

## C09C

**TREATMENT OF INORGANIC MATERIALS, OTHER THAN FIBROUS FILLERS, TO ENHANCE THEIR PIGMENTING OR FILLING PROPERTIES (treatment of materials specially adapted to enhance their filling properties in mortars, concrete or artificial stone [C04B 14/00](#), [C04B 18/00](#), [C04B 20/00](#)); PREPARATION OF CARBON BLACK {; PREPARATION OF INORGANIC MATERIALS WHICH ARE NO SINGLE CHEMICAL COMPOUNDS AND WHICH ARE MAINLY USED AS PIGMENTS OR FILLERS}**

### Definition statement

*This place covers:*

The treatment of inorganic compounds other than fibrous fillers, to enhance their pigmenting or filling properties.

Preparation of carbon black.

Preparation of inorganic materials being no single chemical compounds and used as pigments or fillers.

### References

#### Limiting references

*This place does not cover:*

Treatment of materials specially adapted to enhance their filling properties in mortars, concrete or artificial stone	<a href="#">C04B 14/00</a> , <a href="#">C04B 18/00</a> , <a href="#">C04B 20/00</a>
---	--

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Preparation of inorganic compounds or non-metallic elements	<a href="#">C01</a>
Treatment by polymerisation onto particle	<a href="#">C08F 292/00</a>

### Special rules of classification

Whenever in groups [C09C 1/00](#) - [C09C 1/66](#) the materials consist of a particulate core bearing a coating or any other deposit, classification is done only according to the composition of the core, unless otherwise stated, e.g. [C09C 1/0015](#), [C09C 1/0078](#). Preparations of materials which are no single chemical compounds, mainly comprising ceramic pigments ([C09C 1/0009](#)), consisting of solid solutions or polycrystalline structures, and compounds defined as composite materials ([C09C 1/0081](#)). Preparation and treatment steps are not always easy to distinguish from each other, e.g. preparation in the presence of treating agents (by precipitation or calcination), precise reacting conditions, affecting pigmentary effects. It is common practice to include these complex topics in [C09C 1/00](#) while avoiding redundancy.

The last appropriate place rule applies.

When classifying in this subclass, symbols of [C01P](#) are used to identify structural or physical aspects of solid inorganic compounds.

In case a group is indicated as indexed, the subgroups thereof are also indexed.

The symbols of [C01P](#) group deals with Structural and Physical Aspects of Solid Inorganic Compounds classified in subclasses [C01B](#) - [C01G](#) and [C09C](#). These aspects include crystal-structural characteristics, particle morphology and physical properties.

Exception from the last appropriate place rule:

Dopant: A dopant, also called a doping agent, is a trace impurity element that is inserted into a substance (in very low concentrations) in order to alter the physical properties of the substance. For the purpose of classification, a dopant is considered as such, when its concentration is less than 5% (wt, vol, at.) or when mentioned as such in the patent document to be classified.

In such a case, the compound is classified ignoring the dopant(s) and the last appropriate place rule does not apply in view of the dopant(s). In case of doubts, the document is given the classification symbol relating to the last appropriate place rule by taking into account the dopant(s) and in the appropriate class, without taking into account the dopant(s).

## C09C 1/00

### Treatment of specific inorganic materials other than fibrous fillers

(tenebrescent materials [C09K 9/00](#); luminescent materials [C09K 11/00](#));

### Preparation of carbon black

#### Definition statement

*This place covers:*

Treatment of specific inorganic materials other than fibrous fibers and preparation of carbon black

#### References

##### Limiting references

*This place does not cover:*

Tenebrescent materials	<a href="#">C09K 9/00</a>
Luminescent materials	<a href="#">C09K 11/00</a>

##### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Silica, silicates	<a href="#">C01B 33/00</a>
Aluminium oxide	<a href="#">C01F</a>
For the inorganic products itself	<a href="#">C01G</a>
Dyes, pigments, mordants and lakes	<a href="#">C09B</a>

#### Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

## Glossary of terms

*In this place, the following terms or expressions are used with the meaning indicated:*

Pigment	A material that changes the color of reflected or transmitted light as the result of wavelength-selective absorption. This physical process differs from fluorescence, phosphorescence, and other forms of luminescence, in which a material emits light. A distinction is usually made between a pigment (inorganic), which is insoluble in the vehicle (resulting in a suspension), and a dye (organic), which either is itself a liquid or is soluble in its vehicle (resulting in a solution).
---------	--

## C09C 1/0003

{Compounds of molybdenum ([C09C 1/0015](#) takes precedence)}

### References

#### Limiting references

*This place does not cover:*

Pigment exhibiting interference colours	<a href="#">C09C 1/0015</a>
---	-----------------------------

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Compounds of molybdenum	<a href="#">C01G 39/00</a>
-------------------------	----------------------------

### Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

## C09C 1/0006

{containing bismuth and vanadium ([C09C 1/0015](#) takes precedence)}

### References

#### Limiting references

*This place does not cover:*

Pigment exhibiting interference colours	<a href="#">C09C 1/0015</a>
---	-----------------------------

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Compounds containing vanadium and bismuth	<a href="#">C01G 31/00</a>
---	----------------------------

### Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/0009**

{Pigments for ceramics ([C09C 1/0015](#), [C09C 1/0078](#) take precedence)}

**References****Limiting references**

*This place does not cover:*

Pigment exhibiting interference colours	<a href="#">C09C 1/0015</a>
Pigments consisting of flaky, non-metallic substrates characterised by a surface-region containing free metal	<a href="#">C09C 1/0078</a>
Ceramics	<a href="#">C04B</a>

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/0012**

{containing zirconium and silicon}

**References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Silicates	<a href="#">C01B 33/00</a>
Compounds of zirconium	<a href="#">C01G 25/00</a>

**Special rules of classification**

Classification in [C01P](#) subgroup shall be applied.

**C09C 1/0015**

{Pigments exhibiting interference colours, e.g. transparent platelets of appropriate thinness or flaky substrates, e.g. mica, bearing appropriate thin transparent coatings}

**Definition statement**

*This place covers:*

Pigments with interference colours, e.g. pearlescent pigments, interference pigments, luster pigments, optical variable pigments (OVP), effect pigments.

