">• {the hook forming a loop or ring when interlocked with the closing member, i.e. the entire structure of the hook being loop shaped} <p><u>WARNING</u>
Group F16B 45/057 is incomplete pending reclassification of documents from group F16B 45/04.
Groups F16B 45/04 and F16B 45/057 should be considered in order to perform a complete search.</p> |

M F16B 45/059

- {Multiple locking cavities, each having a sliding closing member}

WARNING

~~Group F16B 45/059 is incomplete pending reclassification of documents from group F16B 45/04.~~

~~Groups F16B 45/04 and F16B 45/059 should be considered in order to perform a complete search.~~

Project: RP10485 (F16H)

M F16H

GEARING**NOTES**

1. Combinations including mechanical gearings are classified in groups [F16H 37/00](#) or [F16H 47/00](#), unless they are provided for in groups [F16H 1/00](#) - [F16H 35/00](#).
2. In this subclass, sets of rigidly-connected members are regarded as single members.
3. In this subclass, the following terms or expressions are used with the meanings indicated:
 - "toothed gearing" includes worm gearing and other gearing involving at least one wheel or sector provided with teeth or the equivalent, EXCEPT gearing with chains or toothed belts, which is treated as friction gearing;
 - "conveying motion" includes transmitting energy, and means that the applied and resultant motions are of the same kind, though they may differ in, e.g. speed, direction extent;
 - "rotary" implies that the motion may continue indefinitely;
 - "oscillating" means moving about an axis to an extent which is limited by the construction of the gearing, and which may exceed one revolution, the movement being alternately forwards and backwards during continued operation of the gearing;
 - "reciprocating" means moving substantially in a straight line, the movement being alternately forwards and backwards during continued operation of the gearing;
 - "reversing" or "reversal" means that an applied movement in one direction may produce a resultant movement in either of two opposed directions at will;
 - "central gears" includes any gears whose axis is the main axis of the gearing.
4. Attention is drawn to the following places:

A01D 69/06	Gearings in harvesting machines
A63H 31/00	Gearing for toys
B21B 35/12	Toothed-wheel gearing for metal-rolling mills
B60K	Arrangement of transmissions in vehicles
B61C 9/00	Transmissions for railway locomotives
B62D 3/00	Vehicle steering gears
B62M	Transmissions for cycles
B63H 23/00	Transmissions for marine propulsions
B63H 25/00	Marine steering gears
{ B64C 27/12 , B64C 27/58 }	{Transmissions for helicopters}
{ B64D 35/00 }	{Transmissions for aircraft}
F01-F04	Machines, engines, pumps
F15B 15/00	Gearings associated with fluid-actuated devices
G01D 5/04	Gearing used in indicating or recording apparatus in connection with measuring devices

[H03J 1/00](#)

Driving arrangements for tuning resonant circuits

[H04L 13/04](#)

Driving mechanisms for apparatus for transmission of coded digital information.

WARNING

{In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

U F16H 1/00

Toothed gearings for conveying rotary motion (specific for conveying rotary motion with variable gear ratio or for reversing rotary motion [F16H 3/00](#))

- M F16H 1/003 · {~~Monodirectionally~~*Unidirectionally* torque-transmitting toothed gearing}
- U F16H 1/02 · without gears having orbital motion
- U F16H 1/04 · · involving only two intermeshing members
- U F16H 1/12 · · · with non-parallel axes
- M F16H 1/125 · · · · {comprising spiral gears *only*}
- U F16H 1/28 · with gears having orbital motion
- M F16H 1/2809 · · {with means for equalising the distribution of load on the planet~~wheels~~ *gears*}
- M F16H 1/2836 · · · {by allowing limited movement of the ~~planets~~*planet* ~~gears~~ relative to the planet carrier or by using free floating ~~planets~~*planet* ~~gears~~}
- M F16H 1/30 · · in which an orbital gear has an axis crossing the main ~~axes~~*axis* of the gearing and has helical teeth or is a worm
- U F16H 1/32 · · in which the central axis of the gearing lies inside the periphery of an orbital gear
- U F16H 1/321 · · · {the orbital gear being nutating}
- M F16H 2001/322 · · · {comprising at least one universal joint *or flexible coupling*, e.g. a Cardan joint}
- M F16H 2001/326 · · · {comprising ~~a carrier with~~ linear guiding means guiding at least one orbital gear}
- M F16H 2001/327 · · · {with ~~orbital gear sets comprising an internally toothed ring gear~~*the orbital gear having internal gear teeth*}
- U F16H 2001/328 · · · {comprising balancing means}
- M F16H 1/48 · · Special means compensating for misalignment of axes {, e.g. for equalising distribution of load on the face width of the teeth ~~(in combination with distribution of load on the planet-wheels F16H 1/2809)~~}

U F16H 3/00

Toothed gearings for conveying rotary motion with variable gear ratio or for reversing rotary motion (speed-changing or reversing mechanisms [F16H 59/00](#) - [F16H 63/00](#))

- M F16H 3/001 · {convertible for varying the gear~~-~~ ratio, e.g. for selecting one of several shafts as the input shaft}
- M F16H 3/002 · {using gears having teeth movable out of mesh (*F16H 3/16, F16H 3/20 and F16H 3/42 takes*take precedence)}
- M F16H 3/003 · {the gear~~-~~ ratio being changed by inversion of torque direction}
- M F16H 3/006 · {power being selectively transmitted by ~~either one of the parallel flow paths~~*parallel flow paths, e.g. dual clutch transmissions*}
- M F16H 2003/007 · · {with two flow paths, one being directly connected to the input, the other being connected to the input ~~though~~*through* a clutch}
- U F16H 3/02 · without gears having orbital motion

- U F16H 3/08
- • exclusively or essentially with continuously meshing gears, that can be disengaged from their shafts
- NOTE
In this group, gears which can be put out of mesh are not taken into consideration if they are used for reversal only.
- M F16H 2003/0807
- • {with gear ratios in which the power is transferred by axially coupling idle gears *to each other*}
- M F16H 3/083
- • with radially acting and axially controlled clutching members, e.g. sliding keys ~~{(clutches with clutching members movable otherwise than only axially F16D 11/12; clutches with wedgeable clutching members F16D 15/00; systems of mechanically actuated clutches F16D 21/04)}~~
- U F16H 3/20
- • exclusively or essentially using gears that can be moved out of gear
- NOTE
In this group, gears which can be put out of mesh are not taken into consideration if they are used for reversal only.
- U F16H 3/38
- • with synchro-meshing
- M F16H 3/385
- • {with braking means ~~(constructional features of the final output mechanisms for reversing F16H 63/302)}~~}
- M F16H 3/44
- using gears having orbital motion ~~{(the gear-ratio being changed by inversion of torque direction F16H 3/005)}~~
- U F16H 3/62
- • Gearings having three or more central gears ([F16H 3/68](#) - [F16H 3/78](#) take precedence)
- U F16H 3/66
- • composed of a number of gear trains without drive passing from one train to another
- M F16H 3/663
- • {with conveying rotary motion between axially spaced orbital gears, e.g. *RAVIGNEAUX* *a stepped orbital gear or Ravigneaux*}
- M F16H 3/666
- • {with ~~compound planetary gear units, e.g. two~~ intermeshing orbital gears ([F16H 3/663](#) takes precedence)}
- U F16H 3/72
- • with a secondary drive, e.g. regulating motor, in order to vary speed continuously
- M F16H 3/721
- • {*with the secondary drive being* an energy dissipating device, e.g. regulating brake ~~or fluid throttle~~, in order to vary speed continuously}
- M F16H 3/722
- • {*with the secondary drive being* a fluid throttle}
- M F16H 3/724
- • {using ~~external~~ *externally* powered electric machines}
- M F16H 3/727
- • {with at least two dynamo electric machines for creating an electric power path inside the gearing, e.g. using generator and motor for a variable power torque path ~~(special adapted for a hybrid electric vehicle B60K 6/20)}~~}
- M F16H 3/74
- • Complexes, not using ~~actuatable speedchanging~~ *actuatable speed-changing* or regulating members, e.g. with gear ratio determined by free play of frictional or other forces
- M F16H 7/00**
- Gearings for conveying rotary motion by endless flexible members (specific for conveying rotary motion with variable gear ratio or for reversing rotary motion [F16H 9/00](#) ~~{; chainwheels F16H 55/30}~~)**
- U F16H 7/02
- with belts; with V-belts
- M F16H 7/023
- {with belts having a toothed contact surface or regularly spaced bosses or hollows for slipless or nearly slipless meshing with complementary profiled contact surface of a pulley ~~(toothed belts F16G 1/28, F16G 5/20)}~~}

- M F16H 7/08
- Means for varying tension of belts, ropes, or chains (pulleys of adjustable construction [F16H 55/52](#); ~~gearings with endless belts F16H 7/02; tensioning for chains or belts specially adapted for cycles B62M 9/16; belt or chain tensioning arrangements for endless conveyors B65G 23/44~~)
- M F16H 7/10
- by adjusting the axis of a pulley (~~F16H 7/0827 takes precedence~~)
- U F16H 7/12
- of an idle pulley
- M F16H 7/1209
- {with vibration damping means (~~vibration damping per se F16F~~)}
- M F16H 13/00**
- Gearing for conveying rotary motion with constant gear ratio by friction between rotary members (~~friction discs F16H 55/32~~)**
- M F16H 15/00**
- Gearings for conveying rotary motion with variable gear ratio, or for reversing rotary motion, by friction between rotary members (~~gearings for reversal only F16H 3/14, F16H 3/60~~; control of change-speed or reversing-gearings conveying rotary motion [F16H 59/00](#) - [F16H 63/00](#))**
- U F16H 19/00**
- Gearings comprising essentially only toothed gears or friction members and not capable of conveying indefinitely-continuing rotary motion (with intermittently-driving members [F16H 27/00](#) - [F16H 31/00](#))**
- U F16H 19/001
- {for conveying reciprocating or limited rotary motion}
- U F16H 19/003
- {comprising a flexible member}
- M F16H 19/006
- {for converting reciprocating ~~into an other~~ *motion into another* reciprocating motion}
- U F16H 19/02
- for interconverting rotary {or oscillating} motion and reciprocating motion
- U F16H 19/06
- comprising {flexible members, e.g. an} endless flexible member
- WARNING
- Groups [F16H 19/0604](#) - [F16H 19/0672](#) are not complete pending reclassification; see also this group
- M F16H 19/0618
- {the flexible member, e.g. cable, being wound on a drum or thread for creating axial movement parallel to the drum *or thread*}
- U F16H 19/0622
- {for converting reciprocating movement into oscillating movement and *vice versa*, the reciprocating movement is perpendicular to the axis of oscillation}
- M F16H 19/0628
- {the flexible member, e.g. a cable, being wound with one string to a drum and unwound with ~~the other~~ *another* string to create reciprocating movement of the flexible member}
- M F16H 19/0645
- {the flexible push or pull member having guiding means, i.e. the flexible member being supported at least partially by a guide to transmit the reciprocating movement (~~non-buckling chains F16H 19/0636~~ *the flexible member being a non-buckling chain F16H 19/0636*)}
- M F16H 21/00**
- Gearings comprising primarily only links or levers, with or without slides ([F16H 23/00](#) takes precedence)**
- U F16H 21/10
- all movement being in, or parallel to, a single plane
- U F16H 21/16
- for interconverting rotary motion and reciprocating motion
- U F16H 21/18
- Crank gearings; Eccentric gearings
- U F16H 21/36
- without swinging connecting-rod, e.g. with epicyclic parallel motion, slot-and-crank motion
- M F16H 21/365
- {with ~~planetary~~ *orbital* gearing having a ratio of 2:1 between ~~sun-gear and planet~~ *central gear and orbital* gear}
- U F16H 21/46
- with movements in three dimensions

M	F16H 21/50	<ul style="list-style-type: none"> • • for interconverting rotary motion and reciprocating motion-{{F16H 23/00 takes precedence}}
M	F16H 23/00	Wobble-plate gearings; Oblique-crank gearings-{{conveying rotary motion with toothed nutating gears F16H 1/321}}
U	F16H 25/00	Gearings comprising primarily only cams, cam-followers and screw-and-nut mechanisms
U	F16H 25/08	<ul style="list-style-type: none"> • for interconverting rotary motion and reciprocating motion (F16H 23/00 takes precedence)
M	F16H 25/12	<ul style="list-style-type: none"> • • with reciprocation along the axis of rotation, e.g. gearings with helical grooves and automatic reversal-{or cams}
U	F16H 25/18	<ul style="list-style-type: none"> • for conveying or interconverting oscillating or reciprocating motions
U	F16H 25/20	<ul style="list-style-type: none"> • • Screw mechanisms (with automatic reversal F16H 25/12)
M	F16H 2025/2059	<ul style="list-style-type: none"> • • • {SuperposingCommon movement by two screws or two nuts, e.g. two connected screws with opposite thread direction}
U	F16H 25/24	<ul style="list-style-type: none"> • • • Elements essential to such mechanisms, e.g. screws, nuts (F16H 25/22 takes precedence)
M	F16H 2025/249	<ul style="list-style-type: none"> • • • • {Special materialsMaterials or coatings for screws or nuts}
U	F16H 27/00	Step-by-step mechanisms without freewheel members, e.g. Geneva drives
M	F16H 27/02	<ul style="list-style-type: none"> • with at least one reciprocating or oscillating transmission member-{{F16H 27/04 takes precedence}}
M	F16H 29/00	Gearings for conveying rotary motion with intermittently-driving members, e.g. with freewheel action-{{gearings for converting oscillating or reciprocating movement with freewheeling members or other intermittently-driving members into a rotary movement F16H 31/00}}
U	F16H 31/00	Other gearings with freewheeling members or other intermittently driving members (F16H 21/00, F16H 23/00, F16H 25/00 take precedence)
U	F16H 31/001	<ul style="list-style-type: none"> • {Mechanisms with freewheeling members}
M	F16H 31/002	<ul style="list-style-type: none"> • • {Hand-driven ratchets-{wrenches of the ratchet type B25B 13/46}}
U	F16H 33/00	Gearings based on repeated accumulation and delivery of energy
M	F16H 33/20	<ul style="list-style-type: none"> • for interconversion, based essentially on inertia, of rotary motion and reciprocating or oscillating motion-{{for converting into a linear propulsion force, i.e. inertia motors F03G 3/00}}
U	F16H 35/00	Gearings or mechanisms with other special functional features
M	F16H 2035/001	<ul style="list-style-type: none"> • {Gearings with eccentriceccentrically mounted gears, e.g. for cyclically varying ratio}
M	F16H 2035/006	<ul style="list-style-type: none"> • {Gearings or mechanisms for stopping or limiting movement, e.g. stopping a movement after a few turns}
M	F16H 35/008	<ul style="list-style-type: none"> • {for variation of rotational phase relationship, e.g. angular relationship between input and output shaft-{couplings F16D 3/10}}
M	F16H 35/06	<ul style="list-style-type: none"> • Gearings designed to allow relative movement between supports thereof without ill effects (special means compensating for misalignment of axes F16H 1/26, F16H 1/48-{; mounting or supporting gearboxes F16H 57/025})
M	F16H 35/10	<ul style="list-style-type: none"> • Arrangements or devices for absorbing overload or preventing damage by overload-{{for screw mechanisms F16H 25/2021}}
U	F16H 37/00	Combinations of mechanical gearings, not provided for in groups F16H 1/00 - F16H 35/00 (combinations of mechanical gearing with fluid clutches or fluid gearing F16H 47/00)

- U F16H 37/02 • comprising essentially only toothed or friction gearings
- M F16H 37/021 • • {toothed gearing combined with ~~continuous~~*continuously* variable friction gearing}
- M F16H 2037/023 • • • {~~CVT's~~*the combined gearing being* provided with at least two forward and one reverse ratio in a ~~serial~~*serially* arranged sub-transmission}
- M F16H 2037/025 • • • {~~CVT's~~*having continuously variable friction gearing, i.e. CVT,* in which the ratio coverage is used more than once to produce the overall transmission ratio coverage, e.g. by shift to end of range, then change ratio in sub-transmission and shift CVT through range once again}
- M F16H 2037/026 • • • {~~CVT-layouts~~*Layouts* with particular features of reversing gear, e.g. to achieve compact arrangement}
- M F16H 37/027 • • {toothed gearing combined with a gear using endless flexible members for reversing rotary motion only (*F16H 37/06 takes precedence*)}
- U F16H 37/04 • • Combinations of toothed gearings only (*F16H 37/06 takes precedence*)
- M F16H 2037/048 • • • {Combinations of parallel shaft and orbital motion gearing, wherein the orbital motion ~~gear~~*gearing* has more than one connection with the parallel shaft gearing}
- U F16H 2037/049 • • • {Forward-reverse units with forward and reverse gears for achieving multiple forward and reverse gears, e.g. for working machines}
- U F16H 37/06 • • with a plurality of driving or driven shafts; with arrangements for dividing torque between two or more intermediate shafts
- M F16H 37/065 • • • {with a plurality of driving or driven shafts (~~F16H 37/08~~*F16H 37/0806* takes precedence)}
- U F16H 37/08 • • • with differential gearing
- U F16H 37/0806 • • • • {with a plurality of driving or driven shafts}
- M F16H 37/0813 • • • • • {with only one input shaft (~~differentials for four wheel drive vehicles B60K 17/346~~)}
- M F16H 37/0833 • • • • {with arrangements for dividing torque between two or more intermediate shafts, i.e. with two or more internal power paths (~~F16H 37/72 takes precedence~~)}
- U F16H 37/084 • • • • • {at least one power path being a continuously variable transmission, i.e. CVT}
- M F16H 2037/0866 • • • • • {Power ~~split variators~~*split transmissions* with distributing differentials, with the output of the CVT connected or connectable to the output shaft}
- M F16H 2037/0873 • • • • • • {with switching *means*, e.g. to change ranges}
- M F16H 2037/088 • • • • • • {Power ~~split variators~~*split transmissions* with summing differentials, with the input of the CVT connected or connectable to the input shaft}
- M F16H 2037/0893 • • • • • • {characterised in *that* the ratio of the continuously variable transmission is different from zero when the output shaft speed is zero}
- M F16H 37/10 • • • • at both ends of intermediate shafts (~~F16H 37/0806 takes precedence~~)
- M F16H 2037/101 • • • • • {Power ~~split variators~~*split transmissions* with one differential at each end of ~~the~~*a continuously variable transmission, i.e. CVT*}
- M F16H 2037/103 • • • • • {Power ~~split variators~~*split transmissions* with each end of ~~the~~*a* CVT connected or connectable to a *planetary gear set having four or more connections, e.g. a Ravigneaux set*}
- M F16H 2037/104 • • • • • {Power ~~split variators~~*with split transmissions with at least* one end of ~~the~~*a* CVT connected or connectable to two or more differentials}

