

**CPC****COOPERATIVE PATENT CLASSIFICATION****C01P****INDEXING SCHEME RELATING TO STRUCTURAL AND PHYSICAL ASPECTS OF SOLID INORGANIC COMPOUNDS****NOTES**

1. This subclass constitutes an internal scheme for indexing only.
2. The indexing scheme is used to identify structural and physical aspects of solid inorganic compounds, already classified in class [C01](#) or subclass [C09C](#).

**C01P 2002/00****Crystal-structural characteristics**

C01P 2002/01

- depicted by a TEM-image

C01P 2002/02

- Amorphous compounds

C01P 2002/04

- Compounds with a limited amount of crystallinity, e.g. as indicated by a crystallinity index

C01P 2002/08

- Intercalated structures, i.e. with atoms or molecules intercalated in their structure

C01P 2002/10

- One-dimensional structures

C01P 2002/20

- Two-dimensional structures

C01P 2002/22

- . . layered hydroxide-type, e.g. of the hydrotalcite-type

C01P 2002/30

- Three-dimensional structures

C01P 2002/32

- . . spinel-type ( $AB_2O_4$ )

C01P 2002/34

- . . perovskite-type ( $ABO_3$ )

C01P 2002/36

- . . pyrochlore-type ( $A_2B_2O_7$ )

C01P 2002/50

- Solid solutions

C01P 2002/52

- . . containing elements as dopants

C01P 2002/54

- . . . one element only

C01P 2002/60

- Compounds characterised by their crystallite size

C01P 2002/70

- defined by measured X-ray, neutron or electron diffraction data

C01P 2002/72

- . . by d-values or two theta-values, e.g. as X-ray diagram

C01P 2002/74

- . . by peak-intensities or a ratio thereof only

C01P 2002/76

- . . by a space-group or by other symmetry indications

C01P 2002/77

- . . by unit-cell parameters, atom positions or structure diagrams

C01P 2002/78

- . . by stacking-plane distances or stacking sequences

C01P 2002/80

- defined by measured data other than those specified in group [C01P 2002/70](#)