In general interference pigments consist of one substrate coated with one or more optically active layers. The optical active layers have a high or low refractive indices. A comprehensive list of inorganic compounds and their refractive indices can be found in "Sample dispersion & refractive index guide", Malvern Instruments Ltd. 1997.

Protective layers or functional layers applied on said interference pigments consist in general of metal oxides, silica, fatty acids, polymers, silanes etc. and are deemed not to affect the optical properties of the core pigment on which they are applied. Therefore and for the purpose of classification this layers are considered as being not optically active.

## Definition statement

A rutilisation promoting layer (mostly SnO<sub>2</sub>) is also not considered as being optically active if not otherwise stated. Also, other layers, like adhesion promoting layers etc., are also considered as optically not active.

## References

## Informative references

Attention is drawn to the following places, which may be of interest for search:

Pigments consisting of flaky, non-metallic substrates characterised by a surface-region containing free metal	<a href="#">C09C 1/0078</a>
Metallic pigments or fillers	<a href="#">C09C 1/62</a>

## Special rules of classification

Classification in [C01P](#) and [C09C 2200/00](#)- subgroups shall be applied.

## C09C 1/0018

**{uncoated and unlayered plate-like particles}**

## Definition statement

*This place covers:*

Pigments exhibiting interference colours comprising uncoated and unlayered plate-like particles, e.g. Substrate materials suitable for use as substrate for pigments exhibiting interference colours.

## Special rules of classification

Classification in [C01P](#) and [C09C 2200/00](#) subgroups shall be applied

## C09C 1/0021

**{comprising a core coated with only one layer having a high or low refractive index}**

## Definition statement

*This place covers:*

Pigments exhibiting interference colours comprising a core coated with only layer having a high or low refractive index, e.g. pearlescent pigments consisting of a substrate and only one optically active layer, e.g. [SiO<sub>2</sub>-(substrate)-SiO<sub>2</sub>], [TiO<sub>2</sub>-(substrate)-TiO<sub>2</sub>], but also [(substrate)-Fe<sub>2</sub>O<sub>3</sub>], [(substrate)-SiO<sub>2</sub>].

These pigments can comprise non optically active layers like protective or functional layers (see definition statement [C09C 1/0015](#)).

These pigments can also comprise a substrate comprising a protective- or a adhesion promoting layer, which cannot be considered as being optically active, e.g. a substrate comprising an metallic aluminium flake coated with a protective layer to prevent corrosion (e.g. silica, aluminium oxide etc.).

A rutilization promoting layer (mostly SnO<sub>2</sub>) is also not considered as being optically active if not otherwise stated.

## References

### Limiting references

*This place does not cover:*

Metallic effect pigments showing no interference colours	<a href="#">C09C 1/62</a>
--	---------------------------

## Special rules of classification

Classification in [C01P](#) and [C09C 2200/00](#) subgroups shall be applied.

### C09C 1/0024

**{comprising a stack of coating layers with alternating high and low refractive indices, wherein the first coating layer on the core surface has the high refractive index}**

#### Definition statement

*This place covers:*

Pigments exhibiting interference colours comprising a stack of coating layers with alternating high and low refractive indices, the first coating layer on the core surface having high refractive index, e.g. Pearlescent pigments consisting of a substrate and with alternating optically active layers, e.g.  $[\text{SiO}_2\text{-TiO}_2\text{-(substrate)-TiO}_2\text{-SiO}_2]$  (Low-High-Substrate-High-Low), but also  $[(\text{substrate)-TiO}_2\text{-SiO}_2\text{-Fe}_2\text{O}_3]$ .

These pigments can further comprise non optically active layers like protective or functional layers (see definition statement [C09C 1/0015](#)).

These pigments can also comprise a substrate comprising a protective- or a adhesion promoting layer, which cannot be considered as being optically active, e.g. a substrate comprising an metallic aluminium flake coated with a protective layer to prevent corrosion (e.g. silica, aluminium oxide etc.).

A rutilization promoting layer (mostly  $\text{SnO}_2$ ) is also not considered as being optically active if not otherwise stated.

## Special rules of classification

Classification in [C01P](#) and [C09C 2200/00](#) subgroups shall be applied.

### C09C 1/0027

**{One layer consisting of at least one sub-stoichiometric inorganic compound}**

#### Definition statement

*This place covers:*

Pigments exhibiting interference colours comprising a stack of coating layers with alternating high and low refractive indices, the first coating layer on the core surface having high refractive index and one layer consisting of at least one sub-stoichiometric inorganic compound, typically used substoechiometric compounds are non-stoechiometric titanium or silicon oxide, like  $\text{TiO}_x$ ,  $\text{SiO}_x$  with  $0 < x < 2$ .

## Special rules of classification

Classification in [C01P](#) and [C09C 2200/00](#) subgroups shall be applied.

In case said layer is defined to be a light adsorbing layer it has to be classified also in [C09C 1/003](#)

**C09C 1/003****{comprising at least one light-absorbing layer}****Definition statement***This place covers:*

Pigments exhibiting interference colours comprising a stack of coating layers with alternating high and low refractive indices, the first coating layer on the core surface having high refractive index and with at least one light-absorbing layer, e.g. a light-absorbing layer is often a compound having an own colour, e.g. metallic oxides, alloys, dyes etc.

**Special rules of classification**

Symbols from [C01P](#) and [C09C 2200/00](#) groups are used for classification.

**C09C 1/0033****{consisting of a metal or an alloy}****Special rules of classification**

Classification in [C01P](#) and [C09C 2200/00](#) subgroups shall be applied.

**C09C 1/0036****{consisting of at least one dye}****Special rules of classification**

Classification in [C01P](#) and [C09C 2200/00](#) subgroups shall be applied.

**C09C 1/0039****{consisting of at least one coloured inorganic material}****Definition statement***This place covers:*

Pigments exhibiting interference colours comprising a stack of coating layers with alternating high and low refractive indices, the first coating layer on the core surface having high refractive index and with at least one light-absorbing layer consisting of one coloured inorganic material, e.g. typically a coloured metal oxide, e.g. iron oxide

**Special rules of classification**

Classification in [C01P](#) and [C09C 2200/00](#) subgroups shall be applied.

