

**ECLA****EUROPEAN CLASSIFICATION****C08K**

**USE OF INORGANIC OR NON-MACROMOLECULAR ORGANIC SUBSTANCES AS COMPOUNDING INGREDIENTS (pesticides, herbicides A01N; pharmaceuticals, cosmetics A61K; explosives C06B; paints, inks, varnishes, dyes, polishes, adhesives C09; lubricants C10M; detergents C11D; artificial filaments or fibres D01F; textile treating compositions D06) [C9410]**

**[N: WARNING]**

The following IPC group is not used in the internal ECLA classification system. Subject matter covered by this group is classified in the following ECLA groups:

[C08K4/5445](#) covered by [C08K5/544](#)  
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**Notes**

1. 1. The use of an ingredient for a specific polymer is classified by adding, in a C-set, to the group symbol of C08K, the subdivision of [C08L1/00](#) to [C08L99/00](#). Example: Polystyrene containing a carboxylic amide is classified in ([C08K5/20](#), [C08L25/06](#)). 2. From April 2012, the use of an ingredient for a specific polymer is classified by adding, in a C-set, to the group symbol of C08K, the subdivision of [C08L1/00](#) to [C08L99/00](#). Example: Polystyrene containing a carboxylic amide is classified in ([C08K5/20](#), [C08L25/06](#)). 3. In this subclass, in the absence of an indication to the contrary, an ingredient is classified in the last appropriate place.
2. In this subclass:
  - a mixture of ingredients is classified in the most indented group covering all the essential ingredients of the mixture, e.g.:
    - a mixture of a monohydric and a polyhydric alcohol [C08K5/05](#)
    - a mixture of two polyhydric alcohols [C08K5/053](#)
    - a mixture of an alcohol and an ether [C08K5/04](#)
    - a mixture of an ether and an amine [C08K5/00](#)
    - a mixture of an amine and a metal [C08K13/02](#)
  - [N: This note is applied only for mixtures with more than three essential ingredients. Mixtures with two or three ingredients are classified in the appropriate groups of C08K, e.g. a mixture of Al<sub>2</sub>O<sub>3</sub>, an ether and an amine is classified in [C08K3/22](#), [C08K5/06](#) and [C08K5/17](#)]
  - ammonium salts are classified in the same way as metal salts
3. In this subclass, organic acid salts, alcoholates, phenolates or mercaptides are classified in the groups or subgroups of the parent compounds

**[N: Notes]**

1. The use of an ingredient for a specific polymer is classified by adding to the group symbol of C08K and separated therefrom by a "+" sign, the subdivision of [C08L1/00](#) to [C08L99/00](#).  
  
Example: Polystyrene containing a carboxylic amide is classified in [C08K5/20+L25/06](#)
2. In this subclass are considered as compounding ingredients:

- a. inert additives
- b. radical crosslinking agents, e.g. peroxides, S-containing vulcanisation agents
- c. coupling agents, i.e. compounds able to improve the adhesion between filler and macromolecule

Are not considered as compounding ingredients:

- a. chemical modifying or crosslinking agents which react via a condensation or addition mechanism (for C08B polymers C08B, for diene rubbers [C08C19/30](#), for other vinyl polymers C08F8/-, for polysiloxanes [C08L83/00](#), for other C08G polymers C08G)
- b. solvents or dispersion agents for making polymer solutions, emulsions or dispersions ([C08J3/02](#))
- c. blowing agents ([C08J9/04](#))

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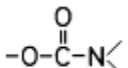
## C08K3/00

