



>>Entry Name: Antimony selenide (Sb₂Se₃), 9Cl, 8Cl

Synonym(s): Diantimony triselenide. Antimony(III