**C09C 1/0042****{Sub-stoichiometric inorganic materials}****Special rules of classification**

Classification in [C01P](#) and [C09C 2200/00](#) subgroups shall be applied.

**C09C 1/0045**

**{consisting of a carbonaceous material, e.g. carbon black, graphite, SWNT, MWNT incorporated within an inorganic material}**

**Special rules of classification**

Classification in [C01P](#) and [C09C 2200/00](#) subgroups shall be applied.

**Glossary of terms**

*In this place, the following terms or expressions are used with the meaning indicated:*

SWNT	single-walled carbon nanotubes
MWNT	multi-walled carbon nanotubes

**C09C 1/0048**

**{comprising at least one optically active layer with at least one organic material layer, e.g. liquid crystal polymers}**

**Special rules of classification**

Classification in [C01P](#) and [C09C 2200/00](#) subgroups shall be applied.

**C09C 1/0051**

**{comprising a stack of coating layers with alternating low and high refractive indices, wherein the first coating layer on the core surface has the low refractive index}**

**Definition statement**

*This place covers:*

Pigments exhibiting interference colours comprising a stack of coating layers with alternating high and low refractive indices with the first coating layer on the core surface having the low refractive index, e.g. pearlescent pigments consisting of a substrate and with alternating optically active layers, e.g. [TiO<sub>2</sub>-SiO<sub>2</sub>-(substrate)-SiO<sub>2</sub>-TiO<sub>2</sub>] (Low-High-Substrate-High-Low), but also [(substrate)-TiO<sub>2</sub>-SiO<sub>2</sub>-Fe<sub>2</sub>O<sub>3</sub>].

These pigments can further comprise non optically active layers like protective or functional layers (see definition statement [C09C 1/0015](#)).

These pigments can also comprise a substrate comprising a protective- or a adhesion promoting layer, which cannot be considered as being optically active, e.g. a substrate comprising an metallic aluminium flake coated with a protective layer to prevent corrosion (e.g. silica, aluminium oxide etc.).

A rutilization promoting layer (mostly SnO<sub>2</sub>) is also not considered as being optically active if not otherwise stated.

**Special rules of classification**

Classification in [C01P](#) and [C09C 2200/00](#) subgroups shall be applied.



**C09C 1/0054****{one layer consisting of at least one sub-stoichiometric inorganic compound}****Definition statement***This place covers:*

Pigments exhibiting interference colours comprising a stack of coating layers with alternating high and low refractive indices with one layer consisting of at least one sub-stoichiometric inorganic compound, e.g. non-stoichiometric titanium or silicon oxide, like  $\text{TiO}_x$ ,  $\text{SiO}_x$  with  $0 < x < 2$ .

In case said layer is a light adsorbing layer, see [C09C 1/0057](#)

**Special rules of classification**

Classification in [C01P](#) and [C09C 2200/00](#) subgroups shall be applied.

In case the layer is a light adsorbing layer, see [C09C 1/0057](#)

**C09C 1/0057****{comprising at least one light-absorbing layer}****Definition statement***This place covers:*

Pigments exhibiting interference colours comprising a stack of coating layers with alternating high and low refractive indices with the first coating layer on the core surface having the low refractive index and comprising at least one light-absorbing layer, e.g. light-absorbing layer is often a compound having an own colour, e.g. metallic oxides, alloys, dyes etc.

**Special rules of classification**

Classification in [C01P](#) and [C09C 2200/00](#) groups shall be applied.

**C09C 1/006****{consisting of a metal or an alloy}****Special rules of classification**

Classification in [C01P](#) and [C09C 2200/00](#) shall be applied.

**C09C 1/0063****{consisting of at least one dye}****Special rules of classification**

Classification in [C01P](#) and [C09C 2200/00](#) groups shall be applied.

**C09C 1/0066****{consisting of at least one coloured inorganic material}****Definition statement***This place covers:*

Typically a coloured metal oxide, e.g. iron oxide

**Special rules of classification**

Classification in [C01P](#) and [C09C 2200/00](#) groups shall be applied.

**C09C 1/0069**

**{Sub-stoichiometric inorganic materials}**

**Definition statement**

*This place covers:*

Pigments exhibiting interference colours comprising a stack of coating layers with alternating high and low refractive indices with the first coating layer on the core surface having the low refractive index and comprising at least one light-absorbing layer consisting of sub-stoichiometric coloured inorganic material, e.g. substoichiometric compounds are non-stoichiometric titanium or silicon oxide, like  $\text{TiO}_x$ ,  $\text{SiO}_x$  with  $0 < x < 2$ .

**Special rules of classification**

Classification in [C01P](#) and [C09C 2200/00](#) groups shall be applied.

**C09C 1/0072**

**{consisting of a carbonaceous material, e.g. carbon black, graphite, SWNT, MWNT incorporated within an inorganic material}**

**Special rules of classification**

Classification in [C01P](#) and [C09C 2200/00](#) groups shall be applied.

**C09C 1/0075**

**{comprising at least one optically active layer with at least one organic material layer, e.g. liquid crystal polymers}**

**Special rules of classification**

Classification in [C01P](#) and [C09C 2200/00](#) groups shall be applied.

**C09C 1/0078**

**{Pigments consisting of flaky, non-metallic substrates, characterised by a surface-region containing free metal}**

**Definition statement**

*This place covers:*

Pigments consisting of non metallic substrates having a surface-region comprising only metal, e.g. a substrate consisting a silicate, mica, a metal oxide material coated with a metallic layer.

