

CPC COOPERATIVE PATENT CLASSIFICATION

C CHEMISTRY; METALLURGY

(NOTES omitted)

CHEMISTRY

C10 PETROLEUM, GAS OR COKE INDUSTRIES; TECHNICAL GASES CONTAINING CARBON MONOXIDE; FUELS; LUBRICANTS; PEAT

C10M LUBRICATING COMPOSITIONS (well drilling compositions [C09K 8/02](#)); USE OF CHEMICAL SUBSTANCES EITHER ALONE OR AS LUBRICATING INGREDIENTS IN A LUBRICATING COMPOSITION (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](#); 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 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.
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 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".
6. In this subclass, it is desirable to add the indexing codes of subclass [C10N](#).
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. }
9. {In this subclass, combination sets [C-Sets] are used. The detailed information about the C-Sets construction and the associated syntax rules are found in the Definitions for [C10M](#). }

C10M

C10M

(continued)

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.}

1/00 {Liquid compositions essentially based on mineral lubricating oils or fatty oils; Their use as lubricants}

(Frozen)

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.

1/08 . {with additives}

(Frozen)

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.

3/00 {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)}

(Frozen)

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.

5/00 {Solid or semi-solid compositions containing as the essential lubricating ingredient mineral lubricating oils or fatty oils and their use}

(Frozen)

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.

7/00 {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)}

(Frozen)

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.

Base-Materials

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.

101/02 . Petroleum fractions

101/025 . . {waxes}

101/04 . Fatty oil fractions

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.

103/02 . Carbon; Graphite

103/04 . Metals; Alloys

103/06 . Metal compounds

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.

- 105/02 . Well-defined hydrocarbons ([petroleum fractions C10M 101/02](#))
- 105/04 . . aliphatic
- 105/06 . . aromatic
- 105/08 . containing oxygen
- 105/10 . . having hydroxy groups bound to acyclic or cycloaliphatic carbon atoms
- 105/12 . . . monohydroxy
- 105/14 . . . polyhydroxy
- 105/16 . . having hydroxy groups bound to a carbon atom of a six-membered aromatic ring
- 105/18 . . Ethers, e.g. epoxides
- 105/20 . . Aldehydes; Ketones
- 105/22 . . Carboxylic acids or their salts
- 105/24 . . . having only one carboxyl group bound to an acyclic carbon atom, cycloaliphatic carbon atom or hydrogen
- 105/26 . . . having more than one carboxyl group bound to an acyclic carbon atom or cycloaliphatic carbon atom
- 105/28 . . . having only one carboxyl group bound to a carbon atom of a six-membered aromatic ring
- 105/30 . . . having more than one carboxyl group bound to a carbon atom of a six-membered aromatic ring
- 105/32 . . Esters
- 105/34 . . . of monocarboxylic acids
- 105/36 . . . of polycarboxylic acids
- 105/38 . . . of polyhydroxy compounds
- 105/40 . . . containing free hydroxy or carboxyl groups
- 105/42 . . . Complex esters, i.e. compounds containing at least three esterified carboxyl groups and derived from the combination of at least three different types of the following five types of compound: monohydroxy compounds, polyhydroxy compounds, monocarboxylic acids, polycarboxylic acids and hydroxy carboxylic acids
- 105/44 derived from the combination of monocarboxylic acids, dicarboxylic acids and dihydroxy compounds only and having no free hydroxy or carboxyl groups
- 105/46 derived from the combination of monohydroxy compounds, dihydroxy compounds and dicarboxylic acids only and having no free hydroxy or carboxyl groups
- 105/48 . . . of carbonic acid
- 105/50 . containing halogen
- 105/52 . . containing carbon, hydrogen and halogen only
- 105/525 . . . {[halogenated waxes](#)}
- 105/54 . . containing carbon, hydrogen, halogen and oxygen
- 105/56 . containing nitrogen

- 105/58 . . Amines, e.g. polyalkylene polyamines, quaternary amines ([polyalkylene polyamines with eleven or more monomer units C10M 107/44](#))
- 105/60 . . . having amino groups bound to an acyclic or cycloaliphatic carbon atom
- 105/62 containing hydroxy groups
- 105/64 . . . having amino groups bound to a carbon atom of a six-membered aromatic ring
- 105/66 containing hydroxy groups
- 105/68 . . Amides; Imides
- 105/70 . . as ring hetero atom
- 105/72 . containing sulfur, selenium or tellurium
- 105/74 . containing phosphorus
- 105/76 . containing silicon
- 105/78 . containing boron
- 105/80 . containing atoms of elements not provided for in groups [C10M 105/02](#) - [C10M 105/78](#)

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.

- 107/02 . Hydrocarbon polymers; Hydrocarbon polymers modified by oxidation
- 107/04 . . Polyethylene
- 107/06 . . containing propene
- 107/08 . . containing butene
- 107/10 . . containing aliphatic monomer having more than 4 carbon atoms
- 107/12 . . containing aromatic monomer, e.g. styrene
- 107/14 . . containing conjugated diene
- 107/16 . . containing non-conjugated diene
- 107/18 . . Hydrocarbon polymers modified by oxidation
- 107/20 . containing oxygen ([C10M 107/18 takes precedence](#))
- 107/22 . . Macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds
- 107/24 . . . containing monomers having an unsaturated radical bound to an alcohol, aldehyde, ketonic, ether, ketal or acetal radical
- 107/26 . . . containing monomers having an unsaturated radical bound to an acyloxy radical of a saturated carboxylic or carbonic acid
- 107/28 . . . containing monomers having an unsaturated radical bound to a carboxyl radical, e.g. acrylate
- 107/30 . . Macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds
- 107/32 . . . Condensation polymers of aldehydes or ketones; Polyesters; Polyethers
- 107/34 Polyoxyalkylenes
- 107/36 . . Polysaccharides, e.g. cellulose
- 107/38 . containing halogen
- 107/40 . containing nitrogen

- 107/42 . . Macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds
- 107/44 . . Macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds
- 107/46 . containing sulfur
- 107/48 . containing phosphorus
- 107/50 . containing silicon
- 107/52 . containing boron
- 107/54 . containing atoms of elements not provided for in groups [C10M 107/02](#) - [C10M 107/52](#)

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.

- 109/02 . Reaction products

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.

- 111/02 . at least one of them being a non-macromolecular organic compound
- 111/04 . at least one of them being a macromolecular organic compound
- 111/06 . at least one of them being a compound of the type covered by group [C10M 109/00](#)

Thickeners

NOTE

In groups [C10M 113/00](#)-[C10M 123/00](#), the following term is used with the meaning indicated:

- "thickener" is an agent which solidifies other liquid components to form a grease. Solid lubricants consisting of solid components are classified in groups [C10M 103/00](#) - [C10M 111/00](#).

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.

- 113/02 . Carbon; Graphite
- 113/04 . Sulfur
- 113/06 . Metals; Alloys
- 113/08 . Metal compounds
- 113/10 . Clays; Micas
- 113/12 . Silica
- 113/14 . Glass
- 113/16 . Inorganic material treated with organic compounds, e.g. coated

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.