### Use of inorganic ingredients


- C08K3/00P . [N: Inorganic ingredients according to more than one of the "one dot" groups of [C08K3/02](#) to [C08K3/40](#)]
- C08K3/00P2 . . [N: Crosslinking or vulcanising agents, including accelerators]
- C08K3/00P3 . . [N: Additives activating the degradation of the macromolecular compound]
- C08K3/00P5 . . [N: Fillers, pigments, reinforcing additives]
- C08K3/00P6 . . [N: Stabilisers against oxidation, heat, light, ozone]
- C08K3/00P7 . . [N: Biocides; (macromolecular substances as carriers for biocide material [A01N25/10](#))]
- C08K3/00P8 . . [N: Flame-proofing or flame-retarding additives]
- C08K3/00P9 . . [N: Antistatics]
- C08K3/00S . [N: Metal containing compounds according to more than one of the "one dot" groups of [C08K3/10](#) to [C08K3/40](#)]
- C08K3/00S2 . . [N: Compounds containing metals of the 1st to 3rd Group of the Periodic system]
- C08K3/00S4 . . [N: Compounds containing metals of the 4th to 8th Group of the Periodic system, e.g. nickel compounds]
- C08K3/02 . Elements
- C08K3/04 . . Carbon
- C08K3/06 . . Sulfur
- C08K3/08 . . Metals
- C08K3/10 . Metal compounds
- C08K3/12 . . Hydrides

- C08K3/14 . . Carbides
- C08K3/16 . Halogen-containing compounds
- C08K3/18 . Oxygen-containing compounds, e.g. metal carbonyls
- C08K3/20 . . Oxides; Hydroxides
- C08K3/22 . . . of metals
- C08K3/22S . . . . [N: of antimony]
- C08K3/24 . . Acids; Salts thereof [N: (C08K3/16 takes precedence)]
- C08K3/26 . . . Carbonates; Bicarbonates
- C08K3/28 . Nitrogen-containing compounds
- C08K3/30 . Sulfur-, selenium- or tellurium-containing compounds
- C08K3/32 . Phosphorus-containing compounds
- C08K3/34 . Silicon-containing compounds
- C08K3/34B . . [N: Clay]
- C08K3/36 . . Silica
- C08K3/38 . Boron-containing compounds
- C08K3/40 . Glass
- C08K5/00 Use of organic ingredients**
- C08K5/00P . [N: Organic ingredients according to more than one of the "one dot" groups of C08K5/01 to C08K5/59]
- C08K5/00P1 . . [N: Plasticisers]
- C08K5/00P2 . . [N: Crosslinking or vulcanising agents; including accelerators]
- C08K5/00P3 . . [N: Additives activating the degradation of the macromolecular compound]
- C08K5/00P4 . . [N: Optical brightening agents, organic pigments]
- C08K5/00P6 . . [N: Stabilisers against oxidation, heat, light, ozone]
- C08K5/00P7 . . [N: Biocides; (macromolecular substances as carriers for biocide material A01N25/10)]
- C08K5/00P8 . . [N: Flame-proofing or flame-retarding additives]
- C08K5/00P9 . . [N: Antistatics]
- C08K5/00P10 . . [N: Nucleating agents promoting the crystallisation of the polymer matrix] [N0009]
- C08K5/00S . [N: Complexes with metal-heteroatom-bonds]
- C08K5/01 . Hydrocarbons [N: (C08K5/00S takes precedence)] [C9505]
- C08K5/02 . Halogenated hydrocarbons [N: (C08K5/00S takes precedence)] [C9505]
- C08K5/03 . . aromatic, [N: e.g. C6H5-CH2-C1]
- C08K5/04 . Oxygen-containing compounds [N: (C08K5/00S takes precedence)]