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/0081**

{Composite particulate pigments or fillers, i.e. containing at least two solid phases, except those consisting of coated particles of one compound ([C09C 1/0015](#), [C09C 1/0078](#) take precedence)}

**References****Limiting references**

*This place does not cover:*

Pigment exhibiting interference colours	<a href="#">C09C 1/0015</a>
Pigment consisting of flaky, non-metallic substrates, characterised by a surface-region containing free metal	<a href="#">C09C 1/0078</a>

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/0084**

{containing titanium dioxide}

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/0087**

{only containing titanium dioxide and silica or silicate}

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/009**

{whose phases only contain calcium, magnesium and carbonate ions and may contain hydroxyl ions}

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/0093**

{whose phases only contain calcium ions, carbonate ions and silicate ions or silica}

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/0096**

{Compounds of antimony ([C09C 1/0015](#), [C09C 1/0078](#) take precedence)}

**References****Limiting references**

*This place does not cover:*

Pigment exhibiting interference colours	<a href="#">C09C 1/0015</a>
Pigment consisting of flaky, non-metallic substrates, characterised by a surface-region containing free metal	<a href="#">C09C 1/0078</a>

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Compounds of antimony	<a href="#">C01G 30/00</a>
-----------------------	----------------------------

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/02**

Compounds of alkaline earth metals or magnesium {([C09C 1/0003](#), [C09C 1/0009](#), [C09C 1/0015](#), [C09C 1/0078](#) take precedence; dolomitic solids [C09C 1/009](#))}

**References****Limiting references**

*This place does not cover:*

Treatment of molybdenum compounds	<a href="#">C09C 1/0003</a>
Pigments for ceramics	<a href="#">C09C 1/0009</a>
Pigment exhibiting interference colours	<a href="#">C09C 1/0015</a>
Pigment consisting of flaky, non-metallic substrates, characterised by a surface-region containing free metal	<a href="#">C09C 1/0078</a>
Dolomitic solids	<a href="#">C09C 1/009</a>

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/021****{Calcium carbonates}****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Compounds of calcium	<a href="#">C01F 11/18</a>
----------------------	----------------------------

**Special rules of classification**Classification in [C01P](#) subgroups shall be applied.**C09C 1/025****{Calcium sulfates}****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Gypsum	<a href="#">C01F 11/46</a>
--------	----------------------------

**Special rules of classification**Classification in [C01P](#) subgroups shall be applied.**C09C 1/027****{Barium sulfates}****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Compounds of barium	<a href="#">C01F 11/46</a>
---------------------	----------------------------

**Special rules of classification**Classification in [C01P](#) subgroups shall be applied.**C09C 1/028****{Compounds containing only magnesium as metal}****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Compounds of magnesium	<a href="#">C01F 5/00</a>
------------------------	---------------------------

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/04**

Compounds of zinc {([C09C 1/0003](#), [C09C 1/0009](#), [C09C 1/0015](#), [C09C 1/0078](#) take precedence)}

**References****Limiting references**

*This place does not cover:*

Treatment of molybdenum compounds	<a href="#">C09C 1/0003</a>
Pigments for ceramics	<a href="#">C09C 1/0009</a>
Pigment exhibiting interference colours	<a href="#">C09C 1/0015</a>
Pigment consisting of flaky, non-metallic substrates, characterised by a surface-region containing free metal	<a href="#">C09C 1/0078</a>

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Compounds of zinc	<a href="#">C01G 9/00</a>
-------------------	---------------------------

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/043**

{Zinc oxide}

**References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Zinc oxide	<a href="#">C01G 9/02</a> , <a href="#">C01G 9/03</a>
------------	---

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/046**

{containing phosphorus}

**Definition statement**

*This place covers:*

Treatment of zinc compounds containing phosphorous to enhance their pigmenting or filling properties, e.g Zinc phosphate pigments which are as anticorrosion pigments

## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

Compounds comprising phosphate anions	<a href="#">C01B 25/16</a>
---------------------------------------	----------------------------

## Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

## C09C 1/06

### Lithopone

#### Definition statement

*This place covers:*

lithopone, brilliant white pigment used in paints, inks, leather, paper, linoleum, and face powder. Lithopone was developed in the 1870s as a substitute or supplement for lead carbonate (white lead), to overcome its drawbacks of toxicity, poor weathering, and darkening in atmospheres that contain sulfur compounds. Lithopone is an insoluble mixture of barium sulfate and zinc sulfide that precipitates upon mixing solutions of barium sulfide and zinc sulfate. The precipitate is recovered by filtration, then calcined (roasted) at temperatures above 600° C (1,112° F). Although lithopone has been replaced in many applications by titanium dioxide, introduced after World War I, it is still widely used in a number of products, such as water paints.

## Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

## C09C 1/08

### Zinc chromate

#### Definition statement

*This place covers:*

Treatment of zinc chromate to enhance their pigmenting or filling properties, e.g like zinc phosphate the zinc chromate is an anticorrosive pigment

## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

Compounds of chromium	<a href="#">C01G 37/00</a>
-----------------------	----------------------------

## Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

## C09C 1/10

**Compounds of cadmium** {([C09C 1/0009](#), [C09C 1/0015](#), [C09C 1/0078](#) take precedence)}

### Definition statement

*This place covers:*

Treatment of cadmium compounds to enhance their pigmenting or filling properties, e.g cadmium pigments have particularly brilliant red and yellow colours.

### References

#### Limiting references

*This place does not cover:*

Pigments for ceramics	<a href="#">C09C 1/0009</a>
Pigment exhibiting interference colours	<a href="#">C09C 1/0015</a>
Pigment consisting of flaky, non-metallic substrates, characterised by a surface-region containing free metal	<a href="#">C09C 1/0078</a>

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Compounds of cadmium	<a href="#">C01G 11/00</a>
----------------------	----------------------------

### Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

### Glossary of terms

*In this place, the following terms or expressions are used with the meaning indicated:*

Cadmium yellow	pure CdS or mixed crystals of zinc and cadmium sulfide (Cd,Zn)S
Cadmium cinnabar	(Cd,Hg)S (Cadmium mercury sulfide)

## C09C 1/12

### Cadmium sulfoselenide

#### Definition statement

*This place covers:*

Treatment of cadmium sulfoselenide to enhance its pigmenting or filling properties, e.g Cadmium Red Cd(S,Se)

#### Special rules of classification

Classification in [C01P](#) subgroups shall be applied.



