

ECLA**EUROPEAN CLASSIFICATION****C01D**

COMPOUNDS OF ALKALI METALS, i.e. LITHIUM, SODIUM, POTASSIUM, RUBIDIUM, CAESIUM, OR FRANCIUM (metal hydrides [N: monoborane, diborane or addition complexes thereof] [C01B6/00](#); salts of oxyacids of halogens [C01B11/00](#); peroxides, salts of peroxyacids [C01B15/00](#); sulfides [C01B17/22](#); thiosulfates, dithionites, polythionates [C01B17/64](#); compounds containing selenium or tellurium [C01B19/00](#); binary compounds of nitrogen with metals [C01B21/06](#); azides [C01B21/08](#); [N: compounds other than ammonia and cyanogen, containing nitrogen and other non-metals [C01B21/082](#)]; metal amides [C01B21/092](#); nitrites [C01B21/50](#); phosphides [C01B21/50](#); [N: compounds of noble gases [C01B23/00B](#)]; phosphides [C01B25/08](#); salts of oxyacids of phosphorus [C01B25/16](#); carbides [C01B31/30](#); compounds containing silicon [C01B33/00](#); compounds containing boron [C01B35/00](#); cyanides [C01C3/08](#); salts of cyanic acid [C01C3/14](#); salts of cyanamide [C01C3/16](#); thiocyanates [C01C3/20](#)) [C9602]

C01D1/00

Oxides or hydroxides of sodium, potassium or alkali metals in general

C01D1/02

. Oxides

C01D1/04

. Hydroxides

C01D1/20

. . Preparation by reacting oxides or hydroxides with alkali metal salts

C01D1/22

. . . with carbonates or bicarbonates

C01D1/24

. . . from or via fluorides or silico-fluorides

C01D1/26

. . Preparation from or via cyano compounds, e.g. cyanides, cyanamides

C01D1/28

. . Purification; Separation

C01D1/30

. . . by crystallisation

C01D1/32

. . . by absorption or precipitation

C01D1/34

. . . with selective solvents

C01D1/36

. . . by oxidation

C01D1/38

. . . by dialysis

C01D1/40

. . . by electrolysis

C01D1/42

. . Concentration; Dehydration

C01D1/44

. . Preparation in the form of granules, pieces, or other shaped products

C01D3/00

Halides of sodium, potassium or alkali metals in general [N: (halides in general [C01B9/00](#))]

C01D3/02

. Fluorides

C01D3/04

. Chlorides

C01D3/06

. . Preparation by working up brines; seawater or spent lyes

C01D3/08

. . Preparation by working up natural or industrial salt mixtures or siliceous minerals

C01D3/10

. Bromides

- C01D3/12 . Iodides
- C01D3/14 . Purification
- C01D3/14B . . [N: by solid ion-exchangers or solid chelating agents]
- C01D3/16 . . by precipitation or adsorption [N:([C01D3/14B](#) takes precedence)]
- C01D3/18 . . with selective solvents
- C01D3/20 . . by melting
- C01D3/22 . Preparation in the form of granules, pieces, or other shaped products
- C01D3/24 . . Influencing the crystallisation process
- C01D3/26 . Preventing the absorption of moisture or caking of the crystals
- C01D5/00** **Sulfates or sulfites of sodium, potassium or alkali metals in general [N: (sulfites in general [C01B17/62](#))]**
- C01D5/00B . [N: Preventing the absorption of moisture or caking of the crystals by additives]
- C01D5/00D . [N: Preparation in the form of granules, pieces or other shaped products]
- C01D5/00F . [N: Recovery of sodium sulfate from coagulation baths for the spinning of viscose]
- C01D5/00G . [N: Preparation of potassium sulfate from alunite]
- C01D5/02 . Preparation of sulfates from alkali metal salts and sulfuric acid or bisulfates;
Preparation of bisulfates
- C01D5/04 . Preparation of sulfates with the aid of sulfurous acid or sulfites, e.g. Hargreaves process [N: (pyrosulfites or metabisulfites [C01D5/14D](#))]
- C01D5/06 . Preparation of sulfates by double decomposition
- C01D5/08 . . with each other or with ammonium sulfate
- C01D5/10 . . with sulfates of magnesium, calcium, strontium, or barium
- C01D5/12 . Preparation of double sulfates of magnesium with sodium or potassium
- C01D5/14 . Preparation of sulfites ([C01D5/04](#) takes precedence)
- C01D5/14D . . [N: Pyrosulfites or metabisulfites]
- C01D5/16 . Purification [N: ([C01D5/14D](#) takes precedence)]
- C01D5/18 . Dehydration [N: ([C01D5/14D](#) takes precedence)]
- C01D7/00** **Carbonates of sodium, potassium or alkali metals in general**
- C01D7/02 . Preparation by double decomposition
- C01D7/04 . . with a fluoride or silico-fluoride ([C01D1/24](#) takes precedence)
- C01D7/06 . Preparation via sodium or potassium magnesium carbonate