C08K5/05	. . Alcohols; Metal alcoholates
C08K5/053	. . . Polyhydroxylic alcohols
C08K5/057	. . . Metal alcoholates [N: (metal enolates C08K5/00S)]
C08K5/06	. . Ethers; Acetals; Ketals; Ortho-esters
C08K5/07	. . Aldehydes; Ketones
C08K5/08	. . . Quinones
C08K5/09	. . Carboxylic acids; Metal salts thereof; Anhydrides thereof
C08K5/092	. . . Polycarboxylic acids [N9505]
C08K5/095	. . . Carboxylic acids containing halogens [N9505]
C08K5/098	. . . Metal salts of carboxylic acids [N9505]
C08K5/10	. . Esters; Ether-esters
C08K5/101	. . . of monocarboxylic acids [N9505]
C08K5/103	. . . . with polyalcohols [N9505]
C08K5/105	. . . . with phenols [N9505]
C08K5/107	. . . . . with polyphenols [N9505]
C08K5/109	. . . of carbonic acid, [N: e.g. R-O-C(=O)-O-R] [N9505]
C08K5/11	. . . of acyclic polycarboxylic acids
C08K5/12	. . . of cyclic polycarboxylic acids
C08K5/13	. . Phenols; Phenolates
C08K5/132	. . . Phenols containing keto groups, [N: e.g. benzophenones] [N9505]
C08K5/134	. . . Phenols containing ester groups [N9505]
C08K5/134B	. . . . [N: Carboxylic esters of phenolcarboxylic acids] [N9505]
C08K5/136	. . . Phenols containing halogens [N9505]
C08K5/138	. . . Phenolates [N9505]
C08K5/14	. . Peroxides
C08K5/15	. . Heterocyclic compounds having oxygen in the ring
C08K5/151	. . . having one oxygen atom in the ring [N0110]
C08K5/1515	. . . . Three-membered rings [N0110]
C08K5/1525	. . . . Four-membered rings [N0110]
C08K5/1535	. . . . Five-membered rings [N0110]
C08K5/1539	. . . . . Cyclic anhydrides [N0110]
C08K5/1545	. . . . Six-membered rings [N0110]
C08K5/156	. . . having two oxygen atoms in the ring [N0110]
C08K5/1565	. . . . Five-membered rings [N0110]
C08K5/1575	. . . . Six-membered rings [N0110]
C08K5/159	. . . having more than two oxygen atoms in the ring [N0110]
C08K5/16	. Nitrogen-containing compounds [N: (C08K5/00S takes precedence)]
C08K5/17	. . Amines; Quaternary ammonium compounds
C08K5/17B	. . . [N: containing COOH-groups; Esters or salts thereof] [N9409]
C08K5/18	. . . with aromatically bound amino groups
C08K5/19	. . . Quaternary ammonium compounds

C08K5/20	. .	Carboxylic acid amides	
C08K5/205	. .	Compounds containing	groups, e.g. carbamates [N9505]
			
C08K5/21	. .	Urea; Derivatives thereof, e.g. biuret	
C08K5/22	. .	Compounds containing nitrogen bound to another nitrogen atom	
C08K5/23	. . .	Azo-compounds	
C08K5/23B	. . . .	[N: Diazo and polyazo compounds]	
C08K5/24	. . .	Derivatives of hydrazine	
C08K5/25	. . . .	Carboxylic acid hydrazides	
C08K5/26	. . . .	Semicarbazides	
C08K5/27	. . .	Compounds containing a nitrogen atom bound to two other nitrogen atoms, e.g. diaz amino-compounds	
C08K5/28	. . . .	Azides	
C08K5/29	. .	Compounds containing [N: one or more] carbon-to-nitrogen double bonds	
C08K5/30	. . .	Hydrazones; Semicarbazones	
C08K5/31	. . .	Guanidine; Derivatives thereof	
C08K5/315	. .	Compounds containing carbon-to-nitrogen triple bonds [N9505]	
C08K5/315B	. . .	[N: Dicyandiamide] [N9505]	
C08K5/32	. .	Compounds containing nitrogen bound to oxygen	
C08K5/33	. . .	Oximes	
C08K5/34	. .	Heterocyclic compounds having nitrogen in the ring	
C08K5/3412	. . .	having one nitrogen atom in the ring	
C08K5/3415	. . . .	Five-membered rings	
C08K5/3417	. . . . .	condensed with carbocyclic rings	
C08K5/3432	. . . .	Six-membered rings	
C08K5/3435	. . . . .	Piperidines	
C08K5/3437	. . . . .	condensed with carbocyclic rings	
C08K5/3442	. . .	having two nitrogen atoms in the ring	
C08K5/3445	. . . .	Five-membered rings	
C08K5/3447	. . . . .	condensed with carbocyclic rings	
C08K5/3462	. . . .	Six-membered rings	
C08K5/3465	. . . . .	condensed with carbocyclic rings	
C08K5/3467	. . .	having more than two nitrogen atoms in the ring	
C08K5/3472	. . . .	Five-membered rings	
C08K5/3475	. . . . .	condensed with carbocyclic rings	
C08K5/3477	. . . .	Six-membered rings	
C08K5/3492	. . . . .	Triazines	
C08K5/3492B	. . . . .	[N: Melamine; Derivatives thereof] [N9409]	
C08K5/3492D	. . . . .	[N: containing cyanurate groups; Tautomers thereof] [N9409]	
C08K5/3492F	. . . . .	[N: also containing heterocyclic groups other than triazine groups] [N9409]	
C08K5/3492S	. . . . .	[N: Salts] [N9409]	