## C09C 1/14

Compounds of lead {([C09C 1/0009](#), [C09C 1/0015](#), [C09C 1/0078](#) take precedence)}

### References

#### Limiting references

*This place does not cover:*

Pigments for ceramics	<a href="#">C09C 1/0009</a>
Pigment exhibiting interference colours	<a href="#">C09C 1/0015</a>
Pigment consisting of flaky, non-metallic substrates, characterised by a surface-region containing free metal	<a href="#">C09C 1/0078</a>

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Compounds of lead	<a href="#">C01G 21/00</a>
-------------------	----------------------------

### Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

## C09C 1/16

### White lead

#### Definition statement

*This place covers:*

White lead is basic lead carbonate,  $(\text{PbCO}_3)_2\text{Pb}(\text{OH})_2$  and has the warmest masstone of all the whites. It has a very subtle reddish-yellow undertone that is almost unnoticeable unless you are looking for it, or comparing lead white side by side with other kinds of white. This undertone is minimal in the best quality of lead whites.

### Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

## C09C 1/18

### Red lead

#### Definition statement

*This place covers:*

Red lead is lead tetroxide, also called minium, red lead or triplumbic tetroxide, is a bright red or orange crystalline or amorphous pigment. Chemically, red lead is lead tetroxide,  $\text{Pb}_3\text{O}_4$ , or  $2\text{PbO} \cdot \text{PbO}_2$ .

Lead tetroxide is used in the manufacture of rust-proof primer paints.

### Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

## C09C 1/20

### Lead chromate

#### Definition statement

*This place covers:*

Treatment of lead chromate compounds to enhance their pigmenting or filling properties, e.g "chrome yellow" : Lead(II) chromate ( $\text{PbCrO}_4$ ) is a chemical compound, a chromate of lead, but also a mixed phase compound of the type  $\text{Pb}(\text{Cr,S})\text{O}_4$

#### References

##### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Compounds of chromium	<a href="#">C01G 37/00</a>
-----------------------	----------------------------

#### Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

## C09C 1/22

**Compounds of iron** {([C09C 1/0009](#), [C09C 1/0015](#), [C09C 1/0078](#) take precedence)}

#### References

##### Limiting references

*This place does not cover:*

Pigments for ceramics	<a href="#">C09C 1/0009</a>
Pigment exhibiting interference colours	<a href="#">C09C 1/0015</a>
Pigment consisting of flaky, non-metallic substrates, characterised by a surface-region containing free metal	<a href="#">C09C 1/0078</a>

##### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Compounds of iron	<a href="#">C01G 49/00</a>
-------------------	----------------------------

#### Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

## C09C 1/24

### Oxides of iron

#### Definition statement

*This place covers:*

Iron oxide pigments consist in general of the well defined compounds like goethite ( $\alpha$ -FeOOH) (yellow); lepidocrocite ( $\gamma$ -FeOOH) (yellow to orange); hematite ( $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>, red) (light red to dark violet); maghemite ( $\gamma$ -Fe<sub>2</sub>O<sub>3</sub>) (brown); magnetite (Fe<sub>3</sub>O<sub>4</sub>) (black).

#### References

##### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Compounds of iron	<a href="#">C01G 49/00</a>
-------------------	----------------------------

#### Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

## C09C 1/245

{of plate-like shape}

#### Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

## C09C 1/26

### Iron blues

#### Definition statement

*This place covers:*

The iron blues are based upon iron (II,III) hexacyanoferrate (II,III), ferric ferrocyanide, ferric hexacyanoferrate, iron (III) ferrocyanide, iron (III) hexacyanoferrate (II). Historical and more common names for said pigments are Prussian blue (Parisian blue, Berlin blue) and Turnbull's blue

#### Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

## C09C 1/28

**Compounds of silicon** {([C09C 1/0009](#), [C09C 1/0015](#), [C09C 1/0078](#) take precedence)}

#### References

##### Limiting references

*This place does not cover:*

Pigments for ceramics	<a href="#">C09C 1/0009</a>
Pigment exhibiting interference colours	<a href="#">C09C 1/0015</a>

Pigment consisting of flaky, non-metallic substrates, characterised by a surface-region containing free metal	<a href="#">C09C 1/0078</a>
---	-----------------------------

**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Compounds of silicon	<a href="#">C01B 33/00</a>
----------------------	----------------------------

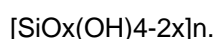
**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/30****Silicic acid****Definition statement**

*This place covers:*

Silicic acid is a general name for a family of chemical compounds of the element silicon, hydrogen, and oxygen, with the general formula



Silicon dioxide ( $\text{SiO}_2$ ) is considered as anhydrous silicic acid and is classified in [C09C 1/30](#)

**References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

Compounds of silicon	<a href="#">C01B 33/00</a>
----------------------	----------------------------

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/3009**

**{Physical treatment, e.g. grinding; treatment with ultrasonic vibrations}**

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/3018**

**{Grinding}**

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/3027****{Drying, calcination}****Special rules of classification**Classification in [C01P](#) subgroups shall be applied.**C09C 1/3036****{Agglomeration, granulation, pelleting}****Special rules of classification**Classification in [C01P](#) subgroups shall be applied.**C09C 1/3045****{Treatment with inorganic compounds}****Special rules of classification**Classification in [C01P](#) subgroups shall be applied.**C09C 1/3054****{Coating}****Special rules of classification**Classification in [C01P](#) subgroups shall be applied.**C09C 1/3063****{Treatment with low-molecular organic compounds}****Definition statement***This place covers:*

Low-molecular organic compounds are compounds which consist of one type of molecule, which molecular weight can be exactly defined. The molecular weight of low-molecular compounds is less than 15000 g/mol. Typical low-molecular compounds are fatty acids, ethylene glycols.

**Special rules of classification**Classification in [C01P](#) subgroups shall be applied.**C09C 1/3072****{Treatment with macro-molecular organic compounds}****Definition statement***This place covers:*

Macromolecular organic compounds are compounds with a molecular weight of more than about 15000 g/mol. Typical macro-molecular organic compounds are polymers like polyethylene, polypropylene etc., waxes etc.

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/3081**

{Treatment with organo-silicon compounds}

**Special rules of classification**

Classification in [C01P](#) subgroup shall be applied.

