

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

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	.. by mass-spectroscopy
C01P 2002/90	. Other crystal-structural characteristics not specified above
<b>C01P 2004/00</b>	<b>Particle morphology</b>
C01P 2004/01	. depicted by an image
C01P 2004/02	.. obtained by optical microscopy
C01P 2004/03	.. obtained by SEM
C01P 2004/04	.. obtained by TEM, STEM, STM or AFM
C01P 2004/10	. extending in one dimension, e.g. needle-like
C01P 2004/11	.. with a prismatic shape
C01P 2004/12	.. with a cylindrical shape
C01P 2004/13	.. Nanotubes
C01P 2004/133	... Multiwall nanotubes
C01P 2004/136	... Nanoscrolls, i.e. tubes having a spiral section
C01P 2004/16	.. Nanowires or nanorods, i.e. solid nano-fibres with two nearly equal dimensions between 1-100 nanometer
C01P 2004/17	.. Nanostrips, nanoribbons or nanobelts, i.e. solid nano-fibres with two significantly differing dimensions between 1-100 nanometer
C01P 2004/20	. extending in two dimensions, e.g. plate-like
C01P 2004/22	.. with a polygonal circumferential shape
C01P 2004/24	.. Nanoplates, i.e. plate-like particles with a thickness from 1-100 nanometer
C01P 2004/30	. extending in three dimensions
C01P 2004/32	.. Spheres
C01P 2004/34	... hollow
C01P 2004/36	... fragmented
C01P 2004/38	.. cube-like
C01P 2004/39	.. parallelepiped-like
C01P 2004/40	.. prism-like
C01P 2004/41	.. octahedron-like
C01P 2004/42	.. (bi)pyramid-like
C01P 2004/45	.. Aggregated particles or particles with an intergrown morphology
C01P 2004/50	. Agglomerated particles
C01P 2004/51	. Particles with a specific particle size distribution
C01P 2004/52	.. highly monodisperse size distribution
C01P 2004/53	.. bimodal size distribution
C01P 2004/54	. Particles characterised by their aspect ratio, i.e. the ratio of sizes in the longest to the shortest dimension
C01P 2004/60	. Particles characterised by their size
C01P 2004/61	.. Micrometer sized, i.e. from 1-100 micrometer
C01P 2004/62	.. Submicrometer sized, i.e. from 0.1-1 micrometer
C01P 2004/64	.. Nanometer sized, i.e. from 1-100 nanometer

- 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**

### **NOTE**

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