- C08K5/3495 . . . . . condensed with carbocyclic rings
- C08K5/35 . . . . . having also oxygen in the ring
- C08K5/353 . . . . . Five-membered rings
- C08K5/357 . . . . . Six-membered rings
- C08K5/36 . Sulfur-, selenium-, or tellurium-containing compounds [N: (C08K5/00S takes precedence)]
- C08K5/37 . . Thiols [C0110]
- C08K5/372 . . . Sulfides, [N: e.g. R-(S)<sub>x</sub>-R'] [N9505] [C0110]
- C08K5/372B . . . . [N: containing nitrogen] [N9505]
- C08K5/375 . . . containing six-membered aromatic rings [N: (C08K5/372B takes precedence) [N9505]
- C08K5/378 . . . containing heterocyclic rings [N9505]
- C08K5/38 . . Thiocarbonic acids; Derivatives thereof, e.g. xanthates; [N: i.e. compounds containing -X-C(=X)- groups, X being oxygen or sulfur, at least one X being sulfur]
- C08K5/39 . . Thiocarbamic acids; Derivatives thereof, e.g. dithiocarbamates
- C08K5/40 . . . Thiurams, [N: i.e. compounds containing  groups]
- C08K5/405 . . . Thioureas; Derivatives thereof [N9505]
- C08K5/41 . . Compounds containing sulfur bound to oxygen
- C08K5/42 . . . Sulfonic acids; Derivatives thereof
- C08K5/43 . . Compounds containing sulfur bound to nitrogen
- C08K5/435 . . . Sulfonamides [N9505]
- C08K5/44 . . . Sulfenamides
- C08K5/45 . . Heterocyclic compounds having sulfur in the ring
- C08K5/46 . . . with oxygen or nitrogen in the ring
- C08K5/47 . . . . Thiazoles
- C08K5/48 . . Selenium- or tellurium-containing compounds
- C08K5/49 . Phosphorus-containing compounds [N: (C08K5/00S takes precedence)]
- C08K5/50 . . Phosphorus bound to carbon only
- C08K5/51 . . Phosphorus bound to oxygen
- C08K5/52 . . . Phosphorus bound to oxygen only
- C08K5/52S . . . . [N: Salts of P-acids with N-bases] [N9409]
- C08K5/521 . . . . Esters of phosphoric acids, e.g. of H<sub>3</sub>PO<sub>4</sub>
- C08K5/523 . . . . . with hydroxyaryl compounds
- C08K5/524 . . . . Esters of phosphorous acids, e.g. of H<sub>3</sub>PO<sub>3</sub>
- C08K5/526 . . . . . with hydroxyaryl compounds
- C08K5/527 . . . . Cyclic esters
- C08K5/529 . . . . Esters containing heterocyclic rings not representing cyclic esters of phosphoric or phosphorous acids
- C08K5/53 . . . bound to oxygen and to carbon only
- C08K5/5313 . . . . Phosphinic compounds, e.g. R<sub>2</sub>=P(:O)OR'