- 115/02 . Hydrocarbons ([petroleum fractions C10M 121/02](#))
- 115/04 . containing oxygen
- 115/06 . containing halogen
- 115/08 . containing nitrogen
- 115/10 . containing sulfur
- 115/12 . containing phosphorus

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.

- 117/02 . having only one carboxyl group bound to an acyclic carbon atom, cycloaliphatic carbon atom or hydrogen
- 117/04 . . containing hydroxy groups
- 117/06 . having more than one carboxyl group bound to an acyclic carbon atom or cycloaliphatic carbon atom
- 117/08 . having only one carboxyl group bound to a carbon atom of a six-membered aromatic ring
- 117/10 . having more than one carboxyl group bound to a carbon atom of a six-membered aromatic ring

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.

- 119/02 . Hydrocarbon polymers; Hydrocarbon polymers modified by oxidation
- 119/04 . containing oxygen ([hydrocarbon polymers modified by oxidation C10M 119/02](#))
- 119/06 . . Macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds
- 119/08 . . . containing monomers having an unsaturated radical bound to an alcohol, aldehyde, ketonic, ether, ketal or acetal radical
- 119/10 . . . containing monomers having an unsaturated radical bound to an acyloxy radical of a saturated carboxylic or carbonic acid
- 119/12 . . . containing monomers having an unsaturated radical bound to a carboxyl radical, e.g. acrylate
- 119/14 . . Macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds
- 119/16 . . . Condensation polymers of aldehydes or ketones; Polyesters; Polyethers
- 119/18 Polyoxyalkylenes
- 119/20 . . Polysaccharides, e.g. cellulose
- 119/22 . containing halogen
- 119/24 . containing nitrogen
- 119/26 . containing sulfur
- 119/28 . containing phosphorus
- 119/30 . containing atoms of elements not provided for in groups [C10M 119/02](#) - [C10M 119/28](#)

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.

- 121/02 . Petroleum fractions, e.g. tars
- 121/04 . Reaction products

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.

- 123/02 . at least one of them being a non-macromolecular compound
- 123/04 . at least one of them being a macromolecular compound
- 123/06 . at least one of them being a compound of the type covered by group [C10M 121/00](#)

Additives**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.

- 125/02 . Carbon; Graphite
- 125/04 . Metals; Alloys
- 125/06 . Sulfur
- 125/08 . Metal carbides or hydrides
- 125/10 . Metal oxides, hydroxides, carbonates or bicarbonates
- 125/12 . Metal carbonyls
- 125/14 . Water ([aqueous lubricating compositions containing more than 10% water C10M 173/00](#))
- 125/16 . Hydrogen peroxide; Oxygenated water
- 125/18 . Compounds containing halogen
- 125/20 . Compounds containing nitrogen
- 125/22 . Compounds containing sulfur, selenium or tellurium
- 125/24 . Compounds containing phosphorus, arsenic or antimony
- 125/26 . Compounds containing silicon or boron, e.g. silica, sand
- 125/28 . . Glass
- 125/30 . . Clay

- 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.
- 127/02 . well-defined aliphatic
 - 127/04 . well-defined aromatic
 - 127/06 . Alkylated aromatic hydrocarbons
- 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.
- 129/02 . having a carbon chain of less than 30 atoms
 - 129/04 . . Hydroxy compounds
 - 129/06 . . . having hydroxy groups bound to acyclic or cycloaliphatic carbon atoms
 - 129/08 containing at least 2 hydroxy groups
 - 129/10 . . . having hydroxy groups bound to a carbon atom of a six-membered aromatic ring
 - 129/12 with condensed rings
 - 129/14 containing at least 2 hydroxy groups
 - 129/16 . . Ethers
 - 129/18 . . . Epoxides
 - 129/20 . . . Cyclic ethers having 4 or more ring atoms, e.g. furans, dioxolanes
 - 129/22 . . Peroxides; Ozonides
 - 129/24 . . Aldehydes; Ketones
 - 129/26 . . Carboxylic acids; Salts thereof
 - 129/28 . . . having carboxyl groups bound to acyclic or cycloaliphatic carbon atoms
 - 129/30 having 7 or less carbon atoms
 - 129/32 monocarboxylic
 - 129/34 polycarboxylic
 - 129/36 containing hydroxy groups
 - 129/38 having 8 or more carbon atoms
 - 129/40 monocarboxylic
 - 129/42 polycarboxylic
 - 129/44 containing hydroxy groups
 - 129/46 cycloaliphatic
 - 129/48 . . . having carboxyl groups bound to a carbon atom of a six-membered aromatic ring
 - 129/50 monocarboxylic
 - 129/52 polycarboxylic
 - 129/54 containing hydroxy groups
 - 129/56 . . . Acids of unknown or incompletely defined constitution
 - 129/58 Naphthenic acids
 - 129/60 Tall oil acids
- 129/62 Rosin acids
 - 129/64 . . . Acids obtained from polymerised unsaturated acids
 - 129/66 . . Epoxidised acids or esters
 - 129/68 . . Esters ([epoxidised C10M 129/66](#))
 - 129/70 . . . of monocarboxylic acids
 - 129/72 . . . of polycarboxylic acids
 - 129/74 . . . of polyhydroxy compounds
 - 129/76 . . . containing free hydroxy or carboxyl groups
 - 129/78 . . . Complex esters, i.e. compounds containing at least three esterified carboxyl groups and derived from the combination of at least three different types of the following five types of compound: monohydroxy compounds, polyhydroxy compounds, monocarboxylic acids, polycarboxylic acids, hydroxy carboxylic acids
 - 129/80 derived from the combination of monocarboxylic acids, dicarboxylic acids and dihydroxy compounds only and having no free hydroxy or carboxyl groups
 - 129/82 derived from the combination of monohydroxy compounds, dihydroxy compounds and dicarboxylic acids only and having no free hydroxy or carboxyl groups
 - 129/84 . . . of carbonic acid
 - 129/86 . having a carbon chain of 30 or more atoms
 - 129/88 . . Hydroxy compounds
 - 129/90 . . . having hydroxy groups bound to acyclic or cycloaliphatic carbon atoms
 - 129/91 . . . having hydroxy groups bound to a carbon atom of a six-membered aromatic ring
 - 129/92 . . Carboxylic acids
 - 129/93 . . . having carboxyl groups bound to acyclic or cycloaliphatic carbon atoms
 - 129/94 . . . having carboxyl groups bound to a carbon atom of a six-membered aromatic ring
 - 129/95 . . Esters
- 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.
- 131/02 . containing carbon, hydrogen and halogen only
 - 131/04 . . aliphatic
 - 131/06 . . aromatic
 - 131/08 . containing carbon, hydrogen, halogen and oxygen
 - 131/10 . . Alcohols; Ethers; Aldehydes; Ketones
 - 131/12 . . Acids; Salts or esters thereof
 - 131/14 . Halogenated waxes

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.

