

# 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](#))

**1/00 Oxides or hydroxides of sodium, potassium or alkali metals in general**

- 1/02 . Oxides
- 1/04 . Hydroxides
- 1/20 . . Preparation by reacting oxides or hydroxides with alkali metal salts
- 1/22 . . . with carbonates or bicarbonates
- 1/24 . . . from or via fluorides or silico-fluorides
- 1/26 . . Preparation from or via cyano compounds, e.g. cyanides, cyanamides
- 1/28 . . Purification; Separation
- 1/30 . . . by crystallisation
- 1/32 . . . by absorption or precipitation
- 1/34 . . . with selective solvents
- 1/36 . . . by oxidation
- 1/38 . . . by dialysis
- 1/40 . . . by electrolysis
- 1/42 . . Concentration; Dehydration
- 1/44 . . Preparation in the form of granules, pieces, or other shaped products

**3/00 Halides of sodium, potassium or alkali metals in general** {(halides in general [C01B 9/00](#))}

- 3/02 . Fluorides
- 3/04 . Chlorides
- 3/06 . . Preparation by working up brines; seawater or spent lyes
- 3/08 . . Preparation by working up natural or industrial salt mixtures or siliceous minerals
- 3/10 . Bromides
- 3/12 . Iodides
- 3/14 . Purification
- 3/145 . . {by solid ion-exchangers or solid chelating agents}
- 3/16 . . by precipitation or adsorption {(C01D 3/145 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

**5/00 Sulfates or sulfites of sodium, potassium or alkali metals in general** {(sulfites in general [C01B 17/62](#))}

- 5/002 . {Preventing the absorption of moisture or caking of the crystals by additives}
- 5/004 . {Preparation in the form of granules, pieces or other shaped products}
- 5/006 . {Recovery of sodium sulfate from coagulation baths for the spinning of viscose}
- 5/008 . {Preparation of potassium sulfate from alunite}
- 5/02 . Preparation of sulfates from alkali metal salts and sulfuric acid or bisulfates; Preparation of bisulfates
- 5/04 . Preparation of sulfates with the aid of sulfurous acid or sulfites, e.g. Hargreaves process {(pyrosulfites or metabisulfites [C01D 5/145](#))}
- 5/06 . Preparation of sulfates by double decomposition
- 5/08 . . with each other or with ammonium sulfate
- 5/10 . . with sulfates of magnesium, calcium, strontium, or barium
- 5/12 . Preparation of double sulfates of magnesium with sodium or potassium
- 5/14 . Preparation of sulfites ([C01D 5/04 takes precedence](#))
- 5/145 . . {Pyrosulfites or metabisulfites}
- 5/16 . Purification {(C01D 5/145 takes precedence)}
- 5/18 . Dehydration {(C01D 5/145 takes precedence)}

**7/00 Carbonates of sodium, potassium or alkali metals in general**

- 7/02 . Preparation by double decomposition
- 7/04 . . with a fluoride or silico-fluoride ([C01D 1/24 takes precedence](#))
- 7/06 . Preparation via sodium or potassium magnesium carbonate
- 7/07 . Preparation from the hydroxides
- 7/08 . Preparation from or via cyano compounds of sodium or potassium ([C01D 1/26 takes precedence](#))
- 7/10 . Preparation of bicarbonates from carbonates (ammonia soda process [C01D 7/18](#))
- 7/12 . Preparation of carbonates from bicarbonates {or bicarbonate-containing product}
- 7/123 . . {by thermal decomposition of solids in the absence of a liquid medium}
- 7/126 . . {Multi-step processes, e.g. from trona to soda ash}

- 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}