C01P 2002/82

- . . by IR- or Raman-data

C01P 2002/84

- . . by UV- or VIS- data

C01P 2002/85

- . . by XPS, EDX or EDAX data

C01P 2002/86

- . . by NMR- or ESR-data

C01P 2002/87

- . . by chromatography data, e.g. HPLC, gas chromatography

C01P 2002/88

- . . by thermal analysis data, e.g. TGA, DTA, DSC

C01P 2002/89	<ul style="list-style-type: none"> <li>by mass-spectroscopy</li> </ul>
C01P 2002/90	<ul style="list-style-type: none"> <li>Other crystal-structural characteristics not specified above</li> </ul>
<b>C01P 2004/00</b>	<b>Particle morphology</b>
C01P 2004/01	<ul style="list-style-type: none"> <li>depicted by an image</li> </ul>
C01P 2004/02	<ul style="list-style-type: none"> <li>obtained by optical microscopy</li> </ul>
C01P 2004/03	<ul style="list-style-type: none"> <li>obtained by SEM</li> </ul>
C01P 2004/04	<ul style="list-style-type: none"> <li>obtained by TEM, STEM, STM or AFM</li> </ul>
C01P 2004/10	<ul style="list-style-type: none"> <li>extending in one dimension, e.g. needle-like</li> </ul>
C01P 2004/11	<ul style="list-style-type: none"> <li>with a prismatic shape</li> </ul>
C01P 2004/12	<ul style="list-style-type: none"> <li>with a cylindrical shape</li> </ul>
C01P 2004/13	<ul style="list-style-type: none"> <li>Nanotubes</li> </ul>
C01P 2004/133	<ul style="list-style-type: none"> <li>Multiwall nanotubes</li> </ul>
C01P 2004/136	<ul style="list-style-type: none"> <li>Nanoscrolls, i.e. tubes having a spiral section</li> </ul>
C01P 2004/16	<ul style="list-style-type: none"> <li>Nanowires or nanorods, i.e. solid nano-fibres with two nearly equal dimensions between 1-100 nanometer</li> </ul>
C01P 2004/17	<ul style="list-style-type: none"> <li>Nanostrips, nanoribbons or nanobelts, i.e. solid nano-fibres with two significantly differing dimensions between 1-100 nanometer</li> </ul>
C01P 2004/20	<ul style="list-style-type: none"> <li>extending in two dimensions, e.g. plate-like</li> </ul>
C01P 2004/22	<ul style="list-style-type: none"> <li>with a polygonal circumferential shape</li> </ul>
C01P 2004/24	<ul style="list-style-type: none"> <li>Nanoplates, i.e. plate-like particles with a thickness from 1-100 nanometer</li> </ul>
C01P 2004/30	<ul style="list-style-type: none"> <li>extending in three dimensions</li> </ul>
C01P 2004/32	<ul style="list-style-type: none"> <li>Spheres</li> </ul>
C01P 2004/34	<ul style="list-style-type: none"> <li>hollow</li> </ul>
C01P 2004/36	<ul style="list-style-type: none"> <li>fragmented</li> </ul>
C01P 2004/38	<ul style="list-style-type: none"> <li>cube-like</li> </ul>
C01P 2004/39	<ul style="list-style-type: none"> <li>parallelepiped-like</li> </ul>
C01P 2004/40	<ul style="list-style-type: none"> <li>prism-like</li> </ul>
C01P 2004/41	<ul style="list-style-type: none"> <li>octahedron-like</li> </ul>
C01P 2004/42	<ul style="list-style-type: none"> <li>(bi)pyramid-like</li> </ul>
C01P 2004/45	<ul style="list-style-type: none"> <li>Aggregated particles or particles with an intergrown morphology</li> </ul>
C01P 2004/50	<ul style="list-style-type: none"> <li>Agglomerated particles</li> </ul>
C01P 2004/51	<ul style="list-style-type: none"> <li>Particles with a specific particle size distribution</li> </ul>
C01P 2004/52	<ul style="list-style-type: none"> <li>highly monodisperse size distribution</li> </ul>
C01P 2004/53	<ul style="list-style-type: none"> <li>bimodal size distribution</li> </ul>
C01P 2004/54	<ul style="list-style-type: none"> <li>Particles characterised by their aspect ratio, i.e. the ratio of sizes in the longest to the shortest dimension</li> </ul>
C01P 2004/60	<ul style="list-style-type: none"> <li>Particles characterised by their size</li> </ul>
C01P 2004/61	<ul style="list-style-type: none"> <li>Micrometer sized, i.e. from 1-100 micrometer</li> </ul>
C01P 2004/62	<ul style="list-style-type: none"> <li>Submicrometer sized, i.e. from 0.1-1 micrometer</li> </ul>
C01P 2004/64	<ul style="list-style-type: none"> <li>Nanometer sized, i.e. from 1-100 nanometer</li> </ul>

- C01P 2004/80 . Particles consisting of a mixture of two or more inorganic phases
- C01P 2004/82 . . two phases having the same anion, e.g. both oxidic phases
- C01P 2004/84 . . . one phase coated with the other
- C01P 2004/86 . . . . Thin layer coatings, i.e. the coating thickness being less than 0.1 time the particle radius
- C01P 2004/88 . . . . Thick layer coatings
- C01P 2004/90 . Other morphology not specified above

## **C01P 2006/00 Physical properties of inorganic compounds**

### **NOTES**

1. Compounds having molecular sieve properties are classified in [C01B 37/00](#), [C01B 39/00](#).
2. The following codes are only to be used for physical values deviating significantly from the average usual values.

- C01P 2006/10 . Solid density
- C01P 2006/11 . Powder tap density
- C01P 2006/12 . Surface area
- C01P 2006/13 . . thermal stability thereof at high temperatures
- C01P 2006/14 . Pore volume
- C01P 2006/16 . Pore diameter
- C01P 2006/17 . . Pore diameter distribution
- C01P 2006/19 . Oil-absorption capacity, e.g. DBP values
- C01P 2006/20 . Powder free flowing behaviour
- C01P 2006/21 . Attrition-index or crushing strength of granulates
- C01P 2006/22 . Rheological behaviour as dispersion, e.g. viscosity, sedimentation stability
- C01P 2006/32 . Thermal properties
- C01P 2006/33 . . Phase transition temperatures
- C01P 2006/34 . . . Melting temperatures
- C01P 2006/35 . . . Boiling temperatures
- C01P 2006/36 . . . Solid to solid transition temperatures
- C01P 2006/37 . . Stability against thermal decomposition
- C01P 2006/40 . Electric properties
- C01P 2006/42 . Magnetic properties
- C01P 2006/44 . Alpha, beta or gamma radiation related properties
- C01P 2006/60 . Optical properties, e.g. expressed in CIELAB-values
- C01P 2006/62 . . L\* (lightness axis)
- C01P 2006/63 . . a\* (red-green axis)
- C01P 2006/64 . . b\* (yellow-blue axis)
- C01P 2006/65 . . Chroma (C\*)
- C01P 2006/66 . . Hue (H\*)
- C01P 2006/80 . Compositional purity

C01P 2006/82

- • water content

C01P 2006/88

- Isotope composition differing from the natural occurrence

C01P 2006/90

- Other properties not specified above