- U F16H 37/12
- Gearings comprising primarily toothed or friction gearing, links or levers, and cams, or members of at least two of these types (gearings with cranks, eccentrics, or like members fixed to one rotary member and guided along tracks on the other [F16H 21/14](#); crank or eccentric gearings with cams or additional guides, or with members having rolling contact [F16H 21/28](#), [F16H 21/30](#))
- M F16H 37/14
- • the movements of two or more independently-moving members being combined into a single movement ~~{{screw mechanisms with both nut and screw being driven F16H 25/2018}}~~
- M F16H 43/00
- Other fluid gearing, e.g. with oscillating input or output** ~~{{generating mechanical vibrations of infrasonic or sonic frequency B06B; percussive tools B25D 9/00; mine roof supports for step by step movement E21D 23/00; reciprocating-piston machines without rotary main shaft F01B 11/08; fluid pressure actuators F15B}}~~
- M F16H 45/00
- Combinations of fluid gearings for conveying rotary motion with couplings or clutches (gearing systems consisting of a plurality of hydrokinetic units operating alternatively [F16H 41/22](#) ~~-, F16H 47/085~~)**
- NOTE
- Clutches for varying working conditions in fluid torque-converters are regarded as part of the torque converter
- U F16H 47/00
- Combinations of mechanical gearing with fluid clutches or fluid gearing**
- U F16H 47/06
- the fluid gearing being of the hydrokinetic type
- M F16H 47/065
- • {the mechanical gearing ~~being~~ **comprising gearing** of the friction or endless flexible member type}
- M F16H 47/07
- • using two or more power-transmitting fluid circuits (~~{F16H 47/065,}~~ [F16H 47/10](#) ~~take~~ **takes** precedence)
- M F16H 47/08
- • the mechanical gearing being of the type with members having orbital motion ~~{{F16H 47/065 takes precedence}}~~
- M F16H 47/085
- • • {with at least two mechanical connections between the ~~hydraulic device~~ **hydrokinetic gearing** and the mechanical ~~transmissions~~ **gearing**}
- U F16H 48/00
- Differential gearings (cooling or lubricating of differential gearing [F16H 57/04](#))**
- NOTE
- When classifying in this main group, in the absence of an indication to the contrary, classification is made in all appropriate places.
- U F16H 48/20
- Arrangements for suppressing or influencing the differential action, e.g. locking devices
- U F16H 48/30
- • using externally-actuatable means
- U F16H 48/32
- • • using fluid pressure actuators
- U F16H 48/36
- characterised by intentionally generating speed difference between outputs
- U F16H 48/38
- Constructional details (the outer casing comprising the differential and supporting input and output shafts [F16H 57/037](#))
- U F16H 48/40
- • characterised by features of the rotating cases
- U F16H 49/00
- Other gearings**
- M F16H 49/001
- {Wave gearings, e.g. harmonic drive transmissions ~~{harmonic drives specially adapted for positioning programme-controlled manipulators B25J 9/1025}}~~
- M F16H 49/005
- {Magnetic gearings with physical contact between gears ~~{rotating torque transmitting elements of the permanent magnet type H02K 49/102}}~~

M	F16H 53/00	Cams {; Non-rotary cams;} Cams or cam-followers, e.g. rollers for gearing mechanisms
U	F16H 53/02	• Single-track cams for single-revolution cycles; Camshafts with such cams
M	F16H 53/025	• {characterised by their construction, e.g. assembling or manufacturing features (grinding of camshafts B24B 19/12)} }
U	F16H 55/00	Elements with teeth or friction surfaces for conveying motion; Worms, pulleys or sheaves for gearing mechanisms (of screw-and-nut gearing F16H 25/00)
U	F16H 55/02	• Toothed members; Worms
M	F16H 55/06	• • Use of materials; Use of treatments of toothed members or worms to affect their intrinsic material properties {(coatings for lubrication F16H 57/041; producing gear wheels from plastics or substances in a plastic state B29D 15/00; heat treatment C21D 9/32; electrolytic surface treatment C25D; heating by electromagnetic field H05B 6/00)}
U	F16H 55/08	• • Profiling
M	F16H 55/10	• • Constructively simple tooth shapes, e.g. shaped as pins, as balls {(gearwork for clocks and watches G04B 13/00)}
U	F16H 55/17	• • Toothed wheels (worm wheels F16H 55/22 ; chain wheels F16H 55/30)
M	F16H 2055/178	• • • {combined with clutch means, e.g. gear with integrated synchronizer <i>synchroniser</i> clutch}
U	F16H 55/32	• Friction members
U	F16H 55/36	• • Pulleys (with features essential for adjustment F16H 55/52)
U	F16H 2055/366	• • • {with means providing resilience or vibration damping}
M	F16H 55/48	• • • manufactured exclusively or in part of non-metallic material, e.g. plastics (F16H 55/38 , F16H 55/42 , F16H 55/46 take precedence {; manufacture of wooden wheels B27H 7/00})
U	F16H 57/00	General details of gearing (of screw-and-nut gearing F16H 25/00; of fluid gearing F16H 39/00 - F16H 43/00)
M	F16H 2057/0068	• {Repairing of transmissions by using repair kits (for gear wheels F16H 2055/175)} }
M	F16H 2057/0075	• {Modifying standard transmissions from manufacturer, e.g. by adding an extension for additional ratios (for control F16H 2061/0062)} }
M	F16H 2057/0081	• {Fixing of, or adapting to transmission failure (detecting transmission failures F16H 2057/018)} }
U	F16H 57/02	• Gearboxes; Mounting gearing therein <u>NOTE</u> When classifying in this group, in the absence of an indication to the contrary, classification is made in all appropriate subgroups.
U	F16H 57/023	• • Mounting or installation of gears or shafts in the gearboxes, e.g. methods or means for assembly
M	F16H 2057/0235	• • • {specially adapted to allow easy accessibility and repair (using repair kits F16H 2057/0068)} }
U	F16H 57/032	• • characterised by the materials used
M	F16H 2057/0325	• • • {Moulded casings made from plastic}
M	F16H 57/04	• Features relating to lubrication or cooling {or heating} {(in hydrokinetic gearing F16H 41/30;)} control of lubrication or cooling in hydrostatic gearing F16H 61/4165)
U	F16H 57/0408	• • {Exchange, draining or filling of transmission lubricant}

M	F16H 57/0409	<ul style="list-style-type: none"> • {characterised by the problem to increase <i>increasing</i> efficiency, e.g. by reducing splash losses}
M	F16H 57/041	<ul style="list-style-type: none"> • {Coatings or solid lubricants, e.g. antiseize <i>anti-seize</i> layers or pastes}
U	F16H 57/0412	<ul style="list-style-type: none"> • {Cooling or heating; Control of temperature}
U	F16H 57/0415	<ul style="list-style-type: none"> • {Air cooling or ventilation; Heat exchangers; Thermal insulations}
U	F16H 57/0417	<ul style="list-style-type: none"> • {Heat exchangers adapted or integrated in the gearing}
U	F16H 57/042	<ul style="list-style-type: none"> • {Guidance of lubricant}
U	F16H 57/0421	<ul style="list-style-type: none"> • {on or within the casing, e.g. shields or baffles for collecting lubricant, tubes, pipes, grooves, channels or the like}
M	F16H 57/0423	<ul style="list-style-type: none"> • {Lubricant guiding means mounted or supported on the casing, e.g. shields or baffles for collecting lubricant, tubes or pipes (means for guiding lubricant into an axial channel of a shaft F16H 57/0426; lubrication by injection, injection nozzles or tubes therefore F16H 57/0456)}
M	F16H 57/0424	<ul style="list-style-type: none"> • {Lubricant guiding means in the wall of or integrated with the casing, e.g. grooves, channels, holes (means for guiding lubricant into an axial channel of a shaft F16H 57/0426)}
M	F16H 57/0432	<ul style="list-style-type: none"> • {Lubricant guiding means on or inside shift rods or shift forks (shift rods or shift forks to be lubricated, cooled or heated F16H 57/0468)}
M	F16H 57/0434	<ul style="list-style-type: none"> • {relating to lubrication supply, e.g. pumps (arrangement of pumps F16H 57/0441); Pressure control (grooves with pumping effect for supplying lubricant F16H 57/0428; generation and variation of line pressure for transmission control F16H 61/0021)}
U	F16H 57/0436	<ul style="list-style-type: none"> • {Pumps}
U	F16H 57/0445	<ul style="list-style-type: none"> • {for supply of different gearbox casings or sections}
U	F16H 57/0447	<ul style="list-style-type: none"> • {Control of lubricant levels, e.g. lubricant level control dependent on temperature}
U	F16H 57/0449	<ul style="list-style-type: none"> • {Sensors or indicators for controlling the fluid level}
M	F16H 57/0457	<ul style="list-style-type: none"> • {Splash lubrication (characterised by the problem reducing losses, e.g. splash losses F16H 57/0409)}
M	F16H 57/0458	<ul style="list-style-type: none"> • {Oil-mist or spray lubrication; Means to reduce foam formation (reducing foam formation by venting F16H 57/027)}
U	F16H 57/0467	<ul style="list-style-type: none"> • {Elements of gearings to be lubricated, cooled or heated}
M	F16H 57/0475	<ul style="list-style-type: none"> • {Engine and gearing, i.e. joint lubrication or cooling or heating thereof (electric machines and gearing F16H 57/0476)}
U	F16H 57/048	<ul style="list-style-type: none"> • {Type of gearings to be lubricated, cooled or heated}
U	F16H 57/0482	<ul style="list-style-type: none"> • {Gearings with gears having orbital motion}
M	F16H 57/0486	<ul style="list-style-type: none"> • {with fixed gear ratio (differentials F16H 57/0483 <i>axle or inter-axle differentials F16H 57/0483)</i>}
M	F16H 57/0493	<ul style="list-style-type: none"> • {Gearings with spur or bevel gears (differentials with spur or bevel gears F16H 57/0483 <i>axle or inter-axle differentials with spur or bevel gears F16H 57/0483)</i>}
U	F16H 57/12	<ul style="list-style-type: none"> • Arrangements for adjusting or for taking-up backlash not provided for elsewhere
M	F16H 59/00	Control inputs to {control units of} change-speed- ; or reversing-gearings for conveying rotary motion

U	F16H 59/02	<ul style="list-style-type: none"> • Selector apparatus <p><u>NOTE</u> Selection apparatus of general applicability or of interest apart from its use in control of gearings conveying rotary motion is also classified in subclass G05G</p>
M	F16H 59/0217	<ul style="list-style-type: none"> • {with electric switches or sensors not for gear or range selection, e.g. for controlling auxiliary devices (for gear selection F16H 59/044; for range selection F16H 59/105)}}
M	F16H 2059/0221	<ul style="list-style-type: none"> • {for selecting modes, i.e. input device <i>e.g. sport, normal, economy</i>}
U	F16H 59/04	<ul style="list-style-type: none"> • Ratio selector apparatus
M	F16H 59/041	<ul style="list-style-type: none"> • • {consisting of a final output mechanism, e.g. ratio selector being directly linked to a shiftfork <i>shift fork</i>}
M	F16H 59/042	<ul style="list-style-type: none"> • • {comprising a final actuating mechanism (multiple final output mechanism in a gearbox F16H 63/08)}
M	F16H 59/044	<ul style="list-style-type: none"> • • {consisting of electrical switches or sensors (range selectors with electric switches or sensors F16H 59/105)}
M	F16H 2059/047	<ul style="list-style-type: none"> • • {with essentially straight linear movement for gear selection, e.g. straight selection movement using detent mechanism for improving feeling (up-down shift by repeated movements F16H 2059/0239)}
M	F16H 2059/048	<ul style="list-style-type: none"> • • {with means for unlocking select or shift movement to allow access to reverse gear position (particular details of the lever handle F16H 2059/0282)}
U	F16H 59/06	<ul style="list-style-type: none"> • • the ratio being infinitely variable
M	F16H 2059/065	<ul style="list-style-type: none"> • • • {Inching pedals for setting the ratio of an <i>a</i> hydrostatic transmission}
U	F16H 59/08	<ul style="list-style-type: none"> • Range selector apparatus
M	F16H 2059/082	<ul style="list-style-type: none"> • • {with different <i>for different transmission</i> modes}
U	F16H 2059/087	<ul style="list-style-type: none"> • • • {Winter mode, e.g. to start on snow or slippery surfaces}
M	F16H 2059/088	<ul style="list-style-type: none"> • • • {Fast forward-reverse-sequence, <i>e.g. rocking</i> mode}
U	F16H 59/36	<ul style="list-style-type: none"> • Inputs being a function of speed
M	F16H 59/44	<ul style="list-style-type: none"> • • dependent on machine speed of the machine, {, e.g. the vehicle <i>speed</i> <i>(F16H 59/46 takes precedence)</i>
U	F16H 2059/443	<ul style="list-style-type: none"> • • {Detecting travel direction, e.g. the forward or reverse movement of the vehicle}
U	F16H 59/48	<ul style="list-style-type: none"> • Inputs being a function of acceleration
U	F16H 59/68	<ul style="list-style-type: none"> • Inputs being a function of gearing status
M	F16H 2059/683	<ul style="list-style-type: none"> • {Sensing pressure in control systems or in fluid-controlled devices, e.g. by pressure sensors (for hydrostatic transmissions F16H 2059/6861)}
U	F16H 59/72	<ul style="list-style-type: none"> • • dependent on oil characteristics, e.g. temperature, viscosity
M	F16H 2059/725	<ul style="list-style-type: none"> • • {Sensing or calculating temperature of <i>oil in</i> friction devices, e.g. clutches <i>wet clutches</i>, to prevent overheating of friction linings}
U	F16H 59/74	<ul style="list-style-type: none"> • Inputs being a function of engine parameters (F16H 59/14 takes precedence)
M	F16H 2059/743	<ul style="list-style-type: none"> • • {using engine performance or power for control of gearing (transmission input torque F16H 2059/147)}
U	F16H 61/00	<p>Control functions within {control units of} change-speed- or reversing-gearings for conveying rotary motion {; Control of exclusively fluid gearing, friction gearing, gearings with endless flexible members or other particular types of gearing}</p>
U	F16H 61/0021	<ul style="list-style-type: none"> • {Generation or control of line pressure}
M	F16H 61/0025	<ul style="list-style-type: none"> • {Supply of control fluid; Pumps therefore <i>therefor</i>}

- U F16H 61/0031
 - • • {using auxiliary pumps, e.g. pump driven by a different power source than the engine}
- M F16H 2061/0034
 - • • {Accumulators for fluid pressure supply; Control thereof}
- M F16H 61/0059
 - {Braking of gear output shaft using simultaneous engagement of ~~friction devices~~ *engaging means, e.g. clutches or brakes*, applied for different gear ratios}
- M F16H 61/02
 - characterised by the signals used ~~{for shift actuators F16H 61/28, for continuously variable gearings F16H 61/66}~~

NOTES

1. Control units where gearshift is controlled by an electric circuit, are classified in [F16H 61/0202](#)

2. Control units where gearshift is controlled by hydraulic signals and a subfunction, e.g. kickdown, is controlled by an electric circuit, are classified in [F16H 61/0262](#) with indexing of the electric features

- M F16H 61/0202
 - • {the signals being electric ~~(F16H 61/04 takes precedence)~~}
- U F16H 61/0204
 - • • {for gearshift control, e.g. control functions for performing shifting or generation of shift signal}
- M F16H 61/0206
 - • • • {Layout of electro-hydraulic control circuits, e.g. arrangement of valves ~~(for control of actuators selecting and moving final output members, e.g. shift forks F16H 61/2807)~~}
- M F16H 61/0248
 - • • {Control units where shifting is directly initiated by the driver, e.g. semi-automatic transmissions ~~(generation of movements for final actuating mechanisms F16H 61/28)~~}
- M F16H 61/0262
 - • {the signals being hydraulic ~~(F16H 61/04 takes precedence)~~}
- U F16H 61/0265
 - • • {for gearshift control, e.g. control functions for performing shifting or generation of shift signals}
- M F16H 61/0267
 - • • • {Layout of hydraulic control circuits, e.g. arrangement of valves ~~(for control of actuators selecting and moving final output members, e.g. shift forks F16H 61/30)~~}
- M F16H 61/0274
 - • • {Control units where shifting is directly initiated by the driver, e.g. semi-automatic transmissions ~~(generation of movements for final actuating mechanisms F16H 61/28)~~}
- U F16H 61/04
 - Smoothing ratio shift
- M F16H 2061/0474
 - • {by smoothing engagement or release of positive clutches; Methods or means for shock free engagement of dog clutches ~~(for tooth butt situations F16H 2061/047)~~}
- M F16H 61/12
 - Detecting malfunction or potential malfunction, e.g. fail safe (in control of hydrostatic gearing [F16H 61/4192](#)) ~~{;}~~ {Circumventing or fixing failures}
- M F16H 2061/1252
 - • {Fail safe valves ~~(fail priority valves F16H 2061/1236)~~}
- M F16H 61/16
 - Inhibiting {or initiating} shift during unfavourable conditions, ~~{;}~~ {e.g. preventing forward ~~-reverse~~ shift at high vehicle speed, preventing engine ~~over speed~~ *overspeed*} (*unintentional control input F16H 61/18 F16H 61/18 takes precedence*)}
- U F16H 61/26
 - Generation or transmission of movements for final actuating mechanisms

NOTES

1. The generation or transmission of movements comprising only the selector apparatus, is classified in group [F16H 59/00](#).