**C09C 1/309**

{Combinations of treatments provided for in groups  
[C09C 1/3009](#) - [C09C 1/3081](#)}

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

The groups for the single treatments have to be indicated as well, e.g. a silicon dioxide treated with an inorganic compound, further coated with a macromolecular compound and a silane, followed by a grinding process will get the group symbols [C09C 1/309](#), [C09C 1/3045](#), [C09C 1/3072](#), [C09C 1/12](#) and [C09C 1/3018](#)

**C09C 1/32****Ultramarine****Definition statement**

*This place covers:*

Ultramarine is a blue pigment consisting primarily of a double silicate of aluminium (three dimensional aluminosilicate lattice) and sodium with some sulfides or sulfates, and occurring in nature as a proximate component of lapis lazuli. In the past, it has also been known as azzurum ultramarine, azzurum transmarinum, azzuro oltramarino, azur d'Acre, pierre d'azur, Lazurstein. Current terminology for ultramarine include natural ultramarine (English), outremer lapis (French), Ultramarin echt (German), oltremare genuino (Italian), and ultramarino verdadero (Spanish). Ultramarine is a complex sulfur-containing sodium-silicate ( $\text{Na}_{6-10}\text{Al}_6\text{Si}_6\text{O}_{24}\text{S}_{2-4}$ ) containing a blue cubic mineral called lazurite (the major component in lapis lazuli). The blue color of the pigment is due to the  $\text{S}_3^-$  radical anion, which contains an unpaired electron.

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/34**

Compounds of chromium {([C09C 1/0009](#), [C09C 1/0015](#), [C09C 1/0078](#), [C09C 1/08](#), [C09C 1/20](#) take precedence)}

**References****Limiting references**

*This place does not cover:*

Pigments for ceramics	<a href="#">C09C 1/0009</a>
-----------------------	-----------------------------

Pigment exhibiting interference colours	<a href="#">C09C 1/0015</a>
Pigment consisting of flaky, non-metallic substrates, characterised by a surface-region containing free metal	<a href="#">C09C 1/0078</a>
Treatment of zinc chromate	<a href="#">C09C 1/08</a>
Treatment of lead chromate	<a href="#">C09C 1/20</a>

**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Compounds of chromium	<a href="#">C01G 37/00</a>
-----------------------	----------------------------

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/343**

**{containing silicon or associated with silicon containing material, except when silicon only occurs in a thin coating of the particles}**

**Definition statement**

*This place covers:*

Treatment of titanium compounds containing silicon or associated with silicon containing material, except when silicon only occurs in a thin coating of the particles.

Thin layer coating is a coating thickness being less than 0.1 time the particle radius.

**References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

Compounds of silicon	<a href="#">C01B 33/00</a>
Compounds of chromium	<a href="#">C01G 37/00</a>

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/346**

**{Chromium oxides}**

**References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

Compounds of chromium	<a href="#">C01G 37/00</a>
-----------------------	----------------------------

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/36**

**Compounds of titanium** {([C09C 1/0009](#), [C09C 1/0015](#), [C09C 1/0078](#) take precedence)}

**References****Limiting references**

*This place does not cover:*

Pigments for ceramics	<a href="#">C09C 1/0009</a>
Pigment exhibiting interference colours	<a href="#">C09C 1/0015</a>
Pigment consisting of flaky, non-metallic substrates, characterised by a surface-region containing free metal	<a href="#">C09C 1/0078</a>

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Compounds of titanium	<a href="#">C01G 23/00</a>
-----------------------	----------------------------

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/3607**

**{Titanium dioxide}**

**Definition statement**

*This place covers:*

Treatment of titanium oxide compounds to enhance their pigmenting or filling properties, e.g. rutile, anatase and brookite;

Anatase has the higher photocatalytic activity compared with the photocatalytic activity of rutile.

**References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Titanium dioxide	<a href="#">C01G 23/047</a>
------------------	-----------------------------

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.



**C09C 1/3615**

**{Physical treatment, e.g. grinding, treatment with ultrasonic vibrations}**

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/3623**

**{Grinding}**

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/363**

**{Drying, calcination}**

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/3638**

**{Agglomeration, granulation, pelleting}**

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/3646**

**{Densifying, degassing, packaging}**

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/3653**

**{Treatment with inorganic compounds}**

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/3661**

**{Coating}**

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/3669****{Treatment with low-molecular organic compounds}****Definition statement**

*This place covers:*

Low-molecular organic compounds are compounds which consist of one type of molecule, which molecular weight can be exactly defined. The molecular weight of low-molecular compounds is less than 15000 g/mol. Typical low-molecular compounds are fatty acids, ethylene glycols.

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/3676****{Treatment with macro-molecular organic compounds}****Definition statement**

*This place covers:*

Macromolecular organic compounds are compounds with a molecular weight of more than about 15000 g/mol. Typical macro-molecular organic compounds are polymers like polyethylene, polypropylene etc., waxes etc.

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/3684****{Treatment with organo-silicon compounds}****Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/3692****{Combinations of treatments provided for in groups**

**[C09C 1/3615](#) - [C09C 1/3684](#)}**

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

The classes for the single treatments have to be indicated as well, e.g. a titanium dioxide treated with an inorganic compound, further coated with a macromolecular compound and a silane, followed by a grinding process will get the classes [C09C 1/309](#), [C09C 1/3045](#), [C09C 1/3072](#), [C09C 1/12](#) and [C09C 1/3018](#).

