

# CPC COOPERATIVE PATENT CLASSIFICATION

**C01D** **COMPOUNDS OF ALKALI METALS, i.e. LITHIUM, SODIUM, POTASSIUM, RUBIDIUM, CAESIUM, OR FRANCIUM** (metal hydrides {monoborane, diborane or addition complexes thereof} [C01B 6/00](#); salts of oxyacids of halogens [C01B 11/00](#); peroxides, salts of peroxyacids [C01B 15/00](#); sulfides [C01B 17/22](#); thiosulfates, dithionites, polythionates [C01B 17/64](#); compounds containing selenium or tellurium [C01B 19/00](#); binary compounds of nitrogen with metals [C01B 21/06](#); azides [C01B 21/08](#); {compounds other than ammonia and cyanogen, containing nitrogen and other non-metals [C01B 21/082](#)}; metal amides [C01B 21/092](#); nitrites [C01B 21/50](#); phosphides [C01B 21/50](#); {compounds of noble gases [C01B 23/0005](#)}; phosphides [C01B 25/08](#); salts of oxyacids of phosphorus [C01B 25/16](#); carbides [C01B 31/30](#); compounds containing silicon [C01B 33/00](#); compounds containing boron [C01B 35/00](#); cyanides [C01C 3/08](#); salts of cyanic acid [C01C 3/14](#); salts of cyanamide [C01C 3/16](#); thiocyanates [C01C 3/20](#))

<b>1/00</b>	<b>Oxides or hydroxides of sodium, potassium or alkali metals in general</b>	<b>5/00</b>	<b>Sulfates or sulfites of sodium, potassium or alkali metals in general</b> {(sulfites in general <a href="#">C01B 17/62</a> )}
1/02	. Oxides	5/002	. {Preventing the absorption of moisture or caking of the crystals by additives}
1/04	. Hydroxides	5/004	. {Preparation in the form of granules, pieces or other shaped products}
1/20	. . Preparation by reacting oxides or hydroxides with alkali metal salts	5/006	. {Recovery of sodium sulfate from coagulation baths for the spinning of viscose}
1/22	. . . with carbonates or bicarbonates	5/008	. {Preparation of potassium sulfate from alunite}
1/24	. . . from or via fluorides or silico-fluorides	5/02	. Preparation of sulfates from alkali metal salts and sulfuric acid or bisulfates; Preparation of bisulfates
1/26	. . Preparation from or via cyano compounds, e.g. cyanides, cyanamides	5/04	. Preparation of sulfates with the aid of sulfurous acid or sulfites, e.g. Hargreaves process {(pyrosulfites or metabisulfites <a href="#">C01D 5/145</a> )}
1/28	. . Purification; Separation	5/06	. Preparation of sulfates by double decomposition
1/30	. . . by crystallisation	5/08	. . with each other or with ammonium sulfate
1/32	. . . by absorption or precipitation	5/10	. . with sulfates of magnesium, calcium, strontium, or barium
1/34	. . . with selective solvents	5/12	. Preparation of double sulfates of magnesium with sodium or potassium
1/36	. . . by oxidation	5/14	. Preparation of sulfites ( <a href="#">C01D 5/04</a> takes precedence)
1/38	. . . by dialysis	5/145	. . {Pyrosulfites or metabisulfites}
1/40	. . . by electrolysis	5/16	. Purification {( <a href="#">C01D 5/145</a> takes precedence)}
1/42	. . Concentration; Dehydration	5/18	. Dehydration {( <a href="#">C01D 5/145</a> takes precedence)}
1/44	. . Preparation in the form of granules, pieces, or other shaped products	<b>7/00</b>	<b>Carbonates of sodium, potassium or alkali metals in general</b>
<b>3/00</b>	<b>Halides of sodium, potassium or alkali metals in general</b> {(halides in general <a href="#">C01B 9/00</a> )}	7/02	. Preparation by double decomposition
3/02	. Fluorides	7/04	. . with a fluoride or silico-fluoride ( <a href="#">C01D 1/24</a> takes precedence)
3/04	. Chlorides	7/06	. Preparation via sodium or potassium magnesium carbonate
3/06	. . Preparation by working up brines; seawater or spent lyes	7/07	. Preparation from the hydroxides
3/08	. . Preparation by working up natural or industrial salt mixtures or siliceous minerals	7/08	. Preparation from or via cyano compounds of sodium or potassium ( <a href="#">C01D 1/26</a> takes precedence)
3/10	. Bromides	7/10	. Preparation of bicarbonates from carbonates (ammonia soda process <a href="#">C01D 7/18</a> )
3/12	. Iodides	7/12	. Preparation of carbonates from bicarbonates {or bicarbonate-containing product}
3/14	. Purification	7/123	. . {by thermal decomposition of solids in the absence of a liquid medium}
3/145	. . {by solid ion-exchangers or solid chelating agents}	7/126	. . {Multi-step processes, e.g. from trona to soda ash}
3/16	. . by precipitation or adsorption {( <a href="#">C01D 3/145</a> takes precedence)}		
3/18	. . with selective solvents		
3/20	. . by melting		
3/22	. Preparation in the form of granules, pieces, or other shaped products		
3/24	. . Influencing the crystallisation process		
3/26	. Preventing the absorption of moisture or caking of the crystals		

- 7/14 . Preparation of sesquicarbonates
- 7/16 . Preparation from compounds of sodium or potassium with amines and carbon dioxide
- 7/18 . Preparation by the ammonia-soda process  
{(C01D 7/12 takes precedence)}
- 7/22 . Purification
- 7/24 . . Crystallisation
- 7/26 . . by precipitation or adsorption
- 7/28 . . with selective solvents
- 7/30 . . by oxidation
- 7/32 . . by dialysis
- 7/34 . . by electrolysis
- 7/35 . Varying the content of water of crystallisation or the specific gravity {(calcination B01J 6/00, F27B)}
- 7/37 . . Densifying sodium carbonate
- 7/38 . Preparation in the form of granules, pieces or other shaped products
- 7/40 . . influencing the crystallisation process
- 7/42 . Preventing the absorption of moisture or caking

**9/00 Nitrates of sodium, potassium or alkali metals in general** {(preparation as fertilizers or of fertilizers containing them C05D 5/00)}

- 9/02 . Preparation by working-up natural salt mixtures
- 9/04 . Preparation with liquid nitric acid
- 9/06 . Preparation with gaseous nitric acid or nitrogen oxides
- 9/08 . Preparation by double decomposition
- 9/10 . . with ammonium nitrate
- 9/12 . . with nitrates or magnesium, calcium, strontium, or barium
- 9/14 . . of salts of potassium with sodium nitrate
- 9/16 . Purification
- 9/18 . Preparation in the form of shaped products, e.g. granules
- 9/20 . Preventing the absorption of moisture or caking

**13/00 Compounds of sodium or potassium not provided for elsewhere**

**15/00 Lithium compounds**

- 15/005 . {Lithium hexafluorophosphate}
- 15/02 . Oxides; Hydroxides
- 15/04 . Halides
- 15/06 . Sulfates; Sulfites
- 15/08 . Carbonates; Bicarbonates
- 15/10 . Nitrates

**17/00 Rubidium, caesium or francium compounds**

- 17/003 . {Compounds of alkali metals}
- 17/006 . . {Preparation of potassium compounds comprising precipitating potassium ions by an organic reagent or extracting them by a liquid organic phase}