2. The generation or transmission of movements, when part of the final output mechanisms, is classified in group [F16H 63/00](#).

U	F16H 61/28	<ul style="list-style-type: none"> • with at least one movement of the final actuating mechanism being caused by a non-mechanical force, e.g. power-assisted
M	F16H 61/2807	<ul style="list-style-type: none"> • • {using electric control signals for shift actuators, e.g. electro-hydraulic control therefor (F16H 61/30, F16H 61/32 take precedence; methods for generating shift signals F16H 61/0213)}
M	F16H 61/32	<ul style="list-style-type: none"> • • Electric motors {, actuators or related electrical control means} therefor
U	F16H 61/38	<ul style="list-style-type: none"> • Control of exclusively fluid gearing
U	F16H 61/40	<ul style="list-style-type: none"> • • hydrostatic
M	F16H 61/42	<ul style="list-style-type: none"> • • involving adjustment of a pump or motor with adjustable output or capacity {(F16H 61/46 takes precedence)}
U	F16H 61/66	<ul style="list-style-type: none"> • specially adapted for continuously variable gearings (control of exclusively fluid gearing F16H 61/38)
U	F16H 2061/6604	<ul style="list-style-type: none"> • {Special control features generally applicable to continuously variable gearings}
M	F16H 2061/6614	<ul style="list-style-type: none"> • • {Control of ratio during dual or multiple pass shifting for enlarged rationratio coverage}
U	F16H 61/662	<ul style="list-style-type: none"> • • with endless flexible members
U	F16H 61/66231	<ul style="list-style-type: none"> • • • {controlling shifting exclusively as a function of speed}
M	F16H 61/66236	<ul style="list-style-type: none"> • • • {using electrical or electronicalelectronic sensing or control means}
U	F16H 61/66254	<ul style="list-style-type: none"> • • • {controlling of shifting being influenced by a signal derived from the engine and the main coupling}
U	F16H 61/664	<ul style="list-style-type: none"> • • Friction gearings
U	F16H 61/6648	<ul style="list-style-type: none"> • • • {controlling of shifting being influenced by a signal derived from the engine and the main coupling}
U	F16H 63/00	Control outputs {from the control unit} to change-speed- or reversing-gearings for conveying rotary motion {or to other devices than the final output mechanism}
M	F16H 2063/005	<ul style="list-style-type: none"> • {Preassembled gear shift units for mounting on gear case (for hydraulic shift units F16H 2061/308)}
U	F16H 63/02	<ul style="list-style-type: none"> • Final output mechanisms therefor; Actuating means for the final output mechanisms
M	F16H 63/04	<ul style="list-style-type: none"> • • a single final output mechanism being moved by a single final actuating mechanism {(constructional features of the final output mechanisms F16H 63/30)}
M	F16H 63/08	<ul style="list-style-type: none"> • • Multiple final output mechanisms being moved by a single common final actuating mechanism {(constructional features of the final output mechanisms F16H 63/30)}
M	F16H 63/24	<ul style="list-style-type: none"> • • each of the final output mechanisms being moved by only one of the various final actuating mechanisms {(constructional features of the final output mechanisms F16H 63/30)}
M	F16H 63/28	<ul style="list-style-type: none"> • • two or more final actuating mechanisms moving the same final output mechanism {(constructional features of the final output mechanisms F16H 63/30)}
U	F16H 63/30	<ul style="list-style-type: none"> • • Constructional features of the final output mechanisms
M	F16H 63/3069	<ul style="list-style-type: none"> • • • {Interrelationship between two or more final output mechanisms (interlocking devices F16H 63/36)}
M	F16H 2063/3093	<ul style="list-style-type: none"> • • • {Final output elements, i.e. the final elements to establish gear ratio, e.g. dog-clutchescoupling sleeves or other means establishing coupling to shaft}
M	F16H 63/38	<ul style="list-style-type: none"> • • • Detents {(spring-loaded ball units for holding levers in a limited number of positions G05G 5/065)}

U	F16H 2306/00	Shifting
U	F16H 2306/40	• Shifting activities
M	F16H 2306/54	• • Synchronizing <i>Synchronising</i> engine speed to transmission input speed

Project: MP12034 (G01C)

U	G01C 9/00	Measuring inclination, e.g. by clinometers, by levels
M	G01C 9/12	• by using a single pendulum {plumb-lines G01C 15/10} <i>{plumb lines G01C 15/10}</i>
U	G01C 19/00	Gyroscopes; Turn-sensitive devices using vibrating masses; Turn-sensitive devices without moving masses; Measuring angular rate using gyroscopic effects
U	G01C 19/58	• Turn-sensitive devices without moving masses
U	G01C 19/64	• • Gyrometers using the Sagnac effect, i.e. rotation-induced shifts between counter-rotating electromagnetic beams
U	G01C 19/72	• • • with counter-rotating light beams in a passive ring, e.g. fibre laser gyrometers
M	G01C 19/721	• • • • {Details, <i>e.g. optical or electronical details</i> }
U	G01C 21/00	Navigation; Navigational instruments not provided for in groups G01C 1/00 - G01C 19/00 (measuring distance traversed on the ground by a vehicle G01C 22/00; control of position, course, altitude or attitude of vehicles G05D 1/00; traffic control systems for road vehicles involving transmission of navigation instructions to the vehicle G08G 1/0968)
U	G01C 21/20	• Instruments for performing navigational calculations (G01C 21/24 , G01C 21/26 take precedence)
M	G01C 21/203	• • {Specially adapted for sailing ships} <i>{specially adapted for water-borne vessels}</i>
U	G01C 21/26	• specially adapted for navigation in a road network
U	G01C 21/34	• • Route searching; Route guidance
U	G01C 21/3407	• • • {specially adapted for specific applications}
M	G01C 21/3423	• • • • {Multimodal routing, i.e. combining two or more modes of transportation, where the modes can be any of, e.g. driving, walking, cycling, public transport }
M	G01C 21/343	• • • • {Calculating itineraries, i.e. routes leading from a starting point to a series of categorical destinations using a global route restraint, round trips, touristic trips (travelling salesman problem G06Q 10/04 ; optimisation of routes G06Q 10/047)}
M	G01C 21/3438	• • • • { Rendez-vous, i.e. searching a destination where several users can meet, and the routes to this destination for these users <i>Rendezvous</i> ; Ride sharing, i.e. searching a route such that at least two users can share a vehicle for at least part of the route }
M	G01C 21/3446	• • • {Details of route searching algorithms, e.g. Dijkstra, A*, arc-flags, <i>or</i> using precalculated routes}
U	G01C 21/3453	• • • {Special cost functions, i.e. other than distance or default speed limit of road segments}
M	G01C 21/3461	• • • • {Preferred or disfavoured areas, e.g. dangerous zones, toll or emission zones, intersections, manoeuvre types, <i>or</i> segments such as motorways, toll roads, <i>or</i> ferries}
U	G01C 21/3469	• • • • {Fuel consumption; Energy use; Emission aspects}

Project: Unknown (G01M)

U	G01M 15/00	Testing of engines
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G01M 15/04 • Testing internal-combustion engines

NOTE

Group [G01M 15/05](#) takes precedence over groups {[G01M 15/042](#) and [G01M 15/06](#) - [G01M 15/12](#).

U G01M 99/00

Subject matter not provided for in other groups of this subclass

G01M 99/005

- {Testing of complete machines, e.g. washing-machines or mobile phones (testing of machine parts [G01M 13/00](#); testing of electric apparatus or components [G01R 31/50](#))}

NOTE

{This group covers mechanical testing of complete machines.}

Project: Unknown (G01N)

U G01N 30/00

Investigating or analysing materials by separation into components using adsorption, absorption or similar phenomena or using ion-exchange, e.g. chromatography {or field flow fractionation} ([G01N 3/00](#), [G01N 5/00](#), [G01N 7/00](#), [G01N 9/00](#), [G01N 11/00](#), [G01N 13/00](#), [G01N 15/00](#), [G01N 17/00](#), [G01N 19/00](#), [G01N 21/00](#), [G01N 22/00](#), [G01N 23/00](#), [G01N 24/00](#), [G01N 25/00](#), [G01N 27/00](#), [G01N 29/00](#) take precedence)

NOTE

In this group, the following term is used with the meaning indicated:

- "conditioning" refers to the adjustment or control of environmental parameters, e.g. temperature or pressure.

U G01N 30/02

- Column chromatography

U G01N 30/60

- • Construction of the column

G01N 30/6095

- • • {Micromachined or nanomachined, e.g. micro- or nanosize}

NOTE

{Attention is drawn to the Notes following the titles of class [B81](#) and subclass [B81B](#) relating to "microstructural devices" and "microstructural systems" and the Notes following the title of subclass [B82B](#) relating to "nanostructures" .}

U G01N 31/00

Investigating or analysing non-biological materials by the use of the chemical methods specified in the subgroup; Apparatus specially adapted for such methods

U G01N 31/005

- {investigating the presence of an element by oxidation ([G01N 31/12](#) takes precedence)}

G01N 31/007

- • {by measuring the quantity of water resulting therefrom ([G01N 31/12](#) takes precedence)}

NOTE

The observation of the progress of the reaction specified below by any of the methods specified in groups G01N 3/00 – G01N 3/00 – G01N 29/00, if this is of major importance, is dealt with in the group concerned.

{ }

Project: RP0422-F (G01N)

U G01N 33/00 Investigating or analysing materials by specific methods not covered by groups [G01N 1/00](#) - [G01N 31/00](#)

NOTE

In groups [G01N 33/52](#) - [G01N 33/98](#), the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place.
{This Note corresponds to IPC Note (1) relating to [G01N 33/52](#) - [G01N 33/98](#).}

U G01N 33/48 • Biological material, e.g. blood, urine ([G01N 33/02](#), [G01N 33/26](#), [G01N 33/44](#), [G01N 33/46](#) take precedence); Haemocytometers (counting blood corpuscles distributed over a surface by scanning the surface [G06M 11/02](#))

U G01N 33/50 • • Chemical analysis of biological material, e.g. blood, urine; Testing involving biospecific ligand binding methods; Immunological testing (measuring or testing processes involving enzymes or microorganisms, compositions or test papers therefor; processes for forming such compositions, condition responsive control in microbiological or enzymological processes [C12Q](#))

NOTES

1. In this group, the following expression is used with the meaning indicated: "involving", when used in relation to a material, includes the testing for the material as well as employing the material as a determinant or reactant in a test for a different material.

2. In groups [G01N 33/52](#) – [G01N 33/98](#), the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place.

3. Documents relating to new peptides or new DNA or its corresponding mRNA, encoding for the peptides, and their use in measuring or testing processes are classified in subclass [C07K](#) or in group [C12N 9/00](#) according to the peptides, with the appropriate indexing codes relating to their use in diagnostics. However, if the investigating or analysing aspects are of interest, the documents are classified in this group.

U G01N 33/53 • • • Immunoassay; Biospecific binding assay; Materials therefor

U G01N 33/543 • • • • with an insoluble carrier for immobilising immunochemicals

U G01N 33/54366 • • • • • {Apparatus specially adapted for solid-phase testing}

M G01N 33/54386 • • • • • • {Analytical elements}

WARNING

Group G01N 33/54386 is impacted by reclassification into groups G01N 33/54387, G01N 33/54388, G01N 33/54389 and G01N 33/54391.

All groups listed in this Warning should be considered in order to perform a complete search.

M G01N 33/54387 • • • • • • {Immunochromatographic test strips}

WARNING

Groups G01N 33/54387, G01N 33/54388, G01N 33/54389 and G01N 33/54391 are incomplete pending reclassification of documents from groups G01N 33/54386 and G01N 33/558. All groups listed in this Warning should be considered in order to perform a complete search.

- M G01N 33/558 . . . using diffusion or migration of antigen or antibody
{(immunochromatographic test strips [G01N 33/54387](#))}

WARNING

Group G01N 33/558 is impacted by reclassification into groups G01N 33/54387, G01N 33/54388, G01N 33/54389 and G01N 33/54391. All groups listed in this Warning should be considered in order to perform a complete search.

Project: Unknown (G01N)

- U G01N 33/68 . . . involving proteins, peptides or amino acids {(involving lipoproteins [G01N 33/92](#))}
- M G01N 33/6878 . . . {in **epitope** analysis}

Project: Unknown (G01R)

- U G01R 31/00 **Arrangements for testing electric properties; Arrangements for locating electric faults; Arrangements for electrical testing characterised by what is being tested not provided for elsewhere** ({measuring superconductive properties [G01R 33/1238](#)}; testing or measuring semiconductors or solid state devices during manufacture {[H01L 22/00](#)}; testing line transmission systems [H04B 3/46](#))

NOTE

Groups [G01R 31/08](#), [G01R 31/12](#), [G01R 31/327](#), [G01R 31/24](#), [G01R 31/26](#), [G01R 31/34](#), [G01R 31/36](#), [G01R 31/40](#), [G01R 31/44](#) take precedence over group [G01R 31/50](#).

- U G01R 31/28 . Testing of electronic circuits, e.g. by signal tracer ({EMC, EMP or similar testing of electronic circuits [G01R 31/002](#)}; testing for short-circuits, discontinuities, leakage or incorrect line connection [G01R 31/50](#); checking computers {or computer components} [G06F 11/00](#); checking static stores for correct operation [G11C 29/00](#)}; testing receivers or transmitters of transmission systems [H04B 17/00](#))}

- G01R 31/282 . {Testing of electronic circuits specially adapted for particular applications not provided for elsewhere ([G01R 31/2801](#) and [G01R 31/2851](#) take precedence)}

NOTE

{References listed below indicate CPC places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group:

- testing of individual LEDs [G01R 31/2635](#)
- testing of lamps [G01R 31/44](#)
- testing of displays and display drivers, e.g. LCDs [G09G 3/006](#)
- testing of ADCs or DACs [H03M 1/1071](#).

}

- U G01R 33/00 **Arrangements or instruments for measuring magnetic variables**
- U G01R 33/20 . involving magnetic resonance (medical aspects [A61B 5/055](#); magnetic resonance gyrometers [G01C 19/60](#))
- U G01R 33/44 . . using nuclear magnetic resonance [NMR] ([G01R 33/24](#), [G01R 33/62](#) take precedence)
- U G01R 33/48 . . . NMR imaging systems
- U G01R 33/54 . . . Signal processing systems, e.g. using pulse sequences {; Generation or control of pulse sequences; Operator console}

- U G01R 33/56 Image enhancement or correction, e.g. subtraction or averaging techniques {, e.g. improvement of signal-to-noise ratio and resolution}
- U G01R 33/565 Correction of image distortions, e.g. due to magnetic field inhomogeneities
- G01R 33/56518 {due to eddy currents, e.g. caused by switching of the gradient magnetic field}

NOTE

{This group only covers correction of artifacts caused by gradient-non-linearity.}

Project: Unknown (G01S)

- U G01S 5/00 **Position-fixing by co-ordinating two or more direction or position line determinations; Position-fixing by co-ordinating two or more distance determinations {(using active systems [G01S 13/00](#), [G01S 15/00](#), [G01S 17/00](#))}**

- U G01S 5/02 . using radio waves (using satellite radio beacon systems for determining position [G01S 19/00](#))
- G01S 5/0252 . . {Radio frequency fingerprinting}

NOTE

{In this group, the following terms are used with the meaning indicated:

- Radio frequency fingerprints mean measurements or simulated values of radio frequency signal parameters, e.g. receiver signal strength indicator [RSSI] or identifiers or access point identifiers [ApIds] combined with coordinates of the positions at which the radio frequency fingerprints were measured.
- "Radio-map" means a collection of radio frequency fingerprints.