- 133/02 . having a carbon chain of less than 30 atoms
- 133/04 . . Amines, e.g. polyalkylene polyamines; Quaternary amines ([polyalkylene polyamines with eleven or more monomer units C10M 149/22](#))
- 133/06 . . . having amino groups bound to acyclic or cycloaliphatic carbon atoms
- 133/08 containing hydroxy groups
- 133/10 cycloaliphatic
- 133/12 . . . having amino groups bound to a carbon atom of a six-membered aromatic ring
- 133/14 containing hydroxy groups
- 133/16 . . Amides; Imides
- 133/18 . . . of carbonic or haloformic acids
- 133/20 Ureas; Semicarbazides; Allophanates
- 133/22 . . containing a carbon-to-nitrogen double bond, e.g. guanidines, hydrazones, semicarbazones
- 133/24 . . Nitriles
- 133/26 . . containing a nitrogen-to-nitrogen double bond
- 133/28 . . . Azo compounds
- 133/30 . . containing a nitrogen-to-oxygen bond
- 133/32 . . . containing a nitro group
- 133/34 . . . containing a nitroso group
- 133/36 . . . Hydroxylamines
- 133/38 . . Heterocyclic nitrogen compounds
- 133/40 . . . Six-membered ring containing nitrogen and carbon only
- 133/42 Triazines
- 133/44 . . . Five-membered ring containing nitrogen and carbon only
- 133/46 Imidazoles
- 133/48 . . . the ring containing both nitrogen and oxygen
- 133/50 Morpholines
- 133/52 . having a carbon chain of 30 or more atoms
- 133/54 . . Amines
- 133/56 . . Amides; Imides
- 133/58 . . Heterocyclic compounds

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.

- 135/02 . Sulfurised compounds
- 135/04 . . Hydrocarbons
- 135/06 . . Esters, e.g. fats

- 135/08 . containing a sulfur-to-oxygen bond
- 135/10 . . Sulfonic acids or derivatives thereof
- 135/12 . Thio-acids; Thiocyanates; Derivatives thereof
- 135/14 . . having a carbon-to-sulfur double bond
- 135/16 . . . thiourea type, i.e. containing the group

$$\begin{array}{c} \text{S} \\ || \\ >\text{N}-\text{C}-\text{NK} \end{array}$$
- 135/18 . . . thiocarbamic type, e.g. containing the groups

$$\begin{array}{c} \text{S} \\ || \\ >\text{N}-\text{C}-\text{S}- \end{array} \text{ or } \begin{array}{c} \text{S} \\ || \\ >\text{N}-\text{C}-\text{O}- \end{array}$$
- 135/20 . Thiols; Sulfides; Polysulfides
- 135/22 . . containing sulfur atoms bound to acyclic or cycloaliphatic carbon atoms
- 135/24 . . . containing hydroxy groups; Derivatives thereof
- 135/26 . . . containing carboxyl groups; Derivatives thereof
- 135/28 . . containing sulfur atoms bound to a carbon atom of a six-membered aromatic ring
- 135/30 . . . containing hydroxy groups; Derivatives thereof
- 135/32 . Heterocyclic sulfur, selenium or tellurium compounds
- 135/34 . . the ring containing sulfur and carbon only
- 135/36 . . the ring containing sulfur and carbon with nitrogen or oxygen

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.

- 137/02 . having no phosphorus-to-carbon bond
- 137/04 . . Phosphate esters
- 137/06 . . . Metal salts
- 137/08 . . . Ammonium or amine salts
- 137/10 . . . Thio derivatives
- 137/105 {not containing metal}
- 137/12 . having a phosphorus-to-carbon bond
- 137/14 . . containing sulfur
- 137/16 . having a phosphorus-to-nitrogen bond

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.

- 139/02 . Esters of silicon acids
- 139/04 . having a silicon-to-carbon bond, e.g. silanes

- 139/06 . having a metal-to-carbon bond ([metal complexes of unknown constitution C10M 159/18](#))
- 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.
- 141/02 . at least one of them being an organic oxygen-containing compound
- 141/04 . at least one of them being an organic halogen-containing compound
- 141/06 . at least one of them being an organic nitrogen-containing compound
- 141/08 . at least one of them being an organic sulfur-, selenium- or tellurium-containing compound
- 141/10 . at least one of them being an organic phosphorus-containing compound
- 141/12 . at least one of them being an organic compound containing atoms of elements not provided for in groups [C10M 141/02](#) - [C10M 141/10](#)
- 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.
- 143/02 . Polyethylene
- 143/04 . containing propene
- 143/06 . containing butene
- 143/08 . containing aliphatic monomer having more than 4 carbon atoms
- 143/10 . containing aromatic monomer, e.g. styrene
- 143/12 . containing conjugated diene
- 143/14 . containing non-conjugated diene
- 143/16 . containing cycloaliphatic monomer
- 143/18 . Oxidised hydrocarbons, i.e. oxidised subsequent to macromolecular formation
- 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.
- 145/02 . Macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds
- 145/04 . . containing monomers having an unsaturated radical bound to an alcohol, aldehyde, ketonic, ether, ketal or acetal radical
- 145/06 . . containing monomers having an unsaturated radical bound to an acyloxy radical of a saturated carboxylic or carbonic acid
- 145/08 . . . Vinyl esters of a saturated carboxylic or carbonic acid
- 145/10 . . containing monomers having an unsaturated radical bound to a carboxyl radical, e.g. acrylate
- 145/12 . . . monocarboxylic
- 145/14 Acrylate; Methacrylate
- 145/16 . . . polycarboxylic
- 145/18 . Macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds
- 145/20 . . Condensation polymers of aldehydes or ketones
- 145/22 . . Polyesters
- 145/24 . . Polyethers
- 145/26 . . . Polyoxyalkylenes
- 145/28 of alkylene oxides containing 2 carbon atoms only
- 145/30 of alkylene oxides containing 3 carbon atoms only
- 145/32 of alkylene oxides containing 4 or more carbon atoms
- 145/34 of two or more specified different types
- 145/36 etherified
- 145/38 esterified
- 145/40 . Polysaccharides, e.g. cellulose
- 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.
- 147/02 . Monomer containing carbon, hydrogen and halogen only
- 147/04 . Monomer containing carbon, hydrogen, halogen and oxygen