**C09C 1/38**

**Compounds of mercury** {([C09C 1/0009](#), [C09C 1/0015](#), [C09C 1/0078](#) take precedence)}

**References****Limiting references**

*This place does not cover:*

Pigments for ceramics	<a href="#">C09C 1/0009</a>
Pigment exhibiting interference colours	<a href="#">C09C 1/0015</a>
Pigment consisting of flaky, non-metallic substrates, characterised by a surface-region containing free metal	<a href="#">C09C 1/0078</a>

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Compounds of mercury	<a href="#">C01G 13/00</a>
----------------------	----------------------------

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/40**

**Compounds of aluminium** {([C09C 1/0009](#), [C09C 1/0015](#), [C09C 1/0078](#), [C09C 1/32](#) take precedence)}

**References****Limiting references**

*This place does not cover:*

Pigments for ceramics	<a href="#">C09C 1/0009</a>
Pigment exhibiting interference colours	<a href="#">C09C 1/0015</a>
Pigment consisting of flaky, non-metallic substrates, characterised by a surface-region containing free metal	<a href="#">C09C 1/0078</a>
Treatment of ultramarine	<a href="#">C09C 1/32</a>

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Compounds of aluminium	<a href="#">C01F 7/00</a>
------------------------	---------------------------

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/402**

**{Satin white, modifications thereof, e.g. carbonated or silicated; Calcium sulfoaluminates; Mixtures thereof, e.g. with calcium carbonate or kaolin}**

**Definition statement**

*This place covers:*

Treatment of satin white compounds, calcium sulfoaluminates compounds, mixtures thereof to enhance their pigmenting or filling properties.

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**Glossary of terms**

*In this place, the following terms or expressions are used with the meaning indicated:*

Satin white is a white pigment consisting essentially of calcium sulfate and aluminum hydroxide

**C09C 1/405**

**{containing combined silica, e.g. mica}**

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/407**

**{Aluminium oxides or hydroxides}**

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/42**

**Clays**

**References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Preparatory treatment for clay wares	<a href="#">C04B 33/04</a>
--------------------------------------	----------------------------

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/44****Carbon****References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

Compounds of carbon	<a href="#">C01B 32/00</a>
---------------------	----------------------------

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/46****Graphite {([C09C 1/0015](#) takes precedence)}****Definition statement**

*This place covers:*

Graphite is an allotrope of carbon and has a layered, planar structure. In each layer, the carbon atoms are arranged in a honeycomb lattice.

**References****Limiting references**

*This place does not cover:*

Pigments exhibiting interference colours	<a href="#">C09C 1/0015</a>
--	-----------------------------

**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Preparation of graphite	<a href="#">C01B 32/205</a>
-------------------------	-----------------------------

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/48****Carbon black****Definition statement**

*This place covers:*

Carbon black is a form of amorphous carbon and produced with the thermal decomposition method or the partial combustion method using hydrocarbons such as oil or natural gas as raw material.

The characteristics of carbon black vary depending on manufacturing process, and therefore carbon black is classified by manufacturing process.

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/482**

{Preparation from used rubber products, e.g. tyres (recovery of plastics or other constituents of waste material containing plastics [B29B 17/00](#))}

**References****Limiting references**

*This place does not cover:*

Processing of used rubber in general	<a href="#">B29B 17/00</a>
--------------------------------------	----------------------------

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/485**

{Preparation involving the use of a plasma or of an electric arc}

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/487**

{Separation; Recovery (quenching [C09C 1/50](#) - [C09C 1/54](#))}

**References****Limiting references**

*This place does not cover:*

Quenching	<a href="#">C09C 1/50</a> - <a href="#">C09C 1/54</a>
-----------	---

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/50**

Furnace black {; Preparation thereof (separation or recovery [C09C 1/487](#))}

**Definition statement**

*This place covers:*

Furnace black is a carbon black formed by partial combustion of petroleum or coal oil and gaseous hydrocarbons in a closed furnace with a deficiency of oxygen

## References

### Limiting references

*This place does not cover:*

Separation or recovery	<a href="#">C09C 1/487</a>
------------------------	----------------------------

## Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

## C09C 1/52

**Channel black {; Preparation thereof (separation or recovery [C09C 1/487](#))}**

### Definition statement

*This place covers:*

Channel black is a carbon black formed by bringing partially combusted fuel, which is generated with natural gas as raw material, into contact with channel steel and then collecting the carbon black which results.

## References

### Limiting references

*This place does not cover:*

Separation or recovery	<a href="#">C09C 1/487</a>
------------------------	----------------------------

## Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

## C09C 1/54

**Acetylene black; thermal black {; Preparation thereof (separation or recovery [C09C 1/487](#))}**

### Definition statement

*This place covers:*

Acetylene black is a carbon black formed by thermally decomposing acetylene gas. It provides carbon black with higher structures and higher crystallinity.

## References

### Limiting references

*This place does not cover:*

Separation or recovery	<a href="#">C09C 1/487</a>
------------------------	----------------------------

## Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/56****Treatment of carbon black {; Purification}****Special rules of classification**Classification in [C01P](#) subgroups shall be applied.**C09C 1/565****{comprising an oxidative treatment with oxygen, ozone or oxygenated compounds, e.g. when such treatment occurs in a region of the furnace next to the carbon black generating reaction zone}****Special rules of classification**Classification in [C01P](#) subgroups shall be applied.**C09C 1/58****Agglomerating, pelleting, or the like by wet methods****Special rules of classification**Classification in [C01P](#) subgroups shall be applied.**C09C 1/60****Agglomerating, pelleting, or the like by dry methods****Special rules of classification**Classification in [C01P](#) subgroups shall be applied.**C09C 1/62****Metallic pigments or fillers {([C09C 1/0015](#) takes precedence)}****Definition statement***This place covers:*

Metallic pigments or fillers, metallic effect pigments provided in their pure metallic form. However, for corrosion prevention the metallic pigments or fillers can be coated with optically non-active, protective coatings.

**References****Limiting references***This place does not cover:*

Pigments exhibiting interference colours	<a href="#">C09C 1/0015</a>
--	-----------------------------

**Informative references***Attention is drawn to the following places, which may be of interest for search:*

Making metallic powder or suspensions thereof	<a href="#">B22F 9/00</a>
---	---------------------------



Metallothermic processes for the manufacture of iron from iron compounds	<a href="#">C21B 15/02</a>
Dry methods of reducing to metals from metal carbonyls	<a href="#">C22B 5/20</a>
Electrolytic production, recovery or refining of metal powders or porous metal masses	<a href="#">C25C 5/00</a>

### Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

## C09C 1/622

**{Comminution, shaping or abrasion of initially uncoated particles, possibly in presence of grinding aids, abrasives or chemical treating or coating agents; Particle solidification from melted or vaporised metal; Classification}**

### Definition statement

*This place covers:*

Comminution, shaping or abrasion of initially uncoated particles, with or without grinding aids, abrasives or chemical treating or coating agents.