}

Project: Unknown (G01T)

- U G01T 1/00 **Measuring X-radiation, gamma radiation, corpuscular radiation, or cosmic radiation ([G01T 3/00](#), [G01T 5/00](#) take precedence)**

- U G01T 1/36 . Measuring spectral distribution of X-rays or of nuclear radiation {spectrometry (pulse selection circuits per se [H03K](#); investigation of materials by radiation diffraction [G01N 23/20](#); spectrometer tubes [H01J 49/00](#))}
- G01T 1/361 . . {with a combination of detectors of different types, e.g. anti-Compton spectrometers (intensity measurement with a combination of detectors [G01T 1/1603](#); with coincidence circuit [G01T 1/172](#); se provisionally also [G01T 1/36](#))}

NOTE

{[G01T 1/361](#) takes precedence over [G01T 1/362](#).}

Project: Unknown (G02B)

- U G02B 6/00 **Light guides; Structural details of arrangements comprising light guides and other optical elements, e.g. couplings**

- U G02B 6/02 . Optical fibres with cladding {with or without a coating}
- U G02B 6/036 . . core or cladding comprising multiple layers {(multicore optical fibres [G02B 6/02042](#); microstructured properties [G02B 6/02295](#); omniguide fibres [G02B 6/023](#))}

G02B 6/03616

- • • {Optical fibres characterised both by the number of different refractive index layers around the central core segment, i.e. around the innermost high index core layer, and their relative refractive index difference}

NOTE

1. {A layer is characterised by an abrupt change in refractive index gradient, e.g. by the layer having a maximum or minimum or the layer being between two points of inflexion, such that a graded boundary as in a trapezoidal core is not counted as a separate layer. ~~2. The innermost high index core layer is the first layer starting from the central core after which the refractive index decreases. 3. + and - refer respectively to the relative refractive index difference increase/decrease of adjacent layers starting from the innermost highest index core layer and continuing in a radially outward direction}~~

2. {The innermost high index core layer is the first layer starting from the central core after which the refractive index decreases.}

3. {+ and - refer respectively to the relative refractive index difference increase/decrease of adjacent layers starting from the innermost highest index core layer and continuing in a radially outward direction.}

U G02B 6/24

- Coupling light guides

G02B 6/42

- • Coupling light guides with opto-electronic elements

NOTE

{In this group, the following expression is used with the meaning indicated: }

- {"opto-electronic elements" includes light emitting elements, e.g. lasers or LED's, as well as light receiving elements, e.g. photodiodes or phototransistors.}

G02B 13/00

Optical objectives specially designed for the purposes specified below (with variable magnification {in general} [G02B 15/00](#))

NOTE

{Unless specified in the title of the subgroups, this group and its subgroups do not cover objectives comprising reflecting surfaces, which are covered by [G02B 17/06](#), [G02B 17/08](#) and their subgroups.}

U G02B 13/001

- {Miniaturised objectives for electronic devices, e.g. portable telephones, webcams, PDAs, small digital cameras ([G02B 23/243](#) takes precedence)}

U G02B 13/0015

- • {characterised by the lens design}

G02B 13/002

- • • {having at least one aspherical surface}

NOTE

{When classifying in this group, a lens is deemed to be a simple lens or a compound lens.}

U G02B 21/00

Microscopes

U G02B 21/0004

- {specially adapted for specific applications}

U G02B 21/002

- • {Scanning microscopes (scanning near field optical microscopes [G01Q 60/18](#))}

G02B 21/0024

- • • {Confocal scanning microscopes (CSOMs) or confocal "macroscopes"; Accessories which are not restricted to use with CSOMs, e.g. sample holders}

NOTE

{Objective revolvers or the like are classified in other groups of [G02B 21/00](#).}

U G02B 27/00 **Optical systems or apparatus not provided for by any of the groups [G02B 1/00](#) - [G02B 26/00](#), [G02B 30/00](#)**

G02B 27/01

- Head-up displays

NOTE

{Details of head-up displays covered by [G02B 27/01](#) but not provided for in this group are also to be classified under [G02B 27/01](#) and subgroups.}

Project: Unknown (G02F)

U G02F 1/00 **Devices or arrangements for the control of the intensity, colour, phase, polarisation or direction of light arriving from an independent light source, e.g. switching, gating or modulating; Non-linear optics**

NOTE

This group covers only :

- devices or arrangements, e.g. cells, the optical operation of which is modified by changing the optical properties of the medium of the devices or arrangements by the influence or control of physical parameters, e.g. electric fields, electric current, magnetic fields, sound or mechanical vibrations, stress or thermal effects;
- devices or arrangements in which the electric or magnetic field component of the light beams influences the optical properties of the medium, i.e. non-linear optics;
- control of light by electromagnetic waves, e.g. radio waves, or by electrons or other elementary particles.

G02F 1/0009

- {Materials therefor}

NOTE

{[G02F 1/0009](#) and subgroups contain mostly non-patent literature.}

Project: Unknown (G03F)

U G03F 7/00 **Photomechanical, e.g. photolithographic, production of textured or patterned surfaces, e.g. printing surfaces; Materials therefor, e.g. comprising photoresists; Apparatus specially adapted therefor (using photoresist structures for special production processes, see the relevant places, e.g. [B44C](#), [H01L](#), e.g. [H01L 21/00](#), [H05K](#))**

U G03F 7/70 • {Microphotolithographic exposure; Apparatus therefor (photo-masks [G03F 1/00](#))}

WARNING

Group [G03F 7/70](#) is incomplete pending reclassification of documents from group [G03F 7/70375](#).

Groups [G03F 7/70375](#) and [G03F 7/70](#) should be considered in order to perform a complete search.

U G03F 7/70058

- • {Mask illumination systems}

G03F 7/70191

- • • {Optical correction elements, filters or phase plates for controlling intensity, wavelength, polarisation, phase or the like}

NOTE

{Wavelength or polarisation control is further classified in groups [G03F 7/70566](#), [G03F 7/70575](#).}

U G03F 7/70216

- • {Mask projection systems}

- G03F 7/70225 • • • {Optical aspects of catadioptric systems, i.e. comprising reflective and refractive elements}
NOTE
 {Catadioptric systems are further classified in group [G02B 17/0892.](#)}
- G03F 7/70233 • • • {Optical aspects of catoptric systems, i.e. comprising only reflective elements, e.g. extreme ultraviolet [EUV] projection systems}
NOTE
 {Further aspects of catoptric systems are classified in group [G02B 17/06.](#)}
- G03F 7/70241 • • • {Optical aspects of refractive lens systems, i.e. comprising only refractive elements}
NOTE
 {Further aspects of refractive systems are classified in group [G02B 13/143.](#)}
- G03F 7/70308 • • • {Optical correction elements, filters or phase plates for manipulating imaging light, e.g. intensity, wavelength, polarisation, phase or image shift}
NOTE
 { Wavelength or polarisation control is further classified in groups [G03F 7/70566](#), [G03F 7/70575.](#)}
- G03F 7/70316 • • • {Details of optical elements, e.g. of Bragg reflectors, extreme ultraviolet [EUV] multilayer or bilayer mirrors or diffractive optical elements}
NOTES
 1. {Particular optical materials are further classified in group [G03F 7/70958.](#)}
 2. {Multilayer reflectors for X-ray or EUV lithography are further classified in group [G21K 1/062.](#)}
- U G03F 7/70691 • • {Handling of masks or workpieces}
- U G03F 7/70733 • • • {Handling masks and workpieces, e.g. exchange of workpiece or mask, transport of workpiece or mask}
- G03F 7/70741 • • • • {Handling masks outside exposure position, e.g. reticle libraries}
NOTE
 {Protective means, e.g. containers, for masks, blanks or pellicles, are further classified in group [G03F 1/66.](#)}

Project: Unknown (G03G)

- U G03G 5/00 **Recording members for original recording by exposure, e.g. to light, to heat, to electrons; Manufacture thereof; Selection of materials therefor (recording surfaces for measuring apparatus [G01D 15/34](#); photosensitive materials for photographic purposes [G03C](#))**
- U G03G 5/02 • Charge-receiving layers ([G03G 5/153](#) takes precedence)
- U G03G 5/04 • • Photoconductive layers; Charge-generation layers or charge-transporting layers; Additives therefor; Binders therefor
- U G03G 5/05 • • • Organic bonding materials; Methods for coating a substrate with a photoconductive layer; Inert supplements for use in photoconductive layers

- G03G 5/0528 • • • {Macromolecular bonding materials}
- NOTE
{ In groups [G03G 5/0528](#) - [G03G 5/0596](#), in the absence of an indication to the contrary, a polymer is classified in the last appropriate place. }
- U G03G 5/06 • • • characterised by the photoconductive material being organic
- NOTE
In groups [G03G 5/06](#) - [G03G 5/0698](#), in the absence of an indication to the contrary, an invention is classified in the last appropriate place
- G03G 5/0662 • • • {containing metal elements}
- NOTE
{Alcoholates, phenates or organic acid salts of alkali or alkaline earth metals are classified as the parent compounds. }
- U G03G 5/14 • Inert intermediate or cover layers for charge-receiving layers ([G03G 5/04](#) takes precedence)
- U G03G 5/147 • • Cover layers
- U G03G 5/14708 • • • {comprising organic material}
- G03G 5/14713 • • • {Macromolecular material}
- NOTE
{ In groups [G03G 5/14713](#) - [G03G 5/14795](#), in the absence of an indication to the contrary, a polymer is classified in the last appropriate place. }

Project: Unknown (G05G)

- U **G05G 9/00** **Manually-actuated control mechanisms provided with one single controlling member co-operating with two or more controlled members, e.g. selectively, simultaneously**
- U G05G 9/02 • the controlling member being movable in different independent ways, movement in each individual way actuating one controlled member only
- U G05G 9/04 • • in which movement in two or more ways can occur simultaneously
- U G05G 9/047 • • • the controlling member being movable by hand about orthogonal axes, e.g. joysticks {(for switches [H01H 25/04](#))}
- G05G 2009/04781 • • • {with additional rotation of the controlling member}
- NOTE
{Provisional indexing codes related to scheme of trilateral project T021. }

Project: RP10466-F (G06F)

- U **G06F 9/00** **Arrangements for program control, e.g. control units (program control for peripheral devices [G06F 13/10](#))**
- U G06F 9/06 • using stored programs, i.e. using an internal store of processing equipment to receive or retain programs
- U G06F 9/30 • • Arrangements for executing machine instructions, e.g. instruction decode (for executing microinstructions [G06F 9/22](#))
- U G06F 9/30003 • • • {Arrangements for executing specific machine instructions}
- U G06F 9/30007 • • • {to perform operations on data operands}

M	G06F 9/30018	<ul style="list-style-type: none"> • • • • {Bit or string instructions} <p><u>WARNING</u> Group G06F 9/30018 is impacted by reclassification into group G06F 9/30038. Groups G06F 9/30018 and G06F 9/30038 should be considered in order to perform a complete search.</p>
M	G06F 9/30036	<ul style="list-style-type: none"> • • • • {Instructions to perform operations on packed data, e.g. vector, tile or matrix operations} <p><u>WARNING</u> Group G06F 9/30036 is impacted by reclassification into group G06F 9/30038. Groups G06F 9/30036 and G06F 9/30038 should be considered in order to perform a complete search.</p>
M	G06F 9/30038	<ul style="list-style-type: none"> • • • • • {using a mask} <p><u>WARNING</u> Group G06F 9/30038 is incomplete pending reclassification of documents from groups G06F 9/30018 and G06F 9/30036. Groups G06F 9/30018, G06F 9/30036 and G06F 9/30038 should be considered in order to perform a complete search.</p>
M	G06F 9/3005	<ul style="list-style-type: none"> • • • • {to perform operations for flow control} <p><u>WARNING</u> Group G06F 9/3005 is impacted by reclassification into group G06F 9/323. Groups G06F 9/3005 and G06F 9/323 should be considered in order to perform a complete search.</p>
M	G06F 9/30054	<ul style="list-style-type: none"> • • • • {Unconditional branch instructions} <p><u>WARNING</u> Group G06F 9/30054 is incomplete pending reclassification of documents from group G06F 9/30061. Group G06F 9/30054 is also impacted by reclassification into group G06F 9/323. Groups G06F 9/30054, G06F 9/30061 and G06F 9/323 should be considered in order to perform a complete search.</p>
M	G06F 9/30058	<ul style="list-style-type: none"> • • • • {Conditional branch instructions} <p><u>WARNING</u> Group G06F 9/30058 is impacted by reclassification into group G06F 9/323. Groups G06F 9/30058 and G06F 9/323 should be considered in order to perform a complete search.</p>
M	G06F 9/30061	<ul style="list-style-type: none"> • • • • {Multi-way branch instructions, e.g. CASE} <p><u>WARNING</u> Group G06F 9/30061 is impacted by reclassification into groups G06F 9/30054 and G06F 9/323. Groups G06F 9/30061, G06F 9/30054 and G06F 9/323 should be considered in order to perform a complete search.</p>
U	G06F 9/32	<ul style="list-style-type: none"> • • • Address formation of the next instruction, e.g. by incrementing the instruction counter (G06F 9/38 takes precedence)

M	G06F 9/322	<ul style="list-style-type: none"> • • • {for non-sequential address} <p><u>WARNING</u> Group G06F 9/322 is impacted by reclassification into group G06F 9/323. Groups G06F 9/322 and G06F 9/323 should be considered in order to perform a complete search.</p>
M	G06F 9/323	<ul style="list-style-type: none"> • • • {for indirect branch instructions} <p><u>WARNING</u> Group G06F 9/323 is incomplete pending reclassification of documents from groups G06F 9/3005, G06F 9/30054, G06F 9/30058, G06F 9/30061 and G06F 9/322. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	G06F 9/38	<ul style="list-style-type: none"> • • • Concurrent instruction execution, e.g. pipeline or look ahead <p><u>WARNING</u> Group G06F 9/38 is impacted by reclassification into group G06F 9/3854. Groups G06F 9/38 and G06F 9/3854 should be considered in order to perform a complete search.</p>
U	G06F 9/3836	<ul style="list-style-type: none"> • • • {Instruction issuing, e.g. dynamic instruction scheduling or out of order instruction execution}
M	G06F 9/3851	<ul style="list-style-type: none"> • • • {from multiple instruction streams, e.g. multistreaming} <p><u>WARNING</u> Group G06F 9/3851 is impacted by reclassification into group G06F 9/3888. Groups G06F 9/3851 and G06F 9/3888 should be considered in order to perform a complete search.</p>
M	G06F 9/3854	<ul style="list-style-type: none"> • • • {Instruction completion, e.g. retiring, committing or graduating} <p><u>WARNING</u> Group G06F 9/3854 is incomplete pending reclassification of documents from groups G06F 9/38 and G06F 9/3858. Groups G06F 9/38, G06F 9/3858 and G06F 9/3854 should be considered in order to perform a complete search.</p>
M	G06F 9/3858	<ul style="list-style-type: none"> • • • {Result writeback, i.e. updating the architectural state or memory} <p><u>WARNING</u> Group G06F 9/3858 is impacted by reclassification into group G06F 9/3854. Groups G06F 9/3858 and G06F 9/3854 should be considered in order to perform a complete search.</p>
U	G06F 9/3885	<ul style="list-style-type: none"> • • • {using a plurality of independent parallel functional units}
M	G06F 9/3887	<ul style="list-style-type: none"> • • • {controlled by a single instruction for multiple data lanes [SIMD]} <p><u>WARNING</u> Group G06F 9/3887 is impacted by reclassification into groups G06F 9/38873, G06F 9/38875, G06F 9/3888 and G06F 9/38885. All groups listed in this Warning should be considered in order to perform a complete search.</p>

- M G06F 9/38873 {Iterative single instructions for multiple data lanes [SIMD]}
- WARNING
Groups G06F 9/38873 and G06F 9/38875 are incomplete pending reclassification of documents from group G06F 9/3887.
Groups G06F 9/3887, G06F 9/38873 and G06F 9/38875 should be considered in order to perform a complete search.
- M G06F 9/3888 {controlled by a single instruction for multiple threads [SIMT] in parallel}
- WARNING
Group G06F 9/3888 is incomplete pending reclassification of documents from groups G06F 9/3851 and G06F 9/3887.
Groups G06F 9/3851, G06F 9/3887 and G06F 9/3888 should be considered in order to perform a complete search.
- M G06F 9/38885 {Divergence aspects}
- WARNING
Group G06F 9/38885 is incomplete pending reclassification of documents from group G06F 9/3887.
Groups G06F 9/3887 and G06F 9/38885 should be considered in order to perform a complete search.

Project: Unknown (G06K)

- U G06K 7/00 Methods or arrangements for sensing record carriers, {e.g. for reading patterns} (methods or arrangements for marking the record carrier in digital fashion [G06K 1/00](#); pattern recognition [G06F 18/00](#); arrangements for image or video recognition or understanding [G06V 10/00](#); character recognition, recognising digital ink or document-oriented image-based pattern recognition [G06V 30/00](#))
- U G06K 7/10 . by electromagnetic radiation, e.g. optical sensing; by corpuscular radiation
- G06K 7/10009 . . {sensing by radiation using wavelengths larger than 0.1 mm, e.g. radio-waves or microwaves}
- NOTE
{This group covers electromagnetic interrogation as radiated by the antenna of an interrogation device while interrogating a plurality of wireless electronic memory record carriers, e.g. non-contact smart cards, RFID tags or labels, or transponders.}

Project: RP0762-F (G06N)

- M G06N 10/00 Quantum computing, i.e. information processing based on quantum-mechanical phenomena
- WARNING
Group G06N 10/00 is impacted by reclassification into groups G06N 10/20, G06N 10/40, G06N 10/60, G06N 10/70 and G06N 10/80.
All groups listed in this Warning should be considered in order to perform a complete search.
- M G06N 10/20 . Models of quantum computing, e.g. quantum circuits or universal quantum computers
- WARNING
Group G06N 10/20 is incomplete pending reclassification of documents from group G06N 10/00.