- 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.
- 149/02 . Macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds
- 149/04 . . containing monomers having an unsaturated radical bound to an amino group
- 149/06 . . containing monomers having an unsaturated radical bound to an amido or imido group
- 149/08 . . containing monomers having an unsaturated radical bound to a nitrile group
- 149/10 . . containing monomers having an unsaturated radical bound to a nitrogen-containing hetero ring
- 149/12 . Macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds
- 149/14 . . a condensation reaction being involved
- 149/16 . . . between the nitrogen-containing monomer and an aldehyde or ketone
- 149/18 . . . Polyamides
- 149/20 . . . Polyureas
- 149/22 . . . Polyamines
- 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.
- 151/02 . Macromolecular compounds obtained by reactions involving only carbon-to-carbon unsaturated bonds
- 151/04 . Macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds
- 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.
- 153/02 . Macromolecular compounds obtained by reactions involving only carbon-to-carbon unsaturated bonds
- 153/04 . Macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds
- 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.
- 155/02 . Monomer containing silicon
- 155/04 . Monomer containing boron
- 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.
- 157/02 . at least one of them being a halogen-containing compound
- 157/04 . at least one of them being a nitrogen-containing compound
- 157/06 . at least one of them being a sulfur-, selenium- or tellurium-containing compound
- 157/08 . at least one of them being a phosphorus-containing compound
- 157/10 . at least one of them being a compound containing atoms of elements not provided for in groups [C10M 157/02](#) - [C10M 157/08](#)
- 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.
- 159/005 . {Macromolecular compounds, e.g. macromolecular compounds composed of alternatively specified monomers not covered by the same main group}
- 159/02 . Natural products
- 159/04 . . Petroleum fractions, e.g. tars, solvents

- 159/06 . . Waxes, e.g. ozocerite, ceresine, petrolatum, slack-wax
- 159/08 . . Fatty oils
- 159/10 . . Rubber
- 159/12 . Reaction products
- 159/123 . . {obtained by phosphorus or phosphorus-containing compounds, e.g. P x S x with organic compounds}
- 159/126 . . . {with hydrocarbon polymers}
- 159/14 . . obtained by Friedel-Crafts condensation
- 159/16 . . obtained by Mannich reactions
- 159/18 . . Complexes with metals
- 159/20 . . Reaction mixtures having an excess of neutralising base, e.g. so-called overbasic or highly basic products
- 159/22 . . . containing phenol radicals
- 159/24 . . . containing sulfonic radicals

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.

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.

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.

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.

Mixtures of base-materials, thickeners and additives

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.

- 169/02 . Mixtures of base-materials and thickeners
- 169/04 . Mixtures of base-materials and additives
- 169/041 . . {the additives being macromolecular compounds only}
- 169/042 . . {the additives being compounds of unknown or incompletely defined constitution only}
- 169/044 . . {the additives being a mixture of non-macromolecular and macromolecular compounds}
- 169/045 . . {the additives being a mixture of compounds of unknown or incompletely defined constitution and non-macromolecular compounds}
- 169/047 . . {the additives being a mixture of compounds of unknown or incompletely defined constitution and macromolecular compounds}
- 169/048 . . {the additives being a mixture of compounds of unknown or incompletely defined constitution, non-macromolecular and macromolecular compounds}
- 169/06 . Mixtures of thickeners and additives

Compositions characterised by physical properties**NOTE**

Attention is drawn to Note (5) following the title of the subclass.

- 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.

- 171/001 . {Electrorheological fluids; smart fluids}
- 171/002 . {Traction fluids}
- 171/004 . {Foam inhibited lubricant compositions}
- 171/005 . {Volatile oil compositions; Vaporous lubricants}
- 171/007 . {Coloured or dyes-containing lubricant compositions}
- 171/008 . {Lubricant compositions compatible with refrigerants}
- 171/02 . Specified values of viscosity or viscosity index
- 171/04 . Specified molecular weight or molecular weight distribution
- 171/06 . Particles of special shape or size

Aqueous lubricating compositions**NOTE**

Attention is drawn to Note (5) following the title of the subclass.

- 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.

- 173/02 . not containing mineral or fatty oils
- 173/025 . . {for lubricating conveyor belts}

Working-up**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.

- 175/0008 . {with the use of adsorbentia}
- 175/0016 . {with the use of chemical agents}
- 175/0025 . {by thermal processes}
- 175/0033 . . {using distillation processes; devices therefor}
- 175/0041 . . {by hydrogenation processes}
- 175/005 . {using extraction processes; apparatus therefor}
- 175/0058 . {by filtration and centrifugation processes; apparatus therefor}
- 175/0066 . {Use of electrical and magnetical means}
- 175/0075 . {synthetic oil based}
- 175/0083 . {Lubricating greases}
- 175/0091 . {Treatment of oils in a continuous lubricating circuit (e.g. motor oil system)}
- 175/02 . mineral-oil based
- 175/04 . aqueous emulsion based
- 175/06 . by ultrafiltration or osmosis

Preparation or after-treatment**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.

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.

- 2201/003 . used as base material
- 2201/006 . used as thickening agents
- 2201/02 . Water
- 2201/022 . . Hydrogen peroxide; Oxygenated water
- 2201/04 . Elements

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- 2201/0403 . . . used as base material
- 2201/0406 . . . used as thickening agents
- 2201/041 . . . Carbon; Graphite; Carbon black
- 2201/0413 used as base material
- 2201/0416 used as thickening agents
- 2201/042 halogenated, i.e. graphite fluoride
- 2201/0423 used as base material
- 2201/0426 used as thickening agents
- 2201/043 . . . Sulfur; Selenium; Tellurium
- 2201/0433 used as base material
- 2201/0436 used as thickening agents
- 2201/05 . . . Metals; Alloys
- 2201/053 used as base material
- 2201/056 used as thickening agents
- 2201/06 . . . Metal compounds
- 2201/0603 used as base material
- 2201/0606 used as thickening agents
- 2201/061 . . . Carbides; Hydrides; Nitrides
- 2201/0613 used as base material
- 2201/0616 used as thickening agents
- 2201/062 . . . Oxides; Hydroxides; Carbonates or bicarbonates
- 2201/0623 used as base material
- 2201/0626 used as thickening agents
- 2201/063 . . . Peroxides
- 2201/064 . . . Carbonyls
- 2201/065 . . . Sulfides; Selenides; Tellurides
- 2201/0653 used as base material
- 2201/0656 used as thickening agents
- 2201/066 Molybdenum sulfide
- 2201/0663 used as base material
- 2201/0666 used as thickening agents
- 2201/08 . . . Inorganic acids or salts thereof
- 2201/0803 used as base material
- 2201/0806 used as thickening agent
- 2201/081 . . . containing halogen
- 2201/082 . . . containing nitrogen
- 2201/083 nitrites
- 2201/084 . . . containing sulfur, selenium or tellurium
- 2201/085 . . . Phosphorus oxides, acids or salts
- 2201/0853 used as base material
- 2201/0856 used as thickening agent
- 2201/086 . . . Chromium oxides, acids or salts
- 2201/0863 used as base material
- 2201/0866 used as thickening agent
- 2201/087 . . . Boron oxides, acids or salts
- 2201/0873 used as base material
- 2201/0876 used as thickening agent
- 2201/10 . . . Compounds containing silicon
- 2201/1006 used as base material
- 2201/1013 used as thickening agents
- 2201/102 . . . Silicates
- 2201/1023 used as base material
- 2201/1026 used as thickening agents
- 2201/103 Clays; Mica; Zeolites
- 2201/1033 used as base material
- 2201/1036 used as thickening agents
- 2201/105 . . . Silica
- 2201/1053 used as base material
- 2201/1056 used as thickening agents
- 2201/12 . . . Glass
- 2201/123 used as base material
- 2201/126 used as thickening agents
- 2201/14 . . . inorganic compounds surface treated with organic compounds
- 2201/145 used as thickening agents
- 2201/16 . . . Carbon dioxide
- 2201/18 . . . Ammonia
- 2203/00** **Organic non-macromolecular hydrocarbon compounds and hydrocarbon fractions as ingredients in lubricant compositions**
- 2203/003 . . . used as base material
- 2203/006 . . . used as thickening agents
- 2203/02 . . . Well-defined aliphatic compounds
- 2203/0206 used as base material
- 2203/0213 used as thickening agents
- 2203/022 saturated
- 2203/024 unsaturated
- 2203/04 . . . Well-defined cycloaliphatic compounds
- 2203/045 used as base material
- 2203/06 . . . Well-defined aromatic compounds
- 2203/065 used as base material
- 2203/10 . . . Petroleum or coal fractions, e.g. tars, solvents, bitumen
- 2203/1006 used as base material
- 2203/1013 used as thickening agents
- 2203/102 Aliphatic fractions
- 2203/1025 used as base material
- 2203/104 Aromatic fractions
- 2203/1045 used as base material
- 2203/106 Naphthenic fractions
- 2203/1065 used as base material
- 2203/108 . . . Residual fractions, e.g. bright stocks
- 2203/1085 used as base material
- 2205/00** **Organic macromolecular hydrocarbon compounds or fractions, whether or not modified by oxidation as ingredients in lubricant compositions**
- NOTE**
- 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.
- 2205/003 . . . used as base material
- 2205/006 . . . used as thickening agents
- 2205/02 . . . containing acyclic monomers
- 2205/0206 used as base material
- 2205/0213 used as thickening agents
- 2205/022 . . . Ethene
- 2205/0225 used as base material
- 2205/024 . . . Propene
- 2205/0245 used as base material
- 2205/026 . . . Butene
- 2205/0265 used as base material
- 2205/028 . . . containing aliphatic monomers having more than four carbon atoms
- 2205/0285 used as base material
- 2205/04 . . . containing aromatic monomers, e.g. styrene
- 2205/043 used as base material
- 2205/046 used as thickening agents
- 2205/06 . . . containing conjugated dienes
- 2205/063 used as base material
- 2205/066 used as thickening agents

