

CPC COOPERATIVE PATENT CLASSIFICATION

C10N INDEXING SCHEME ASSOCIATED WITH SUBCLASS C10M RELATING TO LUBRICATING COMPOSITIONS

C10N 2010/00 Metal present as such or in compounds

NOTE

In this group, metals should be indexed according to their group of the Periodic Table.

C10N 2010/02 . Group 1

C10N 2010/04 . Group 2

C10N 2010/06 . Group 3

C10N 2010/08 . Group 4

C10N 2010/10 . Group 5

C10N 2010/12 . Group 6

C10N 2010/14 . Group 7

C10N 2010/16 . Group 8

C10N 2020/00 Specified physical properties of component of lubricating compositions

C10N 2020/02 . Viscosity; Viscosity index

C10N 2020/04 . Molecular weight; Molecular weight distribution

C10N 2020/06 . Particles of special shape or size

C10N 2030/00 Specified physical or chemical property which is improved by the additive characterising the lubricating composition, e.g. multifunctional additives

C10N 2030/02 . Pour-point; Viscosity index

C10N 2030/04 . Detergent or dispersant property

- C10N 2030/06 . Oiliness; Film-strength; Anti-wear; Resistance to extreme pressure
- C10N 2030/08 . Resistance to extreme temperature
- C10N 2030/10 . Inhibition of oxidation, e.g. anti-oxidants
- C10N 2030/12 . Inhibition of corrosion, e.g. anti-rust agents, anti-corrosives
- C10N 2030/14 . Metal deactivation
- C10N 2030/16 . Antiseptic; Biocidal
- C10N 2030/18 . Anti-foaming property
- C10N 2030/20 . Colour, e.g. dyes

- C10N 2040/00 **Specified use or application for which the lubricating composition is intended****

- C10N 2040/02 . Bearings
- C10N 2040/04 . Oil-bath; Gear-boxes; Automatic transmissions; Traction drives
- C10N 2040/06 . Instruments or other precision apparatus, e.g. damping fluids
- C10N 2040/08 . Hydraulic fluids, e.g. brake-fluids
- C10N 2040/10 . Running-in oil
- C10N 2040/12 . Gas-turbines
- C10N 2040/13 . . Aircraft turbines
- C10N 2040/14 . Electric or magnetic purposes
- C10N 2040/16 . . dielectric; Insulating oil
- C10N 2040/18 . . in connection with recordings on magnetic tape or disc

- C10N 2040/20 . Metal working
- C10N 2040/22 . . with essential removal of material, {e.g. cutting; Cooling oil}
- C10N 2040/24 . . without essential removal of material {Oil for deformation operations, e.g. drawing, rolling}

- C10N 2040/25 . Internal combustion engines
- C10N 2040/26 . . Two-stroke
- C10N 2040/28 . . Rotary

- C10N 2040/30 . Refrigerator lubricant

- C10N 2040/32 . Wire, rope or cable lubricants

C10N 2040/34 . Lubricating-sealants

C10N 2040/36 . Release agents

C10N 2050/00 Form in which the lubricant is applied to the material being lubricated

C10N 2050/02 . dissolved or suspended in a carrier which subsequently evaporates to leave a lubricant coating

C10N 2050/04 . Aerosol

C10N 2050/06 . Gaseous phase, at least during working conditions

C10N 2050/08 . solid

C10N 2050/10 . semi-solids; greasy

C10N 2060/00 Chemical after-treatment of the constituents of the lubricating composition

C10N 2060/003 . {by organic hydroxy group containing compounds}

C10N 2060/006 . {by nitrogen containing compounds}

C10N 2060/02 . Reduction, e.g. hydrogenation

C10N 2060/04 . Oxidation, e.g. ozonisation

C10N 2060/06 . by epoxides

C10N 2060/08 . Halogenation

C10N 2060/10 . by sulfur or a compound containing sulfur

C10N 2060/12 . by phosphorus or a compound containing phosphorus, e.g. PxSy

C10N 2060/14 . by boron or a compound containing boron

C10N 2070/00 Special methods of preparation

C10N 2080/00 Special pretreatment of the material to be lubricated, e.g. phosphatising or chromatising of a metal

C10N 2210/00 Nature of the metal present as such or in compounds, i.e. in salts

NOTE

Indexing codes [C10N 2210/01](#) to [C10N 2210/08](#) are only to be used as linked codes in combination with codes chosen from subclass [M10M](#) identifying the chemical nature of the compounds concerned:

Example: [C10M 2201/084](#)+[C10N 2210/02](#)