~~Groups G06N 10/00 and G06N 10/20 should be considered in order to perform a complete search.~~

- M G06N 10/40
- Physical realisations or architectures of quantum processors or components for manipulating qubits, e.g. qubit coupling or qubit control

WARNING

~~Group G06N 10/40 is incomplete pending reclassification of documents from group G06N 10/00.
Groups G06N 10/00 and G06N 10/40 should be considered in order to perform a complete search.~~

- M G06N 10/60
- Quantum algorithms, e.g. based on quantum optimisation, quantum Fourier or Hadamard transforms

WARNING

~~Group G06N 10/60 is incomplete pending reclassification of documents from group G06N 10/00.
Groups G06N 10/00 and G06N 10/60 should be considered in order to perform a complete search.~~

- M G06N 10/70
- Quantum error correction, detection or prevention, e.g. surface codes or magic state distillation

WARNING

~~Group G06N 10/70 is incomplete pending reclassification of documents from group G06N 10/00.
Groups G06N 10/00 and G06N 10/70 should be considered in order to perform a complete search.~~

- M G06N 10/80
- Quantum programming, e.g. interfaces, languages or software-development kits for creating or handling programs capable of running on quantum computers; Platforms for simulating or accessing quantum computers, e.g. cloud-based quantum computing

WARNING

~~Group G06N 10/80 is incomplete pending reclassification of documents from group G06N 10/00.
Groups G06N 10/00 and G06N 10/80 should be considered in order to perform a complete search.~~

Project: Unknown (G06Q)

- U G06Q 20/00
- Payment architectures, schemes or protocols (apparatus for performing or posting payment transactions [G07F 7/08](#), [G07F 19/00](#); electronic cash registers [G07G 1/12](#))**

- U G06Q 20/08
- Payment architectures

- U G06Q 20/20
- Point-of-sale [POS] network systems

- G06Q 20/202
- {Interconnection or interaction of plural electronic cash registers [ECR] or to host computer, e.g. network details, transfer of information from host to ECR or from ECR to ECR}

NOTE

{Features of the apparatus per se should be classified in [G07G 1/14](#).}

- U G06Q 20/38
- Payment protocols; Details thereof

- G06Q 20/387 · · {Payment using discounts or coupons (relating to marketing [G06Q 30/02](#))}

NOTE

{This group covers only the usage of discounts or coupons interacting with the payment of the protocol.}

U G06Q 30/00**Commerce**

- U G06Q 30/02 · Marketing; Price estimation or determination; Fundraising
- U G06Q 30/0283 · · Price estimation or determination
- G06Q 30/0284 · · · {Time or distance, e.g. usage of parking meters or taximeters}

NOTE

{Constructional aspects of time meters are classified in groups [G07B 13/00](#), [G07B 15/00](#) or [G07F 17/24](#).}

Project: Unknown (G07B)**U G07B 17/00****Franking apparatus (printing aspects [B41](#))**

- G07B 17/00733 · {Cryptography or similar special procedures in a franking system}

NOTE

{References listed below indicate CPC places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group:

- secret or secure communication [H04L 9/00](#)
- mechanisms actuated by objects other than coins to free or to actuate vending, hiring, coin or paper currency dispensing or refunding apparatus for cashless transactions only [G07F 7/10](#)
- access-control involving the use of a pass in combination with an identity-check of the pass-holder by means of personal physical data, e.g. characteristic facial curves, hand geometry, voice spectrum, fingerprints [G07C 9/00](#)
- recognising characters or patterns in general [G06F 18/00](#), [G06V 30/00](#)
- random or pseudo-random generators [G06F 7/58](#)
- circuits generating pulses having a predetermined statistical distribution [H03K 3/84](#)
- multiple service credit cards with protecting memory zones [G07F 7/10](#)
- security arrangements for protecting computers or computer systems against unauthorised activity [G06F 21/00](#)
- record carriers with conductive marks and special arrangements for circuits, e.g. for protecting identification code in memory [G06K 19/073](#)
- error detection and error correction [G06F 11/00](#)
- coding, decoding or code conversion, for error detection or error correction [H03M 13/00](#).

}

Project: Unknown (G08B)**U G08B 13/00****Burglar, theft or intruder alarms**

- U G08B 13/02 · Mechanical actuation
- U G08B 13/14 · · by lifting or attempted removal of hand-portable articles
- G08B 13/1427 · · · {with transmitter-receiver for distance detection}

NOTE

{Details thereof are further classified in the subgroups of [G08B 21/0202](#).}

Project: Unknown (G11B)

- U G11B 3/00** **Recording by mechanical cutting, deforming or pressing, e.g. of grooves or pits; Reproducing by mechanical sensing; Record carriers therefor (G11B 11/00, {G11B 13/00} take precedence)**
- G11B 3/60
- Turntables for record carriers
- NOTE
{contains no documents, see [G11B 19/2009](#).}
- G11B 3/61
- • Damping of vibrations of record carriers on turntables
- NOTE
{see provisionally also [G11B 3/60](#), [G11B 3/589](#) and [G11B 17/02](#); contains no documents, see [G11B 19/2018](#).}
- U G11B 5/00** **Recording by magnetisation or demagnetisation of a record carrier; Reproducing by magnetic means; Record carriers therefor (G11B 11/00 {and G11B 13/00} take precedence)**
- NOTE
Subgroups [G11B 5/02](#) - [G11B 5/86](#) take precedence over subgroups [G11B 5/004](#) - [G11B 5/016](#)
- U G11B 5/48**
- Disposition or mounting of heads {or head supports} relative to record carriers {(mounting of head within housing [G11B 5/105](#)); arrangements of heads, e.g. for scanning the record carrier to increase the relative speed (driving of both record carriers and head [G11B 15/18](#); guiding record carriers [G11B 15/60](#); head selecting circuits [G11B 15/12](#))}
- U G11B 5/54**
- • with provision for moving the head into or out of its operative position or across tracks
- U G11B 5/55**
- • • Track change, selection or acquisition by displacement of the head
- G11B 5/5521
- • • • {across disk tracks (spiral track following [G11B 5/596](#))}
- NOTE
{For groups [G11B 5/5526](#) - [G11B 5/5582](#), see provisionally [G11B 5/5521](#) and [G11B 5/596](#).}
- U G11B 5/58**
- • with provision for moving the head for the purpose of maintaining alignment of the head relative to the record carrier during transducing operation, e.g. to compensate for surface irregularities of the latter or for track following {(spacing means incorporated in the head structure [G11B 5/187](#), [G11B 5/255](#), [G11B 5/3106](#))}
- G11B 5/596
- • • for track following on disks {([G11B 5/5526](#), [G11B 5/5552](#), [G11B 5/5565](#), [G11B 5/5582](#) take precedence)}
- NOTE
{ For groups [G11B 5/59605](#) - [G11B 5/59633](#), see provisionally [G11B 5/5521](#) and [G11B 5/596](#).}
- U G11B 11/00** **Recording on or reproducing from the same record carrier wherein for these two operations the methods are covered by different main groups of groups [G11B 3/00](#) - [G11B 7/00](#) or by different subgroups of group [G11B 9/00](#); Record carriers therefor {(driving or moving of heads [G11B 3/02](#), [G11B 5/48](#), [G11B 7/08](#), [G11B 21/02](#))}**
- NOTES
1. Groups [G11B 11/00](#) - [G11B 11/14](#) mainly cover:
 - combined systems or apparatus comprising both recording and reproducing using different methods;

- record carriers therefor.
- 2. Reading only or recording only using mechanical, magnetic, optical or other methods is covered by groups [G11B 3/00](#) - [G11B 9/08](#)
- U G11B 11/16
 - using recording by mechanical cutting, deforming or pressing {([G11B 11/002](#) takes precedence)}
- G11B 11/22
 - with reproducing by capacitive means

NOTE
{see provisionally [G11B 9/06](#), [G11B 9/07](#); [G11B 11/05](#).}
- U **G11B 15/00**

Driving, starting or stopping record carriers of filamentary or web form; Driving both such record carriers and heads; Guiding such record carriers or containers therefor; Control thereof; Control of operating function (driving or guiding heads [G11B 3/00](#) - [G11B 7/00](#), [G11B 21/00](#))
- U G11B 15/02
 - Control of operating function, e.g. switching from recording to reproducing
- G11B 15/026
 - {by using processor, e.g. microcomputer}

NOTE
{see provisional also [G11B 15/005](#).}
- G11B 15/03
 - by using counters

NOTE
{see prov. also [G11B 15/00](#), [G11B 27/00](#).}
- G11B 15/05
 - by sensing features present on or derived from record carrier or container ([G11B 15/16](#) takes precedence)

NOTE
{see provisional also [G11B 15/02](#).}
- U G11B 15/06
 - by sensing auxiliary features on record carriers or containers, e.g. to stop machine near the end of a tape
- G11B 15/07
 - on containers

NOTE
{see provisional also [G11B 15/06](#).}
- G11B 15/087
 - by sensing recorded signals

NOTE
{ see provisional also [G11B 15/06](#), [G11B 15/02](#), [G11B 27/00](#).}
- G11B 15/093
 - by sensing driving condition of record carrier, e.g. travel, tape tension

NOTE
{see provisional also [G11B 15/16](#), [G11B 15/22](#), [G11B 15/46](#).}
- U G11B 15/16
 - by sensing presence, absence or position of record carrier or container
- G11B 15/17
 - of container

NOTE
{see prov. also [G11B 15/16](#).}
- U G11B 15/18
 - Driving; Starting; Stopping; Arrangements for control or regulation thereof {([G11B 15/56](#) takes precedence)}
- U G11B 15/46
 - Controlling, regulating, or indicating speed {(dependent on position of tape in reserve, loop [G11B 15/56](#), [G11B 15/58](#))}

- U G11B 15/467 • • • in arrangements for recording or reproducing wherein both record carriers and heads are driven {{see provisional also [G11B 15/1808](#)}}
- G11B 15/473 • • • by controlling the speed of the heads

NOTE

{see} prov. also [G11B 5/588](#).

- U G11B 17/00 **Guiding record carriers not specifically of filamentary or web form, or of supports therefor (guiding cards or sheets [G06K 13/00](#))**

- U G11B 17/22 • from random access magazine of disc records
- G11B 17/24 • • the magazine having a toroidal or part-toroidal shape

NOTE

{Group [G11B 17/30](#) takes precedence over groups [G11B 17/24](#) - [G11B 17/28](#). }

- U G11B 23/00 **Record carriers not specific to the method of recording or reproducing; Accessories, e.g. containers, specially adapted for co-operation with the recording or reproducing apparatus {; Intermediate mediums; Apparatus or processes specially adapted for their manufacture (processes involving a single technical art and for which provision exists elsewhere, see the relevant class, e.g. [B29](#), [B41M](#), [B05D](#), [C08L](#), [F16N](#))}**

NOTE

In group [G11B 23/00](#), recording or reproducing apparatus does not include the record carriers.

- G11B 23/0007 • {Circuits or methods for reducing noise, for correction of distortion, or for changing density of recorded information, (volume compression or expansion circuits per se [H03G 7/00](#))}

NOTE

{This group is closed down and will in due course be transferred to [G11B 20/22](#) and [G11B 20/24](#) and subgroups. }

Project: Unknown (G11C)

- U G11C 11/00 **Digital stores characterised by the use of particular electric or magnetic storage elements; Storage elements therefor ([G11C 14/00](#) - [G11C 21/00](#) take precedence)**

NOTE

Group [G11C 11/56](#) takes precedence over groups [G11C 11/02](#) - [G11C 11/54](#). {This Note corresponds to IPC Note (1) relating to [G11C 11/02](#) - [G11C 11/56](#).}

- U G11C 11/02 • using magnetic elements
- U G11C 11/06 • • using single-aperture storage elements, e.g. ring core; using multi-aperture plates in which each individual aperture forms a storage element
- G11C 11/06007 • • • {using a single aperture or single magnetic closed circuit}

NOTE

{Provisionally contains the following details; control write -, read -, address circuitry (pulse generators in general [H03K 5/00](#), [H03K 17/00](#)); arrangements for temperature compensation; checking of the correct functioning and repair arrangements (checking methods in general [G06F 11/00](#), [G06F 11/28](#); testing magnetic elements per se [G01R 33/00](#)); magnetic properties, choice of materials or the like (materials per se [H01F 1/00](#)) }

Project: Unknown (H01F)

H01F **MAGNETS; INDUCTANCES; TRANSFORMERS; SELECTION OF MATERIALS FOR THEIR MAGNETIC PROPERTIES** (ceramics based on ferrites [C04B 35/26](#); alloys [C22C](#) {; construction of loading coils [H01B](#)}; loudspeakers, microphones, gramophone pick-ups or like acoustic electromechanical transducers [H04R](#); thermomagnetic devices [H10N 15/00](#))

NOTE

{In this subclass, inductances and transformers are regarded as being "for power supply" if they are intended for this purpose even in systems operating at frequencies above 60 cycles/sec.}

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

U H01F 1/00 **Magnets or magnetic bodies characterised by the magnetic materials therefor; Selection of materials for their magnetic properties**

NOTES

1. Attention is drawn to Note (3) after the title of section [C](#), which Note indicates to which version of the Periodic Table of chemical elements the CPC refers. In this group, the system used is the 8 group system indicated by Roman numerals in the Periodic Table thereunder.

2. {Group [H01F 1/0036](#) takes precedence over groups [H01F 1/09](#), [H01F 1/11](#), [H01F 1/20](#), [H01F 1/33](#) and [H01F 1/36](#).}

- U H01F 1/01 • of inorganic materials ([H01F 1/44](#) takes precedence)
- U H01F 1/03 • • characterised by their coercivity {([H01F 1/40](#) takes precedence)}
- U H01F 1/032 • • • of hard-magnetic materials
- U H01F 1/04 • • • • metals or alloys
- H01F 1/047 • • • • • Alloys characterised by their composition

NOTE

{In groups [H01F 1/053](#) - [H01F 1/059](#), an alloy is classified in the last appropriate place .}

- U H01F 1/12 • • • of soft-magnetic materials
- U H01F 1/14 • • • • metals or alloys
- H01F 1/147 • • • • • Alloys characterised by their composition {(treatment thereof for enhancing their electromagnetic properties [C21D 8/12](#))}

NOTE

{In groups [H01F 1/14708](#) - [H01F 1/15391](#), an alloy is classified in the last appropriate place .}

- U H01F 1/40 • • of magnetic semiconductor materials, e.g. CdCr₂S₄ (devices using galvanomagnetic or similar effects [H10N 50/00](#))
- H01F 1/401 • • • {diluted}

NOTE

{In group [H01F 1/401](#), a diluted magnetic semiconductor (DMS) is classified in the last appropriate place .}

U H01F 10/00 **Thin magnetic films, e.g. of one-domain structure (magnetic record carriers [G11B 5/00](#); thin-film magnetic stores [G11C](#))**

- U H01F 10/08 · characterised by magnetic layers ({H01F 10/32 takes precedence } ; applying thin magnetic films to substrates H01F 41/14)
- U H01F 10/10 · · characterised by the composition
- U H01F 10/12 · · · being metals or alloys (intermetallic compounds H01F 10/18)
- H01F 10/14 · · · · containing iron or nickel ({H01F 10/126} , H01F 10/13, H01F 10/16 take precedence)

NOTE

{In this group, alloys containing iron or nickel are classified in the last appropriate place.}

Project: Unknown (H01L)

- U H01L 21/00 **Processes or apparatus adapted for the manufacture or treatment of semiconductor or solid state devices or of parts thereof**

NOTE

{Due to the ongoing developments in class H10 and related subclasses, the information displayed in notes, references and definitions of this main group and indents may not be entirely accurate. For each specific subject matter referred to in this main group and indents, users are invited to consult the relevant place in class H10 and to consider the class H10 information as correct, in case of conflict}

- U H01L 21/02 · Manufacture or treatment of semiconductor devices or of parts thereof
- H01L 21/02002 · · {Preparing wafers}

NOTES

1. {This group covers processes for manufacturing wafers prior to the fabrication of any device, i.e. between the sawing of ingots (covered by B28D) and the cleaning of substrates (covered by H01L 21/02041). }
2. {This group does not cover:
 - simple use of grinding or polishing machines B24B
 - thermal smoothening H01L 21/324.

- U H01L 21/02104 · · {Forming layers (deposition in general C23C; crystal growth in general C30B)}
- U H01L 21/02107 · · · {Forming insulating materials on a substrate}
- U H01L 21/02109 · · · · {characterised by the type of layer, e.g. type of material, porous/non-porous, pre-cursors, mixtures or laminates}
- H01L 21/02112 · · · · · {characterised by the material of the layer}

NOTE

{Layers comprising sublayers, i.e. multi-layers, are additionally classified in H01L 21/022; porous layers are additionally classified in H01L 21/02203.}

- U H01L 21/02123 · · · · · {the material containing silicon}
- U H01L 21/02126 · · · · · {the material containing Si, O, and at least one of H, N, C, F, or other non-metal elements, e.g. SiOC, SiOC:H or SiONC}
- H01L 21/02129 · · · · · {the material being boron or phosphorus doped silicon oxides, e.g. BPSG, BSG or PSG}

NOTE

{Halogen, e.g. fluorine, containing BPSG, PSG, BSG, and the like, are additionally classified in H01L 21/02131.}

H01L 21/02164	. . . . . {the material being a silicon oxide, e.g. SiO ₂ }
	<u>NOTE</u> { The formation of silicon oxide layers is classified in this group regardless of the precursor or of the process of formation; in case of explicit statements on doping, on rest-groups, or on material components see H01L 21/02126 and subgroups; deposition of silicon oxide from organic precursors without further statements on film composition is classified here and in H01L 21/02205 and subgroups. }
U H01L 21/02205	. . . . . {the layer being characterised by the precursor material for deposition}
U H01L 21/02208	. . . . . {the precursor containing a compound comprising Si}
H01L 21/02214	. . . . . {the compound comprising silicon and oxygen}
	<u>NOTE</u> {This group <u>does not cover</u> mixtures of a silane and oxygen. }
H01L 21/02219	. . . . . {the compound comprising silicon and nitrogen}
	<u>NOTE</u> {This group <u>does not cover</u> mixtures of silane and nitrogen. }
U H01L 21/02225	. . . . {characterised by the process for the formation of the insulating layer}
H01L 21/02227	. . . . {formation by a process other than a deposition process}
	<u>NOTE</u> {Subject matter classified in the range of H01L 21/02223 - H01L 21/02249 is additionally classified in H01L 21/02249 , H01L 21/02255 and H01L 21/02252 , depending on the type of reaction. }
U H01L 21/02226	. . . . . {formation by a deposition process (per se C23C)}
H01L 21/02263	. . . . . {deposition from the gas or vapour phase}
	<u>NOTE</u> {This group and subgroups also cover deposition methods in which the gas or vapour is produced by physical means, e.g. ablation from targets or heating of source material. }
H01L 21/02269	. . . . . {deposition by thermal evaporation (H01L 21/02293 takes precedence)}
	<u>NOTE</u> {Subject matter relating to molecular beam epitaxy is classified in this group. }
U H01L 21/02271	. . . . . {deposition by decomposition or reaction of gaseous or vapour phase compounds, i.e. chemical vapour deposition (H01L 21/02266 takes precedence)}
H01L 21/0228	. . . . . {deposition by cyclic CVD, e.g. ALD, ALE, pulsed CVD}
	<u>NOTE</u> {Subject matter relating to cyclic plasma CVD is additionally classified in H01L 21/02274 . }