- C08K5/5317 . . . . Phosphonic compounds, e.g.  $R-P(=O)(OR')_2$
- C08K5/5333 . . . . Esters of phosphonic acids
- C08K5/5337 . . . . . containing also halogens
- C08K5/5353 . . . . . containing also nitrogen
- C08K5/5357 . . . . . cyclic
- C08K5/5373 . . . . . containing heterocyclic rings not representing cyclic esters of phosphonic acids
- C08K5/5377 . . . . Phosphinous compounds, e.g.  $R_2=P-OR'$
- C08K5/5393 . . . . Phosphonous compounds, e.g.  $R-P(OR')_2$
- C08K5/5397 . . . . Phosphine oxides
- C08K5/5398 . . Phosphorus bound to sulfur
- C08K5/5399 . . Phosphorus bound to nitrogen
- C08K5/54 . Silicon-containing compounds [N: (C08K5/00S takes precedence)] [C9505]
- C08K5/54B . . [N: containing no other elements than carbon or hydrogen]
- C08K5/54H . . [N: containing elements other than oxygen or nitrogen]
- C08K5/541 . . containing oxygen [N0002]
- C08K5/5415 . . . containing at least one Si-O bond [N0002]
- C08K5/5419 . . . . containing at least one Si-C bond [N0002]
- C08K5/5425 . . . containing at least one C=C bond [N0002]
- C08K5/5435 . . . containing oxygen in a ring [N0002]
- C08K5/544 . . containing nitrogen [N0002]
- C08K5/544B . . . [N: containing nitrogen in a heterocyclic ring] [N0002]
- C08K5/5455 . . . containing at least one  group [N: (C08K5/544B takes precedence)] [N0002]
- C08K5/5465 . . . containing at least one C=N bond [N: (C08K5/544B takes precedence)] [N0002]
- C08K5/5475 . . . containing at least one C-N [N: triple] bond [N: (C08K5/544B takes precedence)] [N0002]
- C08K5/548 . . containing sulfur [N: (C08K5/544B takes precedence)] [N0002]
- C08K5/549 . . containing silicon in a ring [N0002]
- C08K5/55 . Boron-containing compounds [N: (C08K5/00S takes precedence)] [C9505]
- C08K5/56 . Organo-metallic compounds, i.e. organic compounds containing a metal-to-carbon bond
- C08K5/57 . . Organo-tin compounds
- C08K5/58 . . . containing sulfur
- C08K5/59 . Arsenic- or antimony-containing compounds
- C08K7/00 Use of ingredients characterised by shape**

- C08K7/02 . Fibres or whiskers
- C08K7/04 . . Inorganic
- C08K7/06 . . . Elements
- C08K7/08 . . . Oxygen-containing compounds
- C08K7/10 . . . Silicon-containing compounds
- C08K7/12 . . . . Asbestos
- C08K7/14 . . . Glass

- C08K7/16 . Solid spheres
- C08K7/18 . . Inorganic
- C08K7/20 . . . Glass

- C08K7/22 . Expanded, porous or hollow particles
- C08K7/24 . . Inorganic
- C08K7/26 . . . Silicon- containing compounds
- C08K7/28 . . . Glass

#### **C08K9/00 Use of pretreated ingredients**

- C08K9/02 . Ingredients treated with inorganic substances
- C08K9/04 . Ingredients treated with organic substances [N: treated with macromolecular compounds [C08K9/08](#)]
- C08K9/06 . . with silicon-containing compounds
- C08K9/08 . Ingredients agglomerated by treatment with a binding agent
- C08K9/10 . Encapsulated ingredients
- C08K9/12 . Adsorbed ingredients [N: e.g. ingredients on carriers]

#### **C08K11/00 Use of ingredients of unknown constitution, e.g. undefined reaction products**

- C08K11/00B . [N: Waste materials, e.g. treated or untreated sewage sludge]

#### **C08K13/00 Use of mixtures of ingredients not covered by one single of the preceding main groups, each of these compounds being essential**

- C08K13/02 . Organic and inorganic ingredients
- C08K13/04 . Ingredients characterised by their shape and organic or inorganic ingredients
- C08K13/06 . Pretreated ingredients and ingredients covered by the main groups [C08K3/00](#) to [C08K7/00](#)
- C08K13/08 . Ingredients of unknown constitution and ingredients covered by the main groups [C08K3/00](#) to [C08K9/00](#)