Particle solidification from melted or vaporised metal

Classification

### Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

## C09C 1/625

**{the particles consisting of zinc or a zinc alloy}**

### Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

## C09C 1/627

**{Copper}**

### Special rules of classification

Classification in [C01P](#) subgroup shall be applied.

## C09C 1/64

**Aluminium**

### Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

**C09C 1/642****{treated with inorganic compounds}****Special rules of classification**Classification in [C01P](#) subgroups shall be applied.**C09C 1/644****{treated with organic compounds, e.g. polymers}****Special rules of classification**Classification in [C01P](#) subgroups shall be applied.**C09C 1/646****{concomitant with mechanical comminution, shaping or abrasion of the particles}****Special rules of classification**Classification in [C01P](#) subgroups shall be applied.**C09C 1/648****{treated with inorganic and organic, e.g. polymeric, compounds}****Special rules of classification**Classification in [C01P](#) subgroups shall be applied.**C09C 1/66****Copper alloys, e.g. bronze****Special rules of classification**Classification in [C01P](#) subgroups shall be applied.**C09C 3/00****Treatment in general of inorganic materials, other than fibrous fillers, to enhance their pigmenting or filling properties****Definition statement***This place covers:*

Treatment in general of inorganic materials not being fibrous fillers to increase their pigmenting or filling properties.

**References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Dyeing other macromolecular particles	<a href="#">C08J 3/20</a>
---------------------------------------	---------------------------

Dyeing macromolecular fibres	<a href="#">D06P</a>
------------------------------	----------------------

### Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

Specific examples shall always be classified in the appropriate [C09C 1/00](#) subgroups.

## C09C 3/003

### {Flushing}

### Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

### Glossary of terms

*In this place, the following terms or expressions are used with the meaning indicated:*

Flushing	to purge, washing
----------	-------------------

## C09C 3/006

### {Combinations of treatments provided for in groups [C09C 3/04](#) - [C09C 3/12](#)}

### Special rules of classification

Classification in [C01P](#) subgroups shall be applied

The single treatment steps shall be classified in the appropriate [C09C 3/00](#)-class

## C09C 3/04

**Physical treatment, e.g. grinding, treatment with ultrasonic vibrations**  
{([C09C 3/006](#) takes precedence)}

### Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

## C09C 3/041

### {Grinding}

### Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

## C09C 3/043

### {Drying, calcination}

### Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

**C09C 3/045****{Agglomeration, granulation, pelleting}****Special rules of classification**Classification in [C01P](#) subgroups shall be applied.**C09C 3/046****{Densifying, degassing, packaging}****Special rules of classification**Classification in [C01P](#) subgroups shall be applied.**C09C 3/048****{Treatment with a plasma}****Special rules of classification**Classification in [C01P](#) subgroups shall be applied.**C09C 3/06****Treatment with inorganic compounds {([C09C 3/006](#), [C09C 3/048](#) take precedence)}****References****Limiting references***This place does not cover:*

Combination of treatments provided for in groups <a href="#">C09C 3/04</a> - <a href="#">C09C 3/12</a>	<a href="#">C09C 3/006</a>
Treatment with plasma	<a href="#">C09C 3/048</a>

**Special rules of classification**Classification in [C01P](#) subgroups shall be applied.**C09C 3/063****{Coating}****Special rules of classification**Classification in [C01P](#) subgroups shall be applied.

**C09C 3/066**

{Treatment or coating resulting in a free metal containing surface-region  
([C09C 1/0078](#) takes precedence)}

**References****Limiting references**

*This place does not cover:*

Pigments consisting of flaky, non-metallic substrates, characterised by a surface-region containing free metal	<a href="#">C09C 1/0078</a>
--	-----------------------------

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 3/08**

Treatment with low-molecular-weight {non-polymer} organic compounds  
{([C09C 3/006](#), [C09C 3/048](#) take precedence)}

**Definition statement**

*This place covers:*

Low-molecular organic compounds are compounds which consist of one type of molecule, which molecular weight can be exactly defined. The molecular weight of low-molecular compounds is less than 15000 g/mol. Typical low-molecular compounds are fatty acids, ethylene glycols.

**References****Limiting references**

*This place does not cover:*

Combination of treatments provided for in groups <a href="#">C09C 3/04</a> - <a href="#">C09C 3/12</a>	<a href="#">C09C 3/006</a>
Treatment with plasma	<a href="#">C09C 3/048</a>

**Special rules of classification**

Classification in [C01P](#) subgroups shall be applied.

**C09C 3/10**

Treatment with macromolecular organic compounds {([C09C 3/006](#) takes precedence)}

**Definition statement**

*This place covers:*

Macromolecular organic compounds are compounds with a molecular weight of more than about 15000 g/mol. Typical macro-molecular organic compounds are polymers like polyethylene, polypropylene etc., waxes etc.

## References

### Limiting references

*This place does not cover:*

Combination of treatments provided for in groups <a href="#">C09C 3/04</a> - <a href="#">C09C 3/12</a>	<a href="#">C09C 3/006</a>
--	----------------------------

## Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

## C09C 3/12

Treatment with organosilicon compounds {([C09C 3/006](#) takes precedence)}

## References

### Limiting references

*This place does not cover:*

Combination of treatments provided for in groups <a href="#">C09C 3/04</a> - <a href="#">C09C 3/12</a>	<a href="#">C09C 3/006</a>
--	----------------------------

## Special rules of classification

Classification in [C01P](#) subgroups shall be applied.

## C09C 2200/00

**Compositional and structural details of pigments exhibiting interference colours**

## Special rules of classification

When the subgroups of [C09C 2200/00](#) - [C09C 2220/20](#) are used for classification only for [C09C 1/0015](#) - [C09C 1/0075](#), no symbols are given for the classification of the particle morphology according to the symbols [C01P 2004/10](#) - [C01P 2004/42](#) or [C01P 2004/80](#) - [C01P 2004/88](#)