H01L 21/02293	<ul style="list-style-type: none"> • • • • • {formation of epitaxial layers by a deposition process (epitaxial growth per se C30B)} <p><u>NOTE</u></p> <p>{Formation of non-epitaxial layers by MBE, ALE, etc. is not covered by this group; for MBE see H01L 21/02269; for ALE see H01L 21/0228.}</p>
H01L 21/02296	<ul style="list-style-type: none"> • • • • • {characterised by the treatment performed before or after the formation of the layer (H01L 21/02227 and subgroups take precedence)} <p><u>NOTE</u></p> <p>{This group and subgroups only cover processes which are directly linked to the layer formation; routine anneals, i.e. thermal treatment without further features like a special atmosphere, presence of a plasma, thermally induced chemical reactions, change of phase (crystal structure) etc. are not classified here; for cleaning see H01L 21/02041 and subgroups; for etching processes see H01L 21/311 and subgroups; for planarization processes see H01L 21/31051 and subgroups; for processes to repair etch damage see H01L 21/3105 and subgroups. }</p>
H01L 21/02299	<ul style="list-style-type: none"> • • • • • {pre-treatment} <p><u>NOTE</u></p> <p>{This group and subgroups cover treatments to improve adhesion or change the surface termination; for<i>for</i> etching see H01L 21/306 and subgroups and H01L 21/311 and subgroups. }</p>
H01L 21/02301	<ul style="list-style-type: none"> • • • • • {in-situ cleaning} <p><u>NOTE</u></p> <p>{Subject matter relating to the cleaning processes for semiconductor devices in general is covered by H01L 21/02041 and subgroups. }</p>
H01L 21/02318	<ul style="list-style-type: none"> • • • • • {post-treatment} <p><u>NOTE</u></p> <p>{This group only covers processes that are part of the layer formation; treatments which are performed after completion of the insulating layer are covered by H01L 21/3105 and subgroups. }</p>
H01L 21/02321	<ul style="list-style-type: none"> • • • • • {introduction of substances into an already existing insulating layer (H01L 21/02227 and subgroups take precedence)} <p><u>NOTE</u></p> <p>processes {<i>Processes</i> like the introduction of phosphorus into silicon oxide by diffusion, or doping of an already existing insulating layer are covered by this group and subgroups; for the method of introduction, see H01L 21/02337, H01L 21/02343, H01L 21/02345 and subgroups. }</p>
H01L 21/02334	<ul style="list-style-type: none"> • • • • • {in-situ cleaning after layer formation, e.g. removing process residues} <p><u>NOTE</u></p> <p>{Subject matter relating to the cleaning processes for semiconductor devices in general is covered by H01L 21/02041 and subgroups. }</p>
U H01L 21/04	<ul style="list-style-type: none"> • • the devices having potential barriers, e.g. a PN junction, depletion layer or carrier concentration layer

	H01L 21/0405	<ul style="list-style-type: none"> • • {the devices having semiconductor bodies comprising semiconducting carbon, e.g. diamond, diamond-like carbon} <p><u>NOTE</u> {This group <u>covers</u> passivation.}</p>
U	H01L 21/0445	<ul style="list-style-type: none"> • • {the devices having semiconductor bodies comprising crystalline silicon carbide}
U	H01L 21/0455	<ul style="list-style-type: none"> • • • {Making n or p doped regions or layers, e.g. using diffusion}
	H01L 21/046	<ul style="list-style-type: none"> • • • • {using ion implantation} <p><u>NOTE</u> {Processes where ion implantation of boron and subsequent annealing does not produce a p-doped region are classified elsewhere, e.g. H01L 21/0445.}</p>
U	H01L 21/18	<ul style="list-style-type: none"> • • the devices having semiconductor bodies comprising elements of Group IV of the Periodic Table or $A_{III}B_V$ compounds with or without impurities, e.g. doping materials {(H01L 21/041 - H01L 21/0425, H01L 21/045 - H01L 21/048 take precedence)} <p><u>NOTE</u> This group <u>covers</u> also processes and apparatus which, by using the appropriate technology, are clearly suitable for manufacture or treatment of devices whose bodies comprise elements of Group IV of the Periodic Table or $A_{III}B_V$ compounds, even if the material used is not explicitly specified.</p>
U	H01L 21/28	<ul style="list-style-type: none"> • • • Manufacture of electrodes on semiconductor bodies using processes or apparatus not provided for in groups H01L 21/20 - H01L 21/268
U	H01L 21/28008	<ul style="list-style-type: none"> • • • • {Making conductor-insulator-semiconductor electrodes}
	H01L 21/28017	<ul style="list-style-type: none"> • • • • • {the insulator being formed after the semiconductor body, the semiconductor being silicon} <p><u>NOTE</u> {This group <u>covers</u> deposition of the insulators, including epitaxial insulators, and the conductors within the same process or chamber.}</p>
	H01L 21/28026	<ul style="list-style-type: none"> • • • • • {characterised by the conductor (H01L 21/28176 takes precedence)} <p><u>NOTE</u> {When the final conductor comprises a superconductor, subject matter is not classified according to the subgroups H01L 21/28035 - H01L 21/28097. Instead, it is classified in H01L 21/28026.}</p>
	H01L 21/28035	<ul style="list-style-type: none"> • • • • • {the final conductor layer next to the insulator being silicon, e.g. polysilicon, with or without impurities (H01L 21/28105 takes precedence)} <p><u>NOTE</u> {A very thin, e.g. silicon, adhesion or seed layer is not considered as the one next to the insulator.}</p>
U	H01L 21/28044	<ul style="list-style-type: none"> • • • • • {the conductor comprising at least another non-silicon conductive layer}

- H01L 21/28061 {the conductor comprising a metal or metal silicide formed by deposition, e.g. sputter deposition, i.e. without a silicidation reaction ([H01L 21/28052](#) takes precedence)}
- NOTE
{To assess the coverage of groups [H01L 21/28052](#) and [H01L 21/28061](#), barrier layers, e.g. TaSiN, are not considered.}
- H01L 21/28114 {characterised by the sectional shape, e.g. T, inverted-T}
- NOTE
{Documents are also classified in groups [H01L 21/28035](#) - [H01L 21/28105](#) when the composition is also relevant.}
- U H01L 21/28158 {Making the insulator}
- U H01L 21/28167 {on single crystalline silicon, e.g. using a liquid, i.e. chemical oxidation}
- H01L 21/28211 {in a gaseous ambient using an oxygen or a water vapour, e.g. RTO, possibly through a layer ([H01L 21/28194](#) and [H01L 21/28202](#) take precedence)}
- NOTE
~~thin~~ {Thin oxidation layers used as a barrier layer or as a buffer layer, e.g. before the formation of a high-k insulator, are classified here only if important per se.}
- U H01L 21/30 Treatment of semiconductor bodies using processes or apparatus not provided for in groups [H01L 21/20](#) - [H01L 21/26](#) (manufacture of electrodes thereon [H01L 21/28](#))
- U H01L 21/322 to modify their internal properties, e.g. to produce internal imperfections
- U H01L 21/3221 {of silicon bodies, e.g. for gettering}
- H01L 21/3225 {Thermally inducing defects using oxygen present in the silicon body for intrinsic gettering ([H01L 21/3226](#) takes precedence)}
- NOTE
{Gettering using both extrinsic and intrinsic gettering techniques is classified in both [H01L 21/3221](#) and [H01L 21/3225](#).}
- H01L 21/48 Manufacture or treatment of parts, e.g. containers, prior to assembly of the devices, using processes not provided for in a single one of the groups [H01L 21/18](#) - [H01L 21/326](#) or [H10D 48/04](#) - [H10D 48/07](#)
- NOTE
{In this group, the expression "treatment" covers also the removal of leads from parts.}
- H01L 21/50 Assembly of semiconductor devices using processes or apparatus not provided for in a single one of the groups [H01L 21/18](#) - [H01L 21/326](#) or [H10D 48/04](#) - [H10D 48/07](#) {e.g. sealing of a cap to a base of a container}
- NOTE
{Arrangements for connecting or disconnecting semiconductor or other solid state bodies, or methods related thereto, other than those arrangements or methods covered by the following subgroups, are covered by [H01L 24/00](#).}

- H01L 21/67
- Apparatus specially adapted for handling semiconductor or electric solid state devices during manufacture or treatment thereof; Apparatus specially adapted for handling wafers during manufacture or treatment of semiconductor or electric solid state devices or components {; Apparatus not specifically provided for elsewhere (processes per se [H01L 21/30](#), [H01L 21/46](#), [H01L 23/00](#); simple temporary support means, e.g. using adhesives, electric or magnetic means [H01L 21/68](#), [H01L 21/302](#); apparatus for manufacturing arrangements for connecting or disconnecting semiconductor or solid-state bodies and for methods related thereto [H01L 24/74](#);)}

NOTE

{In this subgroup the term substrate designates a semiconductor or electric solid state device or component, or a wafer.}

- U H01L 21/683
- • for supporting or gripping (for conveying [H01L 21/677](#), for positioning, orientation or alignment [H01L 21/68](#))

- H01L 21/6835
- • • {using temporarily an auxiliary support}

NOTE

{[H01L 21/6835](#), details of the apparatus are to be further indexed using the indexing codes chosen from [H01L 2221/68304](#) and subgroups.}

- U H01L 21/70
- Manufacture or treatment of devices consisting of a plurality of solid state components formed in or on a common substrate or of parts thereof; Manufacture of integrated circuit devices or of parts thereof ({multistep manufacturing processes of assemblies consisting of a plurality of individual semiconductor or other solid state devices [H01L 25/00](#); } manufacture of assemblies consisting of preformed electrical components [H05K 3/00](#), [H05K 13/00](#))

- U H01L 21/71
- • Manufacture of specific parts of devices defined in group [H01L 21/70](#) ({[H01L 21/0405](#), [H01L 21/0445](#)}, [H01L 21/28](#), [H01L 21/44](#), [H01L 21/48](#) take precedence)

- H01L 21/768
- • • Applying interconnections to be used for carrying current between separate components within a device {comprising conductors and dielectrics}

NOTE

{Groups [H01L 21/768](#) - [H01L 21/76898](#) cover multi-step processes for manufacturing interconnections. Information peculiar to single-step processes should also be classified in the corresponding group, e.g.

- cleaning [H01L 21/02041](#)
- etching [H01L 21/311](#), [H01L 21/3213](#)
- masking [H01L 21/027](#), [H01L 21/033](#), [H01L 21/31144](#), [H01L 21/32139](#)
- planarizing [H01L 21/3105](#), [H01L 21/321](#).

}

- H01L 21/76838
- • • • {characterised by the formation and the after-treatment of the conductors (etching for patterning the conductors [H01L 21/3213](#))}

NOTE

{When the interconnect is also used as the conductor part of a conductor insulator semiconductor electrode (gate level interconnections), documents are classified in the relevant electrode manufacture groups, e.g. [H01L 21/28026](#)}.}

- U H01L 23/00** Details of semiconductor or other solid state devices ([H01L 25/00](#) takes precedence {; structural arrangements for testing or measuring during manufacture or treatment, or for reliability measurements [H01L 22/00](#); arrangements for connecting or disconnecting semiconductor or solid-state bodies, or methods related thereto [H01L 24/00](#); finger print sensors [G06V 40/12](#)})
- NOTE
This group does not cover:
- details of semiconductor bodies or of electrodes of devices provided for in subclass [H10D](#), which details are covered by that group;
 - details peculiar to devices provided for in a single subclass of subclasses [H10F](#), [H10H](#), [H10K](#) or [H10N](#), which details are covered by those places.
- H01L 23/48
- Arrangements for conducting electric current to or from the solid state body in operation, e.g. leads, terminal arrangements {; Selection of materials therefor}
- NOTE
{Arrangements for connecting or disconnecting semiconductor or other solid state bodies, or methods related thereto, other than those arrangements or methods covered by the following subgroups, are covered by [H01L 24/00](#).}
- H01L 23/544
- Marks applied to semiconductor devices {or parts}, e.g. registration marks, {alignment structures, wafer maps (test patterns for characterising or monitoring manufacturing processes [H01L 22/00](#))}
- NOTE
{When classifying in group [H01L 23/544](#), details are to be further indexed by using the indexing codes chosen from [H01L 2223/544](#) and subgroups.}
- U H01L 23/58**
- Structural electrical arrangements for semiconductor devices not otherwise provided for {, e.g. in combination with batteries ([H01L 23/49593](#), [H01L 23/49596](#) take precedence)}
- U H01L 23/64**
- • Impedance arrangements
- H01L 23/66**
- • • High-frequency adaptations
- NOTE
{When classifying in group [H01L 23/66](#), details are to be further indexed by using the indexing codes chosen from [H01L 2223/66](#) and subgroups.}
- U H01L 25/00** Assemblies consisting of a plurality of semiconductor or other solid state devices (devices consisting of a plurality of solid-state components formed in or on a common substrate [H10D 89/00](#); photovoltaic modules or arrays of photovoltaic cells [H10F 19/00](#))
- NOTE
{Due to the ongoing developments in class [H10](#) and related subclasses, the information displayed in notes, references and definitions of this main group and indents may not be entirely accurate. For each specific subject matter referred to in this main group and indents, users are invited to consult the relevant place in class [H10](#) and to consider the class [H10](#) information as correct, in case of conflict}
- U H01L 25/03**
- all the devices being of a type provided for in a single subclass of subclasses [H10B](#), [H10F](#), [H10H](#), [H10K](#) or [H10N](#), e.g. assemblies of rectifier diodes
- U H01L 25/04**
- • the devices not having separate containers
- WARNING
Group [H01L 25/04](#) is impacted by reclassification into groups [H10N 19/00](#), [H10N 39/00](#), [H10N 59/00](#), [H10N 69/00](#), [H10N 79/00](#) and [H10N 89/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

H01L 25/065

- • the devices being of a type provided for in group [H10D 89/00](#)

NOTE

{Group [H01L 25/0652](#) takes precedence over groups [H01L 25/0655](#) and [H01L 25/0657](#).}

WARNING

Group [H01L 25/065](#) is impacted by reclassification into groups [H10B 80/00](#), [H10K 39/10](#), [H10K 39/12](#), [H10K 39/15](#), [H10K 39/18](#), [H10K 39/601](#), [H10K 39/621](#), [H10K 59/90](#), [H10K 59/95](#), [H10N 19/00](#), [H10N 39/00](#), [H10N 59/00](#), [H10N 69/00](#), [H10N 79/00](#) and [H10N 89/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

H01L 25/07

- • the devices being of a type provided for in group subclass [H10D](#)

NOTE

{Group [H01L 25/071](#) takes precedence over groups [H01L 25/072](#) - [H01L 25/074](#).}

U H01L 25/10

- • the devices having separate containers

H01L 25/105

- • {the devices being integrated devices of class [H10](#)}

NOTE

{When classifying in group [H01L 25/105](#), details of the assemblies are to be further indexed by using the indexing codes chosen from [H01L 2225/1005](#) and subgroups.}

H01L 25/11

- • the devices being of a type provided for in subclass [H10D](#)

NOTE

{Group [H01L 25/112](#) takes precedence over groups [H01L 25/115](#) and [H01L 25/117](#).}

Project: Unknown (H01M)

U H01M 4/00

Electrodes

NOTE

In classifying electrodes of hybrid cells, the individual half-cells of the hybrid cell are considered separately, e.g. an electrode in the primary half of a primary/fuel type hybrid cell is considered to be a primary-cell electrode covered by [H01M 4/06](#).

U H01M 4/02

- Electrodes composed of, or comprising, active material

U H01M 4/36

- • Selection of substances as active materials, active masses, active liquids

U H01M 4/58

- • of inorganic compounds other than oxides or hydroxides, e.g. sulfides, selenides, tellurides, halogenides or LiCoF_y; of polyanionic structures, e.g. phosphates, silicates or borates

H01M 4/5825

- • {Oxygenated metallic salts or polyanionic structures, e.g. borates, phosphates, silicates, olivines}

NOTE

{Polyanionic structures comprises elements not changing oxidation state during electrochemical reaction, e.g. P, Si, B.}

Project: MP12386 (H03G)**M H03G****CONTROL OF AMPLIFICATION****NOTES**

1. This subclass covers:
 - control of gain of amplifiers or frequency-changers;
 - control of frequency range of amplifiers;
 - limiting amplitude or rate of change of amplitude.
2. Attention is drawn to the Note following the title of subclass [H03F](#).