2205/08	. containing non-conjugated dienes
2205/083	. . used as base material
2205/086	. . used as thickening agents
2205/10	. containing cycloaliphatic monomers
2205/103	. . used as base material
2205/106	. . use as thickening agent
2205/12	. Oxidised hydrocarbons, i.e. oxidised subsequent to macromolecular formation
2205/123	. . used as base material
2205/126	. . used as thickening agents
2205/14	. Synthetic waxes, e.g. polythene waxes
2205/143	. . used as base material
2205/146	. . used as thickening agents
2205/16	. Paraffin waxes; Petrolatum, e.g. slack wax
2205/163	. . used as base material
2205/166	. . used as thickening agent
2205/17	. Fisher Tropsch reaction products
2205/173	. . used as base material
2205/176	. . used as thickening agent
2205/18	. Natural waxes, e.g. ceresin, ozocerite, bees wax, carnauba; Degras
2205/183	. . used as base material
2205/186	. . used as thickening agents
2205/20	. Natural rubber; Natural resins
2205/203	. . used as base material
2205/206	. . used as thickening agents
2205/22	. Alkylation reaction products with aromatic type compounds, e.g. Friedel-crafts
2205/223	. . used as base material
2205/226	. . use as thickening agent
2207/00	Organic non-macromolecular hydrocarbon compounds containing hydrogen, carbon and oxygen as ingredients in lubricant compositions
	NOTE
	In this group compounds, (e.g. phenols, succinic acid) substituted by an alkyl group derived from a polymerised olefin are not considered as macromolecular compounds
2207/003	. used as base material
2207/006	. used as thickening agents
2207/02	. Hydroxy compounds
2207/0203	. . used as base material
2207/0206	. . used as thickening agents
2207/021	. . having hydroxy groups bound to acyclic or cycloaliphatic carbon atoms
2207/0215	. . . used as base material
2207/022	. . . containing at least two hydroxy groups
2207/0225	. . . . used as base material
2207/023	. . having hydroxy groups bound to carbon atoms of six-membered aromatic rings
2207/0235	. . . used as base material
2207/024	. . . having at least two phenol groups but no condensed ring
2207/025	. . . with condensed rings
2207/026	. . . with tertiary alkyl groups
2207/027	. . . Neutral salts thereof
2207/028	. . . Overbased salts thereof
2207/0285	. . . . used as base material
2207/04	. Ethers; Acetals; Ortho-esters; Ortho-carbonates
2207/0406	. . used as base material
2207/0413	. . used as thickening agent
2207/042	. . Epoxides
2207/044	. . Cyclic ethers having four or more ring atoms, e.g. furans, dioxolanes
2207/046	. . Hydroxy ethers
2207/06	. Peroxides; Ozonides
2207/08	. Aldehydes; Ketones
2207/085	. . used as base material
2207/09	. Metal enolates, i.e. keto-enol metal complexes
2207/095	. . used as thickening agent
2207/10	. Carboxylic acids; Neutral salts thereof
2207/103	. . used as base material
2207/106	. . used as thickening agents
2207/12	. . having carboxyl groups bound to acyclic or cycloaliphatic carbon atoms
2207/1203	. . . used as base material
2207/1206	. . . used as thickening agents
2207/121	. . . having hydrocarbon chains of seven or less carbon atoms
2207/1213	. . . . used as base material
2207/1216	. . . . used as thickening agent
2207/122	. . . . monocarboxylic
2207/1225	. . . . used as thickening agent
2207/123	. . . . polycarboxylic
2207/1233	. . . . used as base material
2207/1236	. . . . used as thickening agent
2207/124	. . . . containing hydroxy groups; Ethers thereof
2207/1245	. . . . . used as thickening agent
2207/125	. . . having hydrocarbon chains of eight up to twenty-nine carbon atoms, i.e. fatty acids
2207/1253	. . . . used as base material
2207/1256	. . . . used as thickening agent
2207/126	. . . . monocarboxylic
2207/1265	. . . . . used as thickening agent
2207/127	. . . . polycarboxylic
2207/1273	. . . . . used as base material
2207/1276	. . . . . used as thickening agent
2207/128	. . . . containing hydroxy groups; Ethers thereof
2207/1285	. . . . . used as thickening agents
2207/129	. . . having hydrocarbon chains of thirty or more carbon atoms
2207/1293	. . . . used as base material
2207/1296	. . . . used as thickening agents
2207/14	. having carboxyl groups bound to carbon atoms of six-membered aromatic rings
2207/1403	. . . used as base material
2207/1406	. . . used as thickening agents
2207/141	. . . monocarboxylic
2207/1415	. . . . used as thickening agent
2207/142	. . . polycarboxylic
2207/1423	. . . . used as base material
2207/1426	. . . . used as thickening agent
2207/144	. . . containing hydroxy groups
2207/1443	. . . . used as base material
2207/1446	. . . . used as thickening agent
2207/146	. . . having carboxyl groups bound to carbon atoms of six-membered aromatic rings having a hydrocarbon substituent of thirty or more carbon atoms
2207/1465	. . . . used as base material
2207/16	. . Naphthenic acids
2207/163	. . . used as base material

