



>>Entry Name: Potassium hydrogen sulfide

Synonym(s): Potassium hydrosulfide. Potassium sulfide (K(SH)), 8Cl. Potassium bisulfide. Potassium sulfhydrate. Potassium mercaptide

CAS Registry Number: 1310-61-8

KSH

Molecular Formula: HKS

Molecular Weight: 72.172

Accurate Mass: 71.943602

Percentage Composition: H 1.40%; K 54.17%; S 44.43%

Source/Synthesis: Synth. by the reaction of H₂S with K in liq. NH₃

Use/Importance: Used in the recovery of petroleum from oil shale

Physical Description: Colourless rhombohedral cryst.

Other Data: ΔH_f° -265 kJ mol⁻¹. Undergoes rhombohedral to cubic transition at 170°

References:

West, C.D., *Z. Kristallogr.*, 1934, **88**, 97, (*polymorphs*)

Klemm, W. *et al.*, *Z. Anorg. Allg. Chem.*, 1939, **241**, 281, (*synth*)

Teichert, V.W. *et al.*, *Z. Anorg. Allg. Chem.*, 1939, **243**, 86, (*cryst struct, polymorphs, synth*)