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme:

U H03G 1/00**Details of arrangements for controlling amplification**

U H03G 1/0005

- {Circuits characterised by the type of controlling devices operated by a controlling current or voltage signal}

M H03G 1/0011

- {the device being at least one of the amplifying ~~tubes of the amplifier~~ *tube elements*}

M H03G 1/0017

- {the device being at least one of the amplifying solid ~~state elements of the amplifier~~ *state elements*}

M H03G 1/0029

- • {using ~~FETs~~ *field-effect transistors [FET]*}

U H03G 1/0035

- {using continuously variable impedance elements}

M H03G 1/007

- • {using ~~FET-type devices~~ *field-effect transistors [FET]*}

U H03G 3/00**Gain control in amplifiers or frequency changers**

U H03G 3/20

- Automatic control ({[H03G 3/005](#) takes precedence;} combined with volume compression or expansion [H03G 7/00](#))

U H03G 3/22

- • in amplifiers having discharge tubes

M H03G 3/26

- • • Muting amplifier when no signal is present ~~{or when only weak signals are present, or caused by the presence of noise, e.g. squelch systems}~~

M H03G 3/28

- • • in frequency-modulation receivers ~~{; in angle-modulation receivers}~~

U H03G 3/30

- • in amplifiers having semiconductor devices

U H03G 3/3036

- • {in high-frequency amplifiers or in frequency-changers ([H03G 3/3052](#), [H03G 3/32](#), [H03G 3/34](#) take precedence)}

M H03G 3/3042

- • • {in modulators, frequency-changers, transmitters or power amplifiers ~~(transmission power control in bidirectional transmission systems H04W 52/04)~~}

M H03G 3/34

- • • Muting amplifier when no signal is present ~~{or when only weak signals are present, or caused by the presence of noise signals, e.g. squelch systems}~~

M H03G 7/00**Volume compression or expansion in amplifiers {(frequency dependent ~~H03G 9/00~~ *H03G 9/025*)}****M H03G 11/00****Limiting amplitude; Limiting rate of change of amplitude ~~{; Clipping in general}~~****Project: MP12387 (H03L)****U H03L 1/00****Stabilisation of generator output against variations of physical values, e.g. power supply**

U H03L 1/02

- against variations of temperature only

U H03L 1/022

- {by indirect stabilisation, i.e. by generating an electrical correction signal which is a function of the temperature ([H03L 1/021](#) takes precedence)}

- M H03L 1/027 • • • {by using frequency conversion means which is variable with temperature, e.g. mixer, frequency divider, pulse add/~~subtract~~*subtract* logic circuit ([H03L 1/023](#), [H03L 1/026](#) take precedence)}
- U H03L 7/00 Automatic control of frequency or phase; Synchronisation**
- U H03L 7/06 • using a reference signal applied to a frequency- or phase-locked loop
- U H03L 7/08 • • Details of the phase-locked loop
- M H03L 7/14 • • • for assuring constant frequency when supply or correction voltages fail ~~{or are interrupted}~~

Project: Unknown (H03M)

- U H03M 3/00 Conversion of analogue values to or from differential modulation**
- U H03M 3/30 • {Delta-sigma modulation}
- NOTE
{In group branch [H03M 3/30](#), in the absence of an indication to the contrary, classification is made in the first appropriate place.}
- U H03M 3/39 • • {Structural details of delta-sigma modulators, e.g. incremental delta-sigma modulators (of digital delta-sigma modulators [H03M 7/3004](#))}
- U H03M 3/436 • • • {characterised by the order of the loop filter, e.g. error feedback type}
- NOTE
In this group branch the order of the loop filters is considered to be the number of integrators for a baseband modulator and the number of resonators for a bandpass modulator respectively
- U H03M 3/438 • • • • {the modulator having a higher order loop filter in the feedforward path}
- H03M 3/44 • • • • {with provisions for rendering the modulator inherently stable}
- NOTE
{In this subgroup, classification is made both here and in [H03M 3/478](#) if both subgroups are relevant.}
- U H03M 3/458 • • {Analogue/digital converters using delta-sigma modulation as an intermediate step}
- H03M 3/478 • • • {Means for controlling the correspondence between the range of the input signal and the range of signals the converter can handle; Means for out-of-range indication}
- NOTE
{In this subgroup, classification is made both here and in [H03M 3/44](#) if both subgroups are relevant.}

H03M 5/00**Conversion of the form of the representation of individual digits**NOTE

- In groups [H03M 5/02](#) - [H03M 5/22](#), *the last place priority rule is applied, i.e. at each hierarchical level*, in the absence of an indication to the contrary, ~~an invention is classified~~*classification is made* in the last appropriate place. *{This Note corresponds to IPC Note (1) relating to H03M 5/02 - H03M 5/22.}*
- ~~{In this main group, additional information has been classified systematically for documents published from 01-04-2004 onwards.}~~

H03M 7/00

Conversion of a code where information is represented by a given sequence or number of digits to a code where the same {, similar or subset of} information is represented by a different sequence or number of digits

NOTE

1. In groups ~~H03M 7/001~~[H03M 7/02](#) - ~~H03M 7/50~~[H03M 7/30](#), the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place. *{This Note corresponds to IPC Note (1) relating to [H03M 7/02](#) - [H03M 7/30](#).}*

2. In groups ~~H03M 7/02 – H03M 7/50~~, in the absence of an indication to the contrary, an invention is classified in the last appropriate place.

3. {In this main group, in the absence of an indication to the contrary, additional information has been classified systematically for documents published from 01-04-2004 onwards.}

- U H03M 7/30
 - Compression (speech analysis-synthesis for redundancy reduction [G10L 19/00](#); for image communication [H04N](#)); Expansion; Suppression of unnecessary data, e.g. redundancy reduction

- U H03M 7/3002
 - {Conversion to or from differential modulation}

NOTE

{In group branch [H03M 7/3002](#), additional information has been systematically classified for all documents.}

- U H03M 7/3004
 - • {Digital delta-sigma modulation}
- U H03M 7/3015
 - • • {Structural details of digital delta-sigma modulators}
- H03M 7/3031
 - • • • {characterised by the order of the loop filter, e.g. having a first order loop filter in the feedforward path}

NOTE

{In this group the order of the loop filters is considered to be the number of integrators for a baseband modulator and the number of resonators for a bandpass modulator respectively.}

- U H03M 13/00

Coding, decoding or code conversion, for error detection or error correction; Coding theory basic assumptions; Coding bounds; Error probability evaluation methods; Channel models; Simulation or testing of codes (error detection or error correction for analogue/digital, digital/analogue or code conversion [H03M 1/00](#) – [H03M 11/00](#); specially adapted for digital computers [G06F 11/08](#); for information storage based on relative movement between record carrier and transducer [G11B](#), e.g. [G11B 20/18](#); for static stores [G11C](#))

- U H03M 13/29
 - combining two or more codes or code structures, e.g. product codes, generalised product codes, concatenated codes, inner and outer codes
- H03M 13/2957
 - • {Turbo codes and decoding}

NOTE

{This group covers also aspects when a component code is replaced by a non-coded constraint, e.g. like in joint turbo decoding and detection.}

- H03M 13/296
 - • • {Particular turbo code structure}

NOTE

this {This group covers hybrid parallel and serial concatenated turbo code structures and other unusual code structures that do not fit into [H03M 13/2963](#) - [H03M 13/2972](#).}

Project: Unknown (H04J)

U	H04J 13/00	Code division multiplex systems (for frequency hopping H04B 1/713) <u>NOTE</u> When classifying in this group, any aspect of spread spectrum techniques not specific to frequency hopping, and which is considered to represent information of interest for search, may also be classified in group H04B 1/69 .
	H04J 13/0007	• {Code type} <u>NOTE</u> {Code type information should be classified in addition to other relevant aspects. This should also be done in cases where the other relevant symbol refers to code type, e.g. H04J 13/14 , H04J 13/20 -} }

Project: RP11516-F (H04J)

M	H04J 14/00	Optical multiplex systems <u>WARNING</u> Group H04J 14/00 is impacted by reclassification into groups H04J 14/05 and H04J 14/07. All groups listed in this Warning should be considered in order to perform a complete search.
M	H04J 14/02	• Wavelength-division multiplex systems <u>WARNING</u> Group H04J 14/02 is impacted by reclassification into groups H04J 14/03, H04J 14/0305 and H04J 14/0307. All groups listed in this Warning should be considered in order to perform a complete search.
U	H04J 14/0201	• {Add-and-drop multiplexing}
U	H04J 14/0202	• • {Arrangements therefor}
M	H04J 14/021	• • • {Reconfigurable arrangements, e.g. reconfigurable optical add/drop multiplexers [ROADM] or tunable optical add/drop multiplexers [TOADM]} <u>WARNING</u> Group H04J 14/021 is impacted by reclassification into groups H04J 14/02122 and H04J 14/02126. Groups H04J 14/021, H04J 14/02122 and H04J 14/02126 should be considered in order to perform a complete search.
M	H04J 14/0212	• • • • {using optical switches or wavelength selective switches [WSS]} <u>WARNING</u> Group H04J 14/0212 is impacted by reclassification into groups H04J 14/02122 and H04J 14/02126. Groups H04J 14/0212, H04J 14/02122 and H04J 14/02126 should be considered in order to perform a complete search.
M	H04J 14/02122	• • • • {Colourless, directionless or contentionless [CDC] arrangements} <u>WARNING</u> Group H04J 14/02122 is incomplete pending reclassification of documents from groups H04J 14/021 and H04J 14/0212. Groups H04J 14/021, H04J 14/0212 and H04J 14/02122 should be considered in order to perform a complete search.

M	H04J 14/02126	<ul style="list-style-type: none"> • • • • {Multicast switch arrangements} <p><u>WARNING</u> Group H04J 14/02126 is incomplete pending reclassification of documents from groups H04J 14/021 and H04J 14/0212. Groups H04J 14/021, H04J 14/0212 and H04J 14/02126 should be considered in order to perform a complete search.</p>
M	H04J 14/0221	<ul style="list-style-type: none"> • {Power control, e.g. to keep the total optical power constant} <p><u>WARNING</u> Group H04J 14/0221 is impacted by reclassification into groups H04J 14/02212, H04J 14/02214, H04J 14/02216, H04J 14/02218 and H04J 14/02219. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	H04J 14/02212	<ul style="list-style-type: none"> • • {by addition of a dummy signal} <p><u>WARNING</u> Group H04J 14/02212 is incomplete pending reclassification of documents from group H04J 14/0221. Groups H04J 14/0221 and H04J 14/02212 should be considered in order to perform a complete search.</p>
M	H04J 14/02214	<ul style="list-style-type: none"> • • {by re-allocation of data channels} <p><u>WARNING</u> Group H04J 14/02214 is incomplete pending reclassification of documents from group H04J 14/0221. Groups H04J 14/0221 and H04J 14/02214 should be considered in order to perform a complete search.</p>
M	H04J 14/02216	<ul style="list-style-type: none"> • • {by gain equalization} <p><u>WARNING</u> Group H04J 14/02216 is incomplete pending reclassification of documents from group H04J 14/0221. Groups H04J 14/0221 and H04J 14/02216 should be considered in order to perform a complete search.</p>
M	H04J 14/02218	<ul style="list-style-type: none"> • • {Centralized control} <p><u>WARNING</u> Group H04J 14/02218 is incomplete pending reclassification of documents from group H04J 14/0221. Groups H04J 14/0221 and H04J 14/02218 should be considered in order to perform a complete search.</p>
M	H04J 14/02219	<ul style="list-style-type: none"> • • {Distributed control} <p><u>WARNING</u> Group H04J 14/02219 is incomplete pending reclassification of documents from group H04J 14/0221. Groups H04J 14/0221 and H04J 14/02219 should be considered in order to perform a complete search.</p>
U	H04J 14/0227	<ul style="list-style-type: none"> • {Operation, administration, maintenance or provisioning [OAMP] of WDM networks, e.g. media access, routing or wavelength allocation}

M	H04J 14/0254	<ul style="list-style-type: none"> • • • {Optical medium access} <p><u>WARNING</u> Group H04J 14/0254 is impacted by reclassification into groups H04J 14/02762 and H04J 14/02764. Groups H04J 14/0254, H04J 14/02762 and H04J 14/02764 should be considered in order to perform a complete search.</p>
M	H04J 14/02762	<ul style="list-style-type: none"> • • • {Spectrum slot allocation} <p><u>WARNING</u> Group H04J 14/02762 is incomplete pending reclassification of documents from group H04J 14/0254. Groups H04J 14/0254 and H04J 14/02762 should be considered in order to perform a complete search.</p>
M	H04J 14/02764	<ul style="list-style-type: none"> • • • {Multiplex arrangements for radio-frequency networks access; policies therefor (radio over fibre arrangement H04B 10/2575)} <p><u>WARNING</u> Group H04J 14/02764 is incomplete pending reclassification of documents from group H04J 14/0254. Groups H04J 14/0254 and H04J 14/02764 should be considered in order to perform a complete search.</p>
M	H04J 14/0278	<ul style="list-style-type: none"> • • {WDM optical network architectures} <p><u>WARNING</u> Group H04J 14/0278 is impacted by reclassification into group H04J 14/02862. Groups H04J 14/0278 and H04J 14/02862 should be considered in order to perform a complete search.</p>
M	H04J 14/02862	<ul style="list-style-type: none"> • • • {WDM data centre network [DCN] architectures} <p><u>WARNING</u> Group H04J 14/02862 is incomplete pending reclassification of documents from group H04J 14/0278. Groups H04J 14/0278 and H04J 14/02862 should be considered in order to perform a complete search.</p>
M	H04J 14/03	<ul style="list-style-type: none"> • • {WDM arrangements (ADM arrangements H04J 14/0202; WDM network architectures H04J 14/0278)} <p><u>WARNING</u> Groups H04J 14/03, H04J 14/0305 and H04J 14/0307 are incomplete pending reclassification of documents from group H04J 14/02. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	H04J 14/04	<ul style="list-style-type: none"> • Mode multiplex systems <p><u>WARNING</u> Group H04J 14/04 is impacted by reclassification into group H04J 14/052. Groups H04J 14/04 and H04J 14/052 should be considered in order to perform a complete search.</p>
M	H04J 14/05	<ul style="list-style-type: none"> • {Spatial multiplexing systems} <p><u>WARNING</u> Group H04J 14/05 is incomplete pending reclassification of documents from group H04J 14/00.</p>

Groups H04J 14/00 and H04J 14/05 should be considered in order to perform a complete search.

- M H04J 14/052
- {using multicore fibre (mode multiplex systems [H04J 14/04](#))}

WARNING

Group H04J 14/052 is incomplete pending reclassification of documents from group H04J 14/04.

Groups H04J 14/04 and H04J 14/052 should be considered in order to perform a complete search.

- M H04J 14/07
- {Orbital angular momentum [OAM] multiplex systems}

WARNING

Group H04J 14/07 is incomplete pending reclassification of documents from group H04J 14/00.

Groups H04J 14/00 and H04J 14/07 should be considered in order to perform a complete search.

Project: Unknown (H04L)

- U H04L 12/00
- Data switching networks (interconnection of, or transfer of information or other signals between, memories, input/output devices or central processing units [G06F 13/00](#))**

- U H04L 12/28
- characterised by path configuration, e.g. LAN [Local Area Networks] or WAN [Wide Area Networks] (wireless communication networks [H04W](#) {; arrangements for dividing the transmission path [H04W 40/00](#))}

- U H04L 12/2854
- H04L 12/2856
- {Wide area networks, e.g. public data networks}
 - • {Access arrangements, e.g. Internet access (asynchronous transfer mode networks [H04L 12/5601](#); broadband local area networks [H04L 12/2801](#); optical access or distribution networks [H04Q 11/0067](#); access to open networks [H04L 12/5691](#); digital subscriber line end-user equipment and bit-level processing of data on a PSTN-based network [H04M 11/00](#); home network gateways [H04L 12/2834](#); wireless access networks [H04W](#))}

NOTES

1. {This group covers:
 - access to a public data network, such as an IP network, for subscribers, i.e. customers of a network service provider, over a wired network.
 - communication of generic types of data between end-user equipments, located typically at the subscriber premises, and an access server, which acts as interface between the access network and the public data network.

}

2. {This group does not cover:
 - wireless access networks, which are covered by [H04W](#)
 - optical distribution networks, which are covered by [H04Q 11/0067](#)
 - bit-level, or PHY layer, processing of data between digital subscriber line equipments, which is covered by [H04M 11/06](#)
 - design of DSL, digital subscriber line, modems, which is covered by [H04M 11/06](#)
 - exchange of data related to functionalities of home network appliances between a home network and an external network, which is covered by [H04L 12/2803](#)
 - management of WDM parameters in optical multiplex systems, which is covered by [H04J 14/02](#)
 - circuit-switched access networks, which are covered by [H04M 7/1205](#)

- access arrangements for providing telephone service in networks other than PSTN/ISDN, which are covered by [H04M 7/0066](#)

}

3. {In this group the following terms or expressions are used with the meaning indicated:

- ATM means Asynchronous Transfer Mode
- LAN means Local Area Network
- BRAS means Broadband Remote Access Server
- DSLAM means Digital Subscriber Line Access Multiplexer
- MSAN means MultiService Access Node
- DSL means Digital Subscriber Line
- IP means Internet Protocol
- WDM means Wavelength Division Multiplexing
- SDH means Synchronous Digital Hierarchy
- OTN means Optical Transport Network
- PSTN means Public Switched Telephone Network
- ISDN means Integrated Services Digital Network
- TDM means Time-Division Multiplexing
- TDMA means Time Division Multiple Access

}

U H04L 12/40
H04L 12/40006

- • Bus networks
- • • {Architecture of a communication node (current supply arrangements [H04L 12/10](#); intermediate storage or scheduling [H04L 49/90](#))}

NOTE

{In this group the following terms or expressions are used with the meaning indicated:

- a bus controller is a microprocessor dedicated to input and output of data by a node on a bus;
- a bus master is a device controlling which node accesses the bus at a particular time;
- a bus guardian is a device monitoring the timing of node accesses on the bus;
- a bus interface enhancer is a hardware or software arrangement managing the bus controller or the bus interface to modify its behaviour or providing a transparent interface to the bus controller.

}

H04L 2012/40208

- • • {characterized by the use of a particular bus standard}

NOTE

{In this group the following terms or expressions are used with the meaning indicated:

- Controller-area network (CAN or CAN-bus) designates a computer network protocol and bus standard developed in 1983 by Intel Corporation and Robert Bosch GmbH to allow microcontrollers and devices to communicate with each other without a host computer;
- PROFIBUS (Process Field Bus) designates a standard for field bus communication in automation technology first implemented in 1989 by BMBF, the German department of education and research;
- Modbus designates a serial communications protocol published by Modicon in 1979 for use with its programmable logic controller;
- LIN-Bus (Local Interconnect Network) designates a computer networking bus-system released in 1999 used within current automotive network architectures;
- FlexRay designates an automotive network communications protocol developed by the FlexRay Consortium;

- LON or LonWorks designates a network standard operating on twisted pair or electrical wiring or coaxial cable and used for building automation;
- ASI or AS-Interface (Actuator Sensor Interface) designates the simplest of the industrial networking protocols used in programmable logic controller systems

}

U H04L 25/00

Baseband systems

- U H04L 25/02 • Details {; arrangements for supplying electrical power along data transmission lines (systems for transmitting signals via power distribution lines [H04B 3/54](#))}
- U H04L 25/03 • • Shaping networks in transmitter or receiver, e.g. adaptive shaping networks
- U H04L 25/03006 • • • {Arrangements for removing intersymbol interference}
- H04L 25/03171 • • • • {Arrangements involving maximum a posteriori probability [MAP] detection}

NOTE

{This group contains provisionally all documents which deal with turbo equalisation.}

- U H04L 25/03178 • • • • {Arrangements involving sequence estimation techniques}
- H04L 25/03248 • • • • • {Arrangements for operating in conjunction with other apparatus}

NOTE

{This group covers arrangements in which the sequence estimator is specially adapted to provide signals to, or receive signals from, the other apparatus. The group does not cover the mere juxtaposition of elements.}

Project: RP12306 (H04L)

M H04L 61/00

Network arrangements, protocols or services for addressing or naming

NOTE

This group does not cover:

- {aspects relating to switching or routing which are covered by groups [H04L 45/00](#) or [H04L 49/00](#);}
- {aspects relating to configuration management of data networks or network elements in general, which are covered by group [H04L 41/08](#);}
- {aspects of addressing in telephony which are covered by group [H04M 7/00](#);}
- {aspects of addressing within devices, e.g. process or memory, which are covered by groups [G06F 13/42](#) or [G06F 12/00](#).}

- U H04L 61/09 • Mapping addresses

WARNING

Group [H04L 61/09](#) is incomplete pending reclassification of documents from group [H04L 9/40](#).