2207/166	. . . used as thickening agents	2207/34	. . Esters having a hydrocarbon substituent of thirty or more carbon atoms, e.g. substituted succinic acid derivatives
2207/18	. . Tall oil acids	2207/345	. . . used as base material
2207/183	. . . used as base material	2207/40	. Fatty vegetable or animal oils
2207/186	. . . used as thickening agents	2207/401	. . used as base material
2207/20	. . Rosin acids	2207/402	. . Castor oils
2207/203	. . . used as base material	2207/404	. . obtained from genetically modified species
2207/206	. . . used as thickening agents	2207/4045	. . . used as base material
2207/22	. . Acids obtained from polymerised unsaturated acids	2209/00	Organic macromolecular compounds containing oxygen as ingredients in lubricant compositions
2207/223	. . . used as base material		NOTE
2207/226	. . . used as thickening agents		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.
2207/24	. . Epoxidised acids; Ester derivatives thereof	2209/003	. used as base material
2207/243	. . . used as base material	2209/006	. used as thickening agents
2207/246	. . . used as thickening agents	2209/02	. Macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds
2207/26	. Overbased carboxylic acid salts	2209/023	. . used as base material
2207/2606	. . used as base material	2209/026	. . used as thickening agents
2207/2613	. . used as thickening agents	2209/04	. . containing monomers having an unsaturated radical bound to an alcohol or ester thereof; bound to an aldehyde, ketonic, ether, ketal or acetal radical
2207/262	. . derived from hydroxy substituted aromatic acids, e.g. salicylates	2209/043	. . . used as base material
2207/2623	. . . used as base material	2209/046	. . . used as thickening agents
2207/2626	. . . used as thickening agents	2209/06	. . containing monomers having an unsaturated radical bound to an acyloxy radical of saturated carboxylic or carbonic acid
2207/28	. Esters	2209/0606	. . . used as base material
2207/2805	. . used as base material	2209/0613	. . . used as thickening agents
2207/281	. . of (cyclo)aliphatic monocarboxylic acids	2209/062	. . . Vinyl esters of saturated carboxylic or carbonic acids, e.g. vinyl acetate
2207/2815	. . . used as base material	2209/0625	. . . . used as base material
2207/282	. . of (cyclo)aliphatic polycarboxylic acids	2209/08	. . containing monomers having an unsaturated radical bound to a carboxyl radical, e.g. acrylate type
2207/2825	. . . used as base material	2209/0806	. . . used as base material
2207/283	. . of polyhydroxy compounds	2209/0813	. . . used as thickening agents
2207/2835	. . . used as base material	2209/082	. . . monocarboxylic
2207/284	. . of aromatic monocarboxylic acids	2209/084	. . . Acrylate; Methacrylate
2207/2845	. . . used as base material	2209/0845	. . . . used as base material
2207/285	. . of aromatic polycarboxylic acids	2209/086	. . . polycarboxylic, e.g. maleic acid
2207/2855	. . . used as base material	2209/0863	. . . . used as base material
2207/286	. . of polymerised unsaturated acids	2209/0866	. . . . used as thickening agents
2207/2865	. . . used as base material	2209/10	. Macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds
2207/287	. . Partial esters	2209/1003	. . used as base material
2207/2875	. . . used as base material	2209/1006	. . used as thickening agents
2207/288	. . . containing free carboxyl groups	2209/101	. . Condensation polymers of aldehydes or ketones and phenols, e.g. Also polyoxyalkylene ether derivatives thereof
2207/2885	. . . . used as base material	2209/1013	. . . used as base material
2207/289	. . . containing free hydroxy groups	2209/1016	. . . used as thickening agents
2207/2895	. . . . used as base material	2209/102	. . Polyesters
2207/30	. . Complex esters, i.e. compounds containing at least three esterified carboxyl groups and derived from the combination of at least three different types of the following five types of compounds: monohydroxyl compounds, polyhydroxy compounds, monocarboxylic acids, polycarboxylic acids or hydroxy carboxylic acids	2209/1023	. . . used as base material
2207/301	. . . used as base material	2209/1026	. . . use as thickening agent
2207/302	. . . derived from the combination of monocarboxylic acids, dicarboxylic acids and dihydroxy compounds only and having no free hydroxy or carboxyl groups		
2207/3025	. . . . used as base material		
2207/304	. . . derived from the combination of monohydroxy compounds, dihydroxy compounds and dicarboxylic acids only and having no free hydroxy or carboxyl groups		
2207/3045 used as base material		
2207/32	. . of carbonic acid		
2207/325	. . . used as base material		

