



>>Entry Name: Potassium chloride, 8Cl, JAN, USAN
ENTRY UNDER REVIEW

CAS Registry Number: 7447-40-7

KCl

Molecular Formula: ClK
Molecular Weight: 74.551
Accurate Mass: 73.932559
Percentage Composition: Cl 47.55%; K 52.45%

Source/Synthesis: Extracted from mineral salt deposits by conventional methods. Synth. by reaction of KOH or K₂CO₃ with aq. HCl

Use/Importance: Commercially available. Used as a chlorination catalyst in electroplating and in colour developers in photography. Solid state tunable colour centre laser. Replenisher (electrolyte). Component of numerous commercial preparations

Physical Description: Deliquescent colourless cubic cryst.

Melting Point: Mp 771°. Mp 773°

Boiling Point: Bp 1500°

Solubility: V. sol. H₂O (24 g per 100 cm³ at 20°; 57 g per 100 cm³ at 100°); sol. Et₂O; spar. sol. EtOH

Other Data: ΔH_f° -436.7 kJ mol⁻¹; ΔG_f° -408.8 kJ mol⁻¹; S° 82.6 J K⁻¹ mol⁻¹. ²⁴K labelled compd. is used as a radioactive agent. Component of Klotrix, Infalyte, Kolyum and Lyteers

Hazard & Toxicity: Eye irritant

Aldrich: 45102-9

Fluka: 60036

Sigma: P8041

>>Variant: Mineral-form

Synonym(s): Sylvite

CAS Registry Number: 14336-88-0

Molecular Formula: ClK

Molecular Weight: 74.551

Accurate Mass: 73.932559

Percentage Composition: Cl 47.55%; K 52.45%

Source/Synthesis: Occurs e.g. as thick sedimentary deposits

Use/Importance: Principal potassium ore used in manuf. of KOH and K metal. K fertiliser

Physical Description: White, grey or bluish cryst.

References:

Miller, F.A. *et al.*, *Anal. Chem.*, 1952, **24**, 1253, (*ir*)

Swanson, H.E. *et al.*, *Natl. Bur. Stand. Circ. (U.S.)*, 1953, **1**, 65, (*cryst struct*)

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Yudasak, M. *et al.*, *Bull. Chem. Soc. Jpn.*, 1981, **54**, 1933, (*Cl-35 nmr*)

Chase, M.W. *et al.*, *J. Phys. Chem. Ref. Data*, 1985, **14**, 753, (*thermochem data*)

Sigma-Aldrich Library of Chemical Safety Data, 1988, **2**, 2897C, (*haz*)

Saxena, K., *Med. Toxicol. Adverse Drug Exper.*, 1989, **4**, 429, (*tox*)

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