- C01D7/07 . Preparation from the hydroxides
- C01D7/08 . Preparation from or via cyano compounds of sodium or potassium ([C01D1/26](#) takes precedence)
- C01D7/10 . Preparation of bicarbonates from carbonates ([ammonia soda process C01D7/18](#))
- C01D7/12 . Preparation of carbonates from bicarbonates [N: or bicarbonate-containing product]
- C01D7/12D . . [N: by thermal decomposition of solids in the absence of a liquid medium]
- C01D7/12M . . [N: Multi-step processes, e.g. from trona to soda ash]
- C01D7/14 . Preparation of sesquicarbonates
- C01D7/16 . Preparation from compounds of sodium or potassium with amines and carbon dioxide
- C01D7/18 . Preparation by the ammonia-soda process [N: ([C01D7/12](#) takes precedence)]
- C01D7/22 . Purification
- C01D7/24 . . Crystallisation
- C01D7/26 . . by precipitation or adsorption
- C01D7/28 . . with selective solvents
- C01D7/30 . . by oxidation
- C01D7/32 . . by dialysis
- C01D7/34 . . by electrolysis
- C01D7/35 . Varying the content of water of crystallisation or the specific gravity [N: ([calcination B01J6/00, F27B](#))]
- C01D7/37 . . Densifying sodium carbonate
- C01D7/38 . Preparation in the form of granules, pieces or other shaped products
- C01D7/40 . . influencing the crystallisation process
- C01D7/42 . Preventing the absorption of moisture or caking
- C01D9/00** **Nitrates of sodium, potassium or alkali metals in general** [N: ([preparation as fertilizers or of fertilizers containing them C05D5/00](#))]
- C01D9/02 . Preparation by working-up natural salt mixtures
- C01D9/04 . Preparation with liquid nitric acid
- C01D9/06 . Preparation with gaseous nitric acid or nitrogen oxides
- C01D9/08 . Preparation by double decomposition
- C01D9/10 . . with ammonium nitrate
- C01D9/12 . . with nitrates or magnesium, calcium, strontium, or barium
- C01D9/14 . . of salts of potassium with sodium nitrate

- C01D9/16 . Purification
- C01D9/18 . Preparation in the form of shaped products, e.g. granules
- C01D9/20 . Preventing the absorption of moisture or caking
- C01D13/00 Compounds of sodium or potassium not provided for elsewhere**
- C01D15/00 Lithium compounds**
- C01D15/00B . [N: Lithium hexafluorophosphate] [N9909]
- C01D15/02 . Oxides; Hydroxides
- C01D15/04 . Halides
- C01D15/06 . Sulfates; Sulfites
- C01D15/08 . Carbonates; Bicarbonates
- C01D15/10 . Nitrates
- C01D17/00 Rubidium, caesium or francium compounds**
- C01D17/00B . [N: Compounds of alkali metals]
- C01D17/00B2 . . [N: Preparation of potassium compounds comprising precipitating potassium ions by an organic reagent or extracting them by a liquid organic phase]