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- 2209/103 . . Polyethers, i.e. containing di- or higher polyoxyalkylene groups
- 2209/1033 . . . used as base material
- 2209/1036 . . . used as thickening agents
- 2209/104 . . . of alkylene oxides containing two carbon atoms only
- 2209/1045 used as base material
- 2209/105 . . . of alkylene oxides containing three carbon atoms only
- 2209/1055 used as base material
- 2209/106 . . . of alkylene oxides containing four carbon atoms only
- 2209/1065 used as base material
- 2209/107 . . . of two or more specified different alkylene oxides covered by groups [C10M 2209/104](#) - [C10M 2209/106](#)
- 2209/1075 used as base material
- 2209/108 . . . etherified
- 2209/1085 used as base material
- 2209/109 . . . esterified
- 2209/1095 used as base material
- 2209/11 . . Complex polyesters
- 2209/1105 . . . used as base material
- 2209/111 . . . having dicarboxylic acid centres
- 2209/1115 used as base material
- 2209/112 . . . having dihydric acid centres
- 2209/1125 used as base material
- 2209/12 . Polysaccharides, e.g. cellulose, biopolymers
- 2209/123 . . used as base material
- 2209/126 . . used as thickening agents
- 2211/00 Organic non-macromolecular compounds containing halogen as ingredients in lubricant compositions**
- 2211/003 . used as base material
- 2211/006 . used as thickening agents
- 2211/02 . containing carbon, hydrogen and halogen only
- 2211/0206 . . used as base material
- 2211/0213 . . used as thickening agents
- 2211/022 . . aliphatic
- 2211/0225 . . . used as base material
- 2211/024 . . aromatic
- 2211/0245 . . . used as base material
- 2211/04 . containing carbon, hydrogen, halogen, and oxygen
- 2211/0406 . . used as base material
- 2211/0413 . . used as thickening agents
- 2211/042 . . Alcohols; Ethers; Aldehydes; Ketones
- 2211/0425 . . . used as base material
- 2211/044 . . Acids; Salts or esters thereof
- 2211/0445 . . . used as base material
- 2211/06 . Perfluorinated compounds
- 2211/063 . . used as base material
- 2211/066 . . used as thickening agents
- 2211/08 . Halogenated waxes
- 2211/083 . . used as base material
- 2211/086 . . used as thickening agents
- 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.
- 2213/003 . used as base material
- 2213/006 . used as thickening agents
- 2213/02 . obtained from monomers containing carbon, hydrogen and halogen only
- 2213/023 . . used as base material
- 2213/026 . . used as thickening agents
- 2213/04 . obtained from monomers containing carbon, hydrogen, halogen and oxygen
- 2213/043 . . used as base material
- 2213/046 . . used as thickening agents
- 2213/06 . Perfluoro polymers
- 2213/0606 . . used as base material
- 2213/0613 . . used as thickening agents
- 2213/062 . . Polytetrafluoroethylene [PTFE]
- 2213/0623 . . . used as base material
- 2213/0626 . . . used as thickening agents
- 2215/00 Organic non-macromolecular compounds containing nitrogen as ingredients in lubricant Compositions**
- 2215/003 . used as base material
- 2215/006 . used as thickening agents
- 2215/02 . Amines, e.g. polyalkylene polyamines; Quaternary amines
- 2215/023 . . used as base material
- 2215/026 . . used as thickening agents
- 2215/04 . . having amino groups bound to acyclic or cycloaliphatic carbon atoms
- 2215/041 . . . used as base material
- 2215/042 . . . containing hydroxy groups; Alkoxylated derivatives thereof
- 2215/0425 used as base material
- 2215/044 . . . having cycloaliphatic groups
- 2215/06 . . having amino groups bound to carbon atoms of six-membered aromatic rings
- 2215/061 . . . used as base material
- 2215/062 . . . containing hydroxy groups bound to the aromatic ring
- 2215/064 . . . Di- and triaryl amines
- 2215/065 Phenyl-Naphthyl amines
- 2215/066 . . . Arylene diamines
- 2215/067 . . . Polyaryl amine alkanes
- 2215/068 . . . having amino groups bound to polycyclic aromatic ring systems, i.e. systems with three or more condensed rings
- 2215/08 . Amides [having hydrocarbon substituents containing less than thirty carbon atoms]
- 2215/0806 . . used as base material
- 2215/0813 . . used as thickening agents
- 2215/082 . . containing hydroxyl groups; Alkoxylated derivatives
- 2215/086 . Imides [having hydrocarbon substituents containing less than thirty carbon atoms]
- 2215/0865 . . used as base material
- 2215/10 . Amides of carbonic or haloformic acids
- 2215/1006 . . used as base material
- 2215/1013 . . used as thickening agents
- 2215/102 . . Ureas; Semicarbazides; Allophanates
- 2215/1023 . . . used as base material
- 2215/1026 . . . used as thickening material

- 2215/12 . Partial amides of polycarboxylic acids
- 2215/121 . . used as thickening agents
- 2215/122 . . Phtalamic acid
- 2215/14 . Containing carbon-to-nitrogen double bounds, e.g. guanidines, hydrazones, semicarbazones
- 2215/16 . Nitriles
- 2215/18 . Containing nitrogen-to-nitrogen bonds, e.g. hydrazine
- 2215/182 . . Azo compounds
- 2215/20 . Containing nitrogen-to-oxygen bonds
- 2215/202 . . containing nitro groups
- 2215/204 . . containing nitroso groups
- 2215/206 . . hydroxylamines
- 2215/22 . Heterocyclic nitrogen compounds
- 2215/2203 . . used as base material
- 2215/2206 . . used as thickening agents
- 2215/221 . . Six-membered rings containing nitrogen and carbon only
- 2215/222 . . . Triazines
- 2215/2225 used as base material
- 2215/223 . . Five-membered rings containing nitrogen and carbon only
- 2215/224 . . . Imidazoles
- 2215/2245 used as base material
- 2215/225 . . the rings containing both nitrogen and oxygen
- 2215/226 . . . Morpholines
- 2215/2265 used as base material
- 2215/227 . . . Phthalocyanines
- 2215/2275 used as thickening agents
- 2215/24 . having hydrocarbon substituents containing thirty or more carbon atoms, e.g. nitrogen derivatives of substituted succinic acid
- 2215/245 . . used as base material
- 2215/26 . . Amines
- 2215/265 . . . used as base material
- 2215/28 . . Amides; Imides
- 2215/285 . . . used as base material
- 2215/30 . . Heterocyclic compounds
- 2215/305 . . . used as base material
- 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.
- 2217/003 . used as base material
- 2217/006 . used as thickening agents
- 2217/02 . Macromolecular compounds obtained from nitrogen containing monomers by reactions only involving carbon-to-carbon unsaturated bonds
- 2217/0206 . . used as base material
- 2217/0213 . . used as thickening agents
- 2217/022 . . containing monomers having an unsaturated radical bound to an amino group
- 2217/0225 . . . used as base material
- 2217/023 . . . the amino group containing an ester bond
- 2217/0235 used as base material
- 2217/024 . . containing monomers having an unsaturated radical bound to an amido or imido group
- 2217/0245 . . . used as base material
- 2217/026 . . containing monomers having an unsaturated radical bound to a nitrile group
- 2217/0265 . . . used as base material
- 2217/028 . . containing monomers having an unsaturated radical bound to a nitrogen-containing hetero ring
- 2217/0285 . . . used as base material
- 2217/04 . Macromolecular compounds from nitrogen-containing monomers obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds
- 2217/0403 . . used as base material
- 2217/0406 . . used as thickening agents
- 2217/041 . . involving a condensation reaction
- 2217/0415 . . . used as base material
- 2217/042 . . between the nitrogen-containing monomer and an aldehyde or ketone
- 2217/0425 . . . used as base material
- 2217/043 . . Mannich bases
- 2217/0435 . . . used as base material
- 2217/044 . . Polyamides
- 2217/0443 . . . used as base material
- 2217/0446 . . . used as thickening agents
- 2217/045 . . Polyureas; Polyurethanes
- 2217/0453 . . . used as base material
- 2217/0456 . . . used as thickening agents
- 2217/046 . . Polyamines, i.e. macromoleculars obtained by condensation of more than eleven amine monomers
- 2217/0465 . . . used as base material
- 2217/06 . Macromolecular compounds obtained by functionalisation of polymers with a nitrogen containing compound
- 2217/065 . . used as base material
- 2219/00 Organic non-macromolecular compounds containing sulfur, selenium or tellurium as ingredients in lubricant compositions**
- 2219/003 . used as base material
- 2219/006 . used as thickening agents
- 2219/02 . Sulfur-containing compounds obtained by sulfuration with sulfur or sulfur-containing compounds
- 2219/021 . . used as base material
- 2219/022 . . of hydrocarbons, e.g. olefines
- 2219/024 . . of esters, e.g. fats
- 2219/04 . containing sulfur-to-oxygen bonds, i.e. sulfones, sulfoxides
- 2219/0406 . . used as base material
- 2219/0413 . . use as thickening agent
- 2219/042 . . Sulfate esters
- 2219/044 . . Sulfonic acids, Derivatives thereof, e.g. neutral salts
- 2219/0445 . . . used as thickening agents
- 2219/046 . . Overbased sulfonic acid salts
- 2219/0463 . . . used as base material
- 2219/0466 . . . used as thickening agents
- 2219/06 . Thio-acids; Thiocyanates; Derivatives thereof
- 2219/061 . . used as base material
- 2219/062 . . having carbon-to-sulfur double bonds
- 2219/064 . . . Thiourea type compounds
- 2219/066 . . . Thiocarbamic type compounds
- 2219/068 Thiocarbamate metal salts
- 2219/08 . Thiols; Sulfides; Polysulfides; Mercaptals

