



>>Entry Name: Gallium sulfide

Molecular Formula: [GaS]

>>Variant: Gallium sulfide (GaS)

CAS Registry Number: 12024-10-1

Molecular Formula: GaS

Molecular Weight: 101.789

Accurate Mass: 100.89765

Percentage Composition: Ga 68.50%; S 31.50%

General Statement: Hexagonal layer struct. with Ga-Ga bonds

Physical Description: Thin yellow plates

Melting Point: Mp 970°

>>Variant: Gallium sulfide (Ga₄S₅)

CAS Registry Number: 12259-28-8

Molecular Formula: Ga₄S₅

Molecular Weight: 439.222

Accurate Mass: 435.56267

Percentage Composition: Ga 63.50%; S 36.50%

Source/Synthesis: Synth. from elements at 1250°

Physical Description: Stable up to 1200°

References:

Hahn, H. *et al.*, *Z. Anorg. Allg. Chem.*, 1954, **278**, 340, (*GaS, cryst struct*)

Spandau, H. *et al.*, *Z. Anorg. Allg. Chem.*, 1958, **295**, 300, (*Ga₄S₅, synth*)

Rustamov, P.G. *et al.*, *Izv. Akad. Nauk SSSR, Neorg. Mater.*, 1967, **3**, 479, (*phase diagram*)

Guseinov, G.D. *et al.*, *Phys. Status Solidi*, 1967, **19**, K7, (*thermal props*)

Phillips, J.C., *Phys. Rev.*, 1969, **188**, 1225, (*GaS, struct, uv-vis*)

Bastow, T.J. *et al.*, *J. Magn. Reson.*, 1975, **20**, 1, (*GaS, nqr*)