- [C10N 2210/01](#) . Group I, e.g. Li, Na, K, Cs, Cu, Ag, Au
- [C10N 2210/02](#) . Group II, e.g. Mg, Ca, Ba, Zn, Cd, Hg
- [C10N 2210/03](#) . Group III, e.g. Al, In, La
- [C10N 2210/04](#) . Group IV, e.g. Sn, Pb, Ti, Zr
- [C10N 2210/05](#) . Group V, e.g. V, As, Sb, Bi
- [C10N 2210/06](#) . Group VI, e.g. Cr, Mo, W
- [C10N 2210/07](#) . Group VII or VIII
- [C10N 2210/08](#) .. Mn, Fe, Co, Ni

[C10N 2220/00](#) Specified physical or chemical properties or characteristics, i.e. function, of single compounds in lubricating compositions

- [C10N 2220/02](#) . Physico-chemical properties
- [C10N 2220/021](#) .. Molecular weight
- [C10N 2220/022](#) .. Viscosity
- [C10N 2220/023](#) .. Cloud point
- [C10N 2220/024](#) .. Iodine value
- [C10N 2220/025](#) .. Saturated compounds
- [C10N 2220/026](#) .. Unsaturated compounds
- [C10N 2220/027](#) .. Linear chain compounds
- [C10N 2220/028](#) .. Branched chain compounds
- [C10N 2220/029](#) .. Star-shaped polymers
- [C10N 2220/03](#) .. Dendrimers
- [C10N 2220/031](#) .. Distillation range
- [C10N 2220/032](#) .. Specific gravity or density
- [C10N 2220/033](#) .. Shear stability
- [C10N 2220/04](#) .. Ionic liquids
- [C10N 2220/06](#) .. Liquid crystals
- [C10N 2220/08](#) .. Particles related characteristics
- [C10N 2220/082](#) ... Particle size or shape

C10N 2220/084	...	Coated particles
C10N 2220/086	...	Fibrous forms
C10N 2220/10	..	Biodegradable compounds
C10N 2220/12	..	Volatile compounds
C10N 2220/13	..	Non-volatile compounds
C10N 2220/14	.	Characteristics associated with water
C10N 2220/142	..	Water solubility
C10N 2220/144	..	Onsolubility in water
C10N 2220/146	..	Crystal water containing compounds
C10N 2220/30	..	Refrigerants

NOTE

Indexing codes [C10N 2220/301](#) to [C10N 2220/306](#) are only used in association with group [C10M 171/008](#) to provide information about the specific refrigerant.

C10N 2220/301	...	Chlorofluorocarbons
C10N 2220/302	...	Hydrofluorocarbons
C10N 2220/303	...	Hydrocarbons
C10N 2220/304	...	Nitrogen
C10N 2220/305	...	Ammonia
C10N 2220/306	...	Carbon dioxide

C10N 2230/00 Specified physical or chemical properties of lubricating compositions

C10N 2230/02	.	Viscosity or viscosity index
C10N 2230/04	.	Detergent properties, e.g. for cleaning, inhibition or removing varnish; Dispersion properties, e.g. for dispersing solids, carbon residues, sludge
C10N 2230/041	..	Soot induced viscosity control
C10N 2230/06	.	Resistance to extreme pressure; Oiliness; Abrasion resistance; Friction; Anti-wear
C10N 2230/08	.	Resistance to extreme heat; Resistance to extreme temperature
C10N 2230/10	.	Anti-oxidation characteristics
C10N 2230/12	.	Resistance to rust or corrosion
C10N 2230/14	.	Metal deactivation, i.e. passivation
C10N 2230/16	.	Bactericidal or (micro)biocidal
C10N 2230/18	.	Defoaming properties
C10N 2230/20	.	Colour

- C10N 2230/22 . Degreasing properties
- C10N 2230/24 . Emulsion properties
- C10N 2230/26 . Waterproofing or water-resistance
- C10N 2230/28 . Anti-static
- C10N 2230/30 . Anti-misting
- C10N 2230/32 . Light or X-ray resistance
- C10N 2230/34 . Fragrance or deodorising properties
- C10N 2230/36 . Seal compatibility, e.g. with rubber
- C10N 2230/38 . Catalyst protection, e.g. in exhaust gas converters
- C10N 2230/40 . Low content or no content compositions
- C10N 2230/41 . . Chlorine free or low chlorine content compositions
- C10N 2230/42 . . Phosphor free or low phosphor content compositions
- C10N 2230/43 . . Sulfur free or low sulfur content compositions
- C10N 2230/44 . . Boron free or low contentn boron compositions
- C10N 2230/45 . . Ashless or low ash content
- C10N 2230/50 . Emission or smoke controlling properties
- C10N 2230/52 . Base number (TBN)
- C10N 2230/54 . Fuel economy
- C10N 2230/56 . Boundary lubrication or thin film lubrication
- C10N 2230/58 . Elastohydrodynamic lubrication, e.g. for high compressibility layers
- C10N 2230/60 . Electro rheological properties
- C10N 2230/62 . Food grade properties
- C10N 2230/64 . Environmental friendly compositions
- C10N 2230/66 . Hydrolytic stability
- C10N 2230/68 . Shear stability
- C10N 2230/70 . Soluble oils
- C10N 2230/72 . Extended drain
- C10N 2230/74 . Noack Volatility