- 2219/081 . . . used as base material
- 2219/082 . . . containing sulfur atoms bound to acyclic or cycloaliphatic carbon atoms
- 2219/083 . . . Dibenzyl sulfide
- 2219/084 . . . containing hydroxy groups; Derivatives thereof
- 2219/085 . . . containing carboxyl groups; Derivatives thereof
- 2219/086 . . . containing sulfur atoms bound to carbon atoms of six-membered aromatic rings
- 2219/087 . . . containing hydroxy groups; Derivatives thereof, e.g. sulfurised phenols
- 2219/088 Neutral salts
- 2219/089 Overbased salts
- 2219/09 . Heterocyclic compounds containing no sulfur, selenium or tellurium compounds in the ring
- 2219/10 . Heterocyclic compounds containing sulfur, selenium or tellurium compounds in the ring
- 2219/101 . . . used as base material
- 2219/102 . . . containing sulfur and carbon only in the ring
- 2219/104 . . . containing sulfur and carbon with nitrogen or oxygen in the ring
- 2219/106 . . . Thiadiazoles
- 2219/108 . . . Phenothiazine
- 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.
- 2221/003 . . . used as base material
- 2221/006 . . . used as thickening agents
- 2221/02 . . . Macromolecular compounds obtained by reactions of monomers involving only carbon-to-carbon unsaturated bonds
- 2221/025 . . . used as base material
- 2221/04 . . . Macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds
- 2221/0405 . . . used as base material
- 2221/041 . . . involving sulfurisation of macromolecular compounds, e.g. polyolefins
- 2221/043 . . . Polyoxyalkylene ethers with a thioether group
- 2223/00 Organic non-macromolecular compounds containing phosphorus as ingredients in lubricant compositions**
- 2223/003 . . . used as base material
- 2223/006 . . . used as thickening agents
- 2223/02 . . . having no phosphorus-to-carbon bonds
- 2223/023 . . . used as base material
- 2223/026 . . . used as thickening agents
- 2223/04 . . . Phosphate esters
- 2223/0405 used as base material
- 2223/041 Triaryl phosphates
- 2223/0415 used as base material
- 2223/042 Metal salts thereof
- 2223/043 Ammonium or amine salts thereof
- 2223/045 Metal containing thio derivatives
- 2223/047 Thioderivatives not containing metallic elements
- 2223/049 . . . Phosphite
- 2223/0495 used as base material
- 2223/06 . . . having phosphorus-to-carbon bonds
- 2223/0603 . . . used as base material
- 2223/0606 . . . used as thickening agents
- 2223/061 . . . Metal salts
- 2223/063 . . . Ammonium or amine salts
- 2223/065 . . . containing sulfur
- 2223/0655 used as thickening agents
- 2223/08 . . . having phosphorus-to-nitrogen bonds
- 2223/083 . . . used as base material
- 2223/086 . . . used as thickening agents
- 2223/10 . . . Phosphatides, e.g. lecithin, cephalin
- 2223/103 . . . used as base material
- 2223/106 . . . used as thickening agents
- 2223/12 . . . obtained by phosphorisation of organic compounds, e.g. with PxSy, PxSyHal or PxOy
- 2223/121 . . . of alcohols or phenols
- 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.
- 2225/003 . . . used as base material
- 2225/006 . . . used as thickening agents
- 2225/02 . . . Macromolecular compounds from phosphorus-containing monomers, obtained by reactions involving only carbon-to-carbon unsaturated bonds
- 2225/025 . . . used as base material
- 2225/04 . . . obtained by phosphorisation of macromolecular compounds not containing phosphorus in the monomers
- 2225/0405 . . . used as base material
- 2225/041 . . . Hydrocarbon polymers
- 2227/00 Organic non-macromolecular compounds containing atoms of elements not provided for in groups [C10M 2203/00](#), [C10M 2207/00](#), [C10M 2211/00](#), [C10M 2215/00](#), [C10M 2219/00](#) or [C10M 2223/00](#) as ingredients in lubricant compositions**
- 2227/003 . . . used as base material
- 2227/006 . . . used as thickening agents
- 2227/02 . . . Esters of silicic acids
- 2227/025 . . . used as base material
- 2227/04 . . . having a silicon-to-carbon bond, e.g. organo-silanes
- 2227/045 . . . used as base material
- 2227/06 . . . Organic compounds derived from inorganic acids or metal salts
- 2227/0605 . . . used as base material
- 2227/061 . . . Esters derived from boron
- 2227/0615 used as base material
- 2227/062 Cyclic esters
- 2227/0625 used as base material
- 2227/063 . . . Complexes of boron halides
- 2227/065 . . . derived from Ti or Zr
- 2227/066 . . . derived from Mo or W
- 2227/08 . . . having metal-to-carbon bonds

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- 2227/081 . . with a metal carbon bond belonging to a ring, e.g. ferrocene
- 2227/082 . . Pb compounds
- 2227/083 . . Sn compounds
- 2227/09 . Complexes with metals

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.

- 2229/003 . used as base material
- 2229/006 . used as thickening agents
- 2229/02 . Unspecified siloxanes; Silicones
- 2229/025 . . used as base material
- 2229/04 . Siloxanes with specific structure
- 2229/0405 . . used as base material
- 2229/041 . . containing aliphatic substituents
- 2229/0415 . . . used as base material
- 2229/042 . . containing aromatic substituents
- 2229/0425 . . . used as base material
- 2229/043 . . containing carbon-to-carbon double bonds
- 2229/0435 . . . used as base material
- 2229/044 . . containing silicon-to-hydrogen bonds
- 2229/0445 . . . used as base material
- 2229/045 . . containing silicon-to-hydroxyl bonds
- 2229/0455 . . . used as base material
- 2229/046 . . containing silicon-oxygen-carbon bonds
- 2229/0465 . . . used as base material
- 2229/047 . . containing alkylene oxide groups
- 2229/0475 . . . used as base material
- 2229/048 . . containing carboxyl groups
- 2229/0485 . . . used as base material
- 2229/05 . . containing atoms other than silicon, hydrogen, oxygen or carbon
- 2229/0505 . . . used as base material
- 2229/051 . . . containing halogen
- 2229/0515 used as base material
- 2229/052 . . . containing nitrogen
- 2229/0525 used as base material
- 2229/053 . . . containing sulfur
- 2229/0535 used as base material
- 2229/054 . . . containing phosphorus
- 2229/0545 used as base material

2290/00 Mixtures of base materials or thickeners or additives

- 2290/04 . Synthetic base oils
- 2290/10 . Thickener