Groups [H04L 9/40](#) and [H04L 61/09](#) should be considered in order to perform a complete search.

- U H04L 61/25 • • of the same type
- T H04L 61/2503 • • • Translation of Internet protocol [IP] addresses
- D H04L 61/2542 • • • • {involving dual-stack hosts}
-
-
- <administratively transferred to [H04L 61/2503](#) and [H04L 2101/686](#) ADD>
- U H04L 61/256 • • • • NAT traversal

- D H04L 61/2571 {for identification, e.g. for authentication or billing (charging arrangements H04L 12/14)}
<administratively transferred to [H04L 61/2591](#)>
- U H04L 61/2589 over a relay server, e.g. traversal using relay for network address translation [TURN]
- N H04L 61/2591 {Identification of devices behind NAT devices}
- U **H04L 2101/00** **Indexing scheme associated with group [H04L 61/00](#)**
- U H04L 2101/60 . Types of network addresses
- T H04L 2101/686 . . using dual-stack hosts, e.g. in Internet protocol version 4 [IPv4]/Internet protocol version 6 [IPv6] networks

Project: Unknown (H04R)

- U **H04R 1/00** **Details of transducers, {loudspeakers or microphones}**
H04R 1/10 . Earpieces; Attachments therefor {; Earphones; Monophonic headphones ([H04R 1/28](#) takes precedence; stereophonic headphones [H04R 5/033](#))}
- NOTES
- {This group covers details of headphones, both of monophonic and stereophonic type. }
 - {When classifying in this group or in its subgroups, aspects relating to stereophonic headphones are to be classified in [H04R 5/033](#) as well.}
- H04R 25/00** **Deaf-aid sets {, i.e. electro-acoustic or electro-mechanical hearing aids; Electric tinnitus maskers providing an auditory perception (electrical stimulation of auditory nerves to promote the auditory function [A61N 1/36038](#); optical stimulation of auditory nerves to promote the auditory function [A61N 5/0622](#))}**
- NOTE
- {Classification should be directed to groups [H04R 25/02](#), [H04R 25/04](#) or [H04R 25/50](#) and its subgroups, if and only if the technical subject in consideration cannot be classified elsewhere under the main group [H04R 25/00](#).}
- H04R 25/65 . {Housing parts, e.g. shells, tips or moulds, or their manufacture}
- NOTE
- {Housing parts for mechanical mounting or interconnection of hearing aid parts covered by [H04R 25/60](#) are to be classified in [H04R 25/60](#).}

Project: RP11766-F (H10B)

- U **H10B 20/00** **Read-only memory [ROM] devices**
- M H10B 20/20 . Programmable ROM [PROM] devices comprising field-effect components ([H10B 20/10](#) takes precedence)
- WARNING**
- ~~Group H10B 20/20 is impacted by reclassification into group H10B 20/25. Groups H10B 20/20 and H10B 20/25 should be considered in order to perform a complete search.~~
- M H10B 20/25 . . One-time programmable ROM [OTPROM] devices, e.g. using electrically-fusible links
- WARNING**
- ~~Group H10B 20/25 is incomplete pending reclassification of documents from group H10B 20/20.~~

~~Groups H10B 20/20 and H10B 20/25 should be considered in order to perform a complete search.~~

M H10B 61/00 **Magnetic memory devices, e.g. magnetoresistive RAM [MRAM] devices**

WARNING

~~Group H10B 61/00 is incomplete pending reclassification of documents from group H10N 59/00.~~

~~Groups H10N 59/00 and H10B 61/00 should be considered in order to perform a complete search.~~

M H10B 63/00 **Resistance change memory devices, e.g. resistive RAM [ReRAM] devices**

WARNING

~~Group H10B 63/00 is impacted by reclassification into groups H10B 63/10 and H10N 79/00.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M H10B 63/10 • Phase change RAM [PCRAM, PRAM] devices

WARNING

~~Group H10B 63/10 is incomplete pending reclassification of documents from group H10B 63/00.~~

~~Groups H10B 63/00 and H10B 63/10 should be considered in order to perform a complete search.~~

Project: RP11761-F (H10N)

U H10N 10/00 **Thermoelectric devices comprising a junction of dissimilar materials, i.e. devices exhibiting Seebeck or Peltier effects (integrated devices or assemblies of multiple devices [H10N 19/00](#))**

U H10N 10/80 • Constructional details

U H10N 10/85 • • Thermoelectric active materials

U H10N 10/851 • • • comprising inorganic compositions

M H10N 10/855 • • • comprising compounds containing boron, carbon, oxygen or nitrogen

WARNING

~~Group H10N 10/855 is impacted by reclassification into group H10N 10/8556.~~

~~Groups H10N 10/855 and H10N 10/8556 should be considered in order to perform a complete search.~~

M H10N 10/8556 • • • {comprising compounds containing germanium or silicon}

WARNING

~~Group H10N 10/8556 is incomplete pending reclassification of documents from group H10N 10/855.~~

~~Groups H10N 10/855 and H10N 10/8556 should be considered in order to perform a complete search.~~

M H10N 19/00 **Integrated devices, or assemblies of multiple devices, comprising at least one thermoelectric or thermomagnetic element covered by groups [H10N 10/00](#) - [H10N 15/00](#)**

WARNING

~~Group H10N 19/00 is incomplete pending reclassification of documents from groups H01L 25/04, H01L 25/065, H01L 25/0652, H01L 25/0655, H01L 25/0657, H01L 25/16, H01L 25/162, H01L 25/165, H01L 25/167 and H01L 25/18.~~

All groups listed in this Warning should be considered in order to perform a complete search.

M H10N 30/00

Piezoelectric or electrostrictive devices (integrated devices or assemblies of multiple devices [H10N 39/00](#))

WARNING

Group H10N 30/00 is impacted by reclassification into group H10N 35/00.
Groups H10N 30/00 and H10N 35/00 should be considered in order to perform a complete search.

M H10N 30/80

- Constructional details

WARNING

Group H10N 30/80 is impacted by reclassification into group H10N 35/80.
Groups H10N 30/80 and H10N 35/80 should be considered in order to perform a complete search.

M H10N 30/85

- Piezoelectric or electrostrictive active materials

WARNING

Group H10N 30/85 is impacted by reclassification into group H10N 35/85.
Groups H10N 30/85 and H10N 35/85 should be considered in order to perform a complete search.

M H10N 35/00

Magnetostrictive devices (integrated devices or assemblies of multiple devices [H10N 39/00](#))

WARNING

Group H10N 35/00 is incomplete pending reclassification of documents from group H10N 30/00.
Groups H10N 30/00 and H10N 35/00 should be considered in order to perform a complete search.

M H10N 35/80

- Constructional details

WARNING

Group H10N 35/80 is incomplete pending reclassification of documents from group H10N 30/80.
Groups H10N 30/80 and H10N 35/80 should be considered in order to perform a complete search.

M H10N 35/85

- Magnetostrictive active materials

WARNING

Group H10N 35/85 is incomplete pending reclassification of documents from group H10N 30/85.
Groups H10N 30/85 and H10N 35/85 should be considered in order to perform a complete search.

M H10N 39/00

Integrated devices, or assemblies of multiple devices, comprising at least one piezoelectric, electrostrictive or magnetostrictive element covered by groups [H10N 30/00](#) – [H10N 35/00](#)

WARNING

Group H10N 39/00 is incomplete pending reclassification of documents from groups H01L 25/04, H01L 25/065, H01L 25/0652, H01L 25/0655, H01L 25/0657, H01L 25/16, H01L 25/162, H01L 25/165, H01L 25/167 and H01L 25/18.
All groups listed in this Warning should be considered in order to perform a complete search.

M	H10N 50/00	<p>Galvanomagnetic devices (Hall-effect devices H10N 52/00; integrated devices or assemblies of multiple devices H10N 59/00)</p> <p><u>WARNING</u> Group H10N 50/00 is impacted by reclassification into group H10N 50/20. Groups H10N 50/00 and H10N 50/20 should be considered in order to perform a complete search.</p>
M	H10N 50/20	<ul style="list-style-type: none"> Spin-polarised current-controlled devices (magnetoresistive devices H10N 50/10) <p><u>WARNING</u> Group H10N 50/20 is incomplete pending reclassification of documents from group H10N 50/00. Groups H10N 50/00 and H10N 50/20 should be considered in order to perform a complete search.</p>
U	H10N 50/80	<ul style="list-style-type: none"> Constructional details
M	H10N 50/85	<ul style="list-style-type: none"> Materials of the active region <p><u>WARNING</u> Group H10N 50/85 is impacted by reclassification into group H10N 52/85. Groups H10N 50/85 and H10N 52/85 should be considered in order to perform a complete search.</p>
U	H10N 52/00	<p>Hall-effect devices (integrated devices or assemblies of multiple devices H10N 59/00)</p>
U	H10N 52/80	<ul style="list-style-type: none"> Constructional details
M	H10N 52/85	<ul style="list-style-type: none"> Materials of the active region <p><u>WARNING</u> Group H10N 52/85 is incomplete pending reclassification of documents from group H10N 50/85. Groups H10N 50/85 and H10N 52/85 should be considered in order to perform a complete search.</p>
M	H10N 59/00	<p>Integrated devices, or assemblies of multiple devices, comprising at least one galvanomagnetic or Hall-effect element covered by groups H10N 50/00 - H10N 52/00 (MRAM devices H10B 61/00)</p> <p><u>WARNING</u> Group H10N 59/00 is incomplete pending reclassification of documents from groups H01L 25/04, H01L 25/065, H01L 25/0652, H01L 25/0655, H01L 25/0657, H01L 25/16, H01L 25/162, H01L 25/165, H01L 25/167 and H01L 25/18. All groups listed in this Warning should be considered in order to perform a complete search. Group H10N 59/00 is also impacted by reclassification into group H10B 61/00. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	H10N 69/00	<p>Integrated devices, or assemblies of multiple devices, comprising at least one superconducting element covered by group H10N 60/00</p> <p><u>WARNING</u> Group H10N 69/00 is incomplete pending reclassification of documents from groups H01L 25/04, H01L 25/065, H01L 25/0652, H01L 25/0655, H01L 25/0657, H01L 25/16, H01L 25/162, H01L 25/165, H01L 25/167 and H01L 25/18.</p>

All groups listed in this Warning should be considered in order to perform a complete search.

M H10N 79/00

Integrated devices, or assemblies of multiple devices, comprising at least one solid-state element covered by group [H10N 70/00](#) (ReRAM devices [H10B 63/00](#); PCRAM devices [H10B 63/10](#))

WARNING

Group H10N 79/00 is incomplete pending reclassification of documents from groups H01L 25/04, H01L 25/065, H01L 25/0652, H01L 25/0655, H01L 25/0657, H01L 25/16, H01L 25/162, H01L 25/165, H01L 25/167, H01L 25/18 and H10B 63/00.

All groups listed in this Warning should be considered in order to perform a complete search.

M H10N 89/00

Integrated devices, or assemblies of multiple devices, comprising at least one bulk negative resistance effect element covered by group [H10N 80/00](#)

WARNING

Group H10N 89/00 is incomplete pending reclassification of documents from groups H01L 25/04, H01L 25/065, H01L 25/0652, H01L 25/0655, H01L 25/0657, H01L 25/16, H01L 25/162, H01L 25/165, H01L 25/167 and H01L 25/18.

All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP0241-F (Y10T)

U Y10T 24/00

Buckles, buttons, clasps, etc.

U Y10T 24/45

• Separable-fastener or required component thereof [e.g., projection and cavity to complete interlock]

U Y10T 24/45225

• • including member having distinct formations and mating member selectively interlocking therewith

D Y10T 24/45272
—(Frozen)

• • • Projection passes through cavity then moves toward noninserted portion of its member to complete interlock [e.g., snap hook]

WARNING

Groups Y10T 24/45272 - Y10T 24/45455 are no longer used for the classification of documents as of May 1, 2021.

The content of this group is being reclassified into groups F16B 45/00, F16B 45/002, F16B 45/005, F16B 45/008, F16B 45/012, F16B 45/015, F16B 45/02, F16B 45/021, F16B 45/022, F16B 45/023, F16B 45/024, F16B 45/026, F16B 45/027, F16B 45/028, F16B 45/029, F16B 45/031, F16B 45/032, F16B 45/033, F16B 45/034, F16B 45/035, F16B 45/036, F16B 45/037, F16B 45/04, F16B 45/043, F16B 45/045, F16B 45/047, F16B 45/049, F16B 45/051, F16B 45/053, F16B 45/055, F16B 45/057, F16B 45/059 and F16B 45/06.

All groups listed in this Warning should be considered in order to perform a complete search.

D Y10T 24/45277
—(Frozen)

• • • • Entire projection member forms loop or ring when interlocked

D Y10T 24/45283
—(Frozen)

• • • • Includes slidable gate closing entrance throat

D Y10T 24/45288
—(Frozen)

• • • • Hook type projection member

D Y10T 24/45293
—(Frozen)

• • • • • Plural hooks entering opposite sides of same cavity

D	Y10T 24/45298 —(Frozen)	. . . . . Hooks formed solely from wire
D	Y10T 24/45304 —(Frozen)	. . . . . Noninserted portion of projection member includes movably connected gate for closing access throat
D	Y10T 24/45309 —(Frozen)	. . . . . Threaded gate
D	Y10T 24/45314 —(Frozen)	. . . . . Revolvably mounted disc shaped gate
D	Y10T 24/45319 —(Frozen)	. . . . . Pivotally connected gate
D	Y10T 24/45325 —(Frozen)	. . . . . Gate swings transversely to plane of hook
D	Y10T 24/45333 —(Frozen)	. . . . . Gate also slides relative to pivot
D	Y10T 24/45335 —(Frozen)	. . . . . having means biasing gate about pivot
D	Y10T 24/45344 —(Frozen)	. . . . . and position locking means for gate
D	Y10T 24/45346 —(Frozen)	. . . . . Includes distinct biasing spring
D	Y10T 24/45351 —(Frozen)	. . . . . Coil type spring
D	Y10T 24/45356 —(Frozen)	. . . . . Coiled about pivotal axis of gate
D	Y10T 24/45361 —(Frozen)	. . . . . having position locking means for gate
D	Y10T 24/45366 —(Frozen)	. . . . . Locking means pivotally connected
D	Y10T 24/45372 —(Frozen)	. . . . . Locking means slidably mounted
D	Y10T 24/45377 —(Frozen)	. . . . . Gate closes when structure to be secured is tensioned
D	Y10T 24/45382 —(Frozen)	. . . . . Track or way guided gate
D	Y10T 24/45387 —(Frozen)	. . . . . having means biasing gate
D	Y10T 24/45393 —(Frozen)	. . . . . Guide of gate encircles shank
D	Y10T 24/45398 —(Frozen)	. . . . . Cavity in shank forms track or way
D	Y10T 24/45403 —(Frozen)	. . . . . with position locking means for gate
D	Y10T 24/45408 —(Frozen)	. . . . . Resilient, self-biased gate
D	Y10T 24/45414 —(Frozen)	. . . . . with position locking means for gate
D	Y10T 24/45419 —(Frozen)	. . . . . Gate and hook formed from plastic
D	Y10T 24/45424 —(Frozen)	. . . . . Gate and hook formed solely from wire

- D Y10T 24/45429 —(*Frozen*) Gate and hook formed from single piece of sheet metal
- D Y10T 24/45435 —(*Frozen*) Projection pivotally attached to shank or mounting structure
- D Y10T 24/4544 —(*Frozen*) Projection slidably mounted to shank or mounting structure
- D Y10T 24/45445 —(*Frozen*) Projection self-biased towards shank or mounting structure
- D Y10T 24/4545 —(*Frozen*) and formed solely from wire
- D Y10T 24/45455 —(*Frozen*) Cooperating with relatively stationary wire gate
- U Y10T 24/47 Strap-end-attaching devices
- M Y10T 24/4764 Ring-loop

WARNING

Group Y10T 24/4764 is impacted by reclassification into groups F16B 45/00, F16B 45/002, F16B 45/005, F16B 45/008, F16B 45/012, F16B 45/015, F16B 45/02, F16B 45/021, F16B 45/022, F16B 45/023, F16B 45/024, F16B 45/026, F16B 45/027, F16B 45/028, F16B 45/029, F16B 45/031, F16B 45/032, F16B 45/033, F16B 45/034, F16B 45/035, F16B 45/036, F16B 45/037, F16B 45/04, F16B 45/043, F16B 45/045, F16B 45/047, F16B 45/049, F16B 45/051, F16B 45/053, F16B 45/055, F16B 45/057, F16B 45/059 and F16B 45/06.

All groups listed in this Warning should be considered in order to perform a complete search.