C10N 2230/76 . Reduction of noise, shudder or vibrations

C10N 2230/78 . Fuel contamination

C10N 2240/00 Specified uses or applications of lubricating compositions

C10N 2240/02 . Bearings

C10N 2240/04 . Gear oil

C10N 2240/042 .. for automatic transmissions

C10N 2240/044 .. for manual transmissions

C10N 2240/045 .. for Continuous Variable Transmission (CVT)

C10N 2240/046 .. for traction drives

C10N 2240/06 . Precision machinery, instruments

C10N 2240/08 . Hydraulic fluids, e.g. for brakes, clutches

C10N 2240/10 . Internal-combustion engines

C10N 2240/101 .. Alcohol fuelled engines

C10N 2240/102 .. Diesel engines

C10N 2240/103 ... Small diesel engines

C10N 2240/104 .. Gasoline engines

C10N 2240/105 ... Two-cycle engines

C10N 2240/106 ... Rotary engines

C10N 2240/108 .. for running in; grinding

C10N 2240/12 . Gas turbines

C10N 2240/121 .. Aircraft turbines

C10N 2240/14 . Steam engines or turbines

C10N 2240/20 . Electrical or magnetic applications

C10N 2240/201 .. Dielectrics or insulators

C10N 2240/202 .. for electric contacts

C10N 2240/203 .. Pantographs, i.e. printing devices

C10N 2240/204 .. Magnetic recording mediums

C10N 2240/205 .. Magnetic fluids

C10N 2240/22 . Lubricating sealants

C10N 2240/30 . Refrigerators; Compressors

C10N 2240/40 . Metal working

C10N 2240/401 .. with removal of material, e.g. cutting, grinding, drilling

- C10N 2240/402 . . without removal of material, e.g. forming, gorging, drawing, pressing, stamping, rolling, extruding
- C10N 2240/403 . . Manufacturing joint less pipes
- C10N 2240/404 . . Hot working
- C10N 2240/405 . . Cold working
- C10N 2240/406 . . of specific metals
- C10N 2240/407 . . . Soft metals, e.g. aluminium
- C10N 2240/408 . . . Iron or steel
- C10N 2240/409 . . . stainless steel

- C10N 2240/50 . Wires, ropes or cables

- C10N 2240/52 . Conveyors; Chain belts

- C10N 2240/54 . Generators or electric motors in oil or gas winning field

- C10N 2240/56 . Flashing oils; Marking oils

- C10N 2240/58 . Mould release agents

- C10N 2240/60 . Supervacuum or supercritical use

- C10N 2240/62 . Textile oils

- C10N 2240/64 . Slushing oils

- C10N 2240/66 . Medical uses

- C10N 2250/00 Form or state of lubricant compositions in which they are used**

- C10N 2250/02 . Emulsions; Colloids; Micelles
- C10N 2250/021 . . Oil-in-water
- C10N 2250/022 . . Water-in-oil

- C10N 2250/04 . Aerosols

- C10N 2250/06 . Gaseous form

- C10N 2250/08 . Solids

- C10N 2250/10 . Semi-solids or greases

- C10N 2250/12 . Dispersions of solid lubricants
- C10N 2250/121 . . compositions providing a coating after evaporation of a medium, e.g. of solvent, water

- C10N 2250/14 . Multi layer lubricant coatings
- C10N 2250/141 . . in the form of films or sheets

- C10N 2250/16 . Micro capsules
- C10N 2250/18 . Composite materials, or sliding materials in which lubricants are integrally moulded
- C10N 2260/00 Chemical after-treatment or modifications of compounds**
- C10N 2260/02 . Reduction
- C10N 2260/04 . Oxidation
- C10N 2260/06 . Treatment with epoxides or oxyalkylation reactions
- C10N 2260/08 . Halogenation
- C10N 2260/09 . Treatment with nitrogen containing compounds
- C10N 2260/10 . Treatment with sulfur or sulfur-containing compounds
- C10N 2260/12 . Treatment with phosphorus or phosphorus-containing compounds
- C10N 2260/14 . Treatment with boron or boron-containing compounds
- C10N 2270/00 Specific manufacturing methods for lubricant compositions or compounds not covered by groups [C10N 2210/00](#) to [M10M 260/00](#)**
- C10N 2270/02 . concentrating of additives
- C10N 2280/00 Specific pretreatment of the surface to be lubricated, e.g. phosphatising**