



>>Entry Name: Potassium bromide (KBr), 8Cl
ENTRY UNDER REVIEW

CAS Registry Number: 7758-02-3

KBr

Molecular Formula: BrK

Molecular Weight: 119.002

Accurate Mass: 117.902043

Percentage Composition: Br 67.14%; K 32.86%

Source/Synthesis: Synth. either by action of Br₂ on KOH followed by reduction using HCOOH or by neutralisation of KOH or K₂CO₃ with HBr

Use/Importance: Commercially available. Used as cell windows for ir spectroscopy. Used in photographic developers, pharmaceuticals and as a bromination agent in org. synth.

Biological Use/Importance: Anticonvulsant. Formerly used as a sedative

Physical Description: Sl. hygroscopic colourless cubic cryst.

Melting Point: Mp 734°

Boiling Point: Bp 1435°

Solubility: V. sol. H₂O (53 g per 100 cm³ at 0°; 102 g per 100 cm³ at 100°); spar. sol. EtOH (0.14 g per 100 cm³ at 25°), Et₂O

Other Data: ΔH_f° -393.8 kJ mol⁻¹; ΔG_f° -380.4 kJ mol⁻¹; S° 95.9 J K⁻¹ mol⁻¹

Hazard & Toxicity: Irritant

Aldrich: 45101-0

Fluka: 60095

Sigma: P7442

References:

Mentzel, A., *Z. Phys.*, 1934, **88**, 178, (*ir*)

Doucet, J., *C. R. Hebd. Seances Acad. Sci.*, 1945, **220**, 196, (*uv*)

de Cugnac, A. *et al.*, *C. R. Hebd. Seances Acad. Sci.*, 1964, **258**, 4761, (*cryst struct*)

Bonera, G. *et al.*, *Phys. Rev.*, 1968, **165**, 391, (*Br-79 nmr*)

Sahm, W. *et al.*, *Z. Naturforsch., A*, 1974, **29**, 1754, (*K-39 nmr*)

Chase, M.W. *et al.*, *J. Phys. Chem. Ref. Data*, 1985, **14**, 435, (*thermochem data*)

Sigma-Aldrich Library of Chemical Safety Data, 1988, **2**, 2896B, (*haz*)

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Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, PKY500