



>>Entry Name: Copper selenide (CuSe), 10Cl

CAS Registry Number: 1317-41-5

CuSe

Molecular Formula: CuSe

Molecular Weight: 142.506

Accurate Mass: 142.856118

Percentage Composition: Cu 44.59%; Se 55.41%

General Statement: Hexagonal α -CuSe is transformed to orthorhombic β -CuSe above 51° and to hexagonal γ -CuSe above 120°. The α -CuSe struct. is built up of ordered Cu₂Se₂ sheets alternating with disordered CuSe sheets

Source/Synthesis: Mineral

Use/Importance: Catalyst for *N*-acylation of amines

Physical Description: Cryst.

Other Data: Dec. to Cu₃Se₂ and CuSe₂ under pressure

>>Variant: Mineral-form

Synonym(s): Klockmannite

CAS Registry Number: 1308-74-3

Molecular Formula: CuSe

Molecular Weight: 142.506

Accurate Mass: 142.856118

Percentage Composition: Cu 44.59%; Se 55.41%

General Statement: Isostruct. with covellite

Source/Synthesis: Occurs in Argentina, Germany

Physical Description: Dark grey to bluish-black trigonal cryst.

References:

- Esirkegenov, G.M. *et al.*, *Metall. Obogashch.*, 1974, **9**, 36, (*synth, thermal props*)
Murray, R.M. *et al.*, *Can. J. Chem.*, 1975, **53**, 878, (*cryst struct*)
Bahl, M.K., *J. Phys. C: Solid State Phys.*, 1975, **8**, 4107, (*x-ray absorption*)
Heyding, R.D. *et al.*, *Can. J. Chem.*, 1976, **54**, 841, (*cryst struct*)
Mestnik, B. *et al.*, *Fizika (Zagreb)*, Suppl., 1976, **8**, 56, (*phase trans*)
Romand, M. *et al.*, *J. Electron Spectrosc. Relat. Phenom.*, 1978, **13**, 229, (*pe, esca*)
Satish, P.N. *et al.*, *Indian Mineral.*, 1980, **21**, 34, (*cryst struct, synth*)
Folmer, J.C. *et al.*, *J. Less-Common Met.*, 1980, **76**, 153, (*pe*)
Effenberger, H. *et al.*, *Neues Jahrb. Mineral., Monatsh.*, 1981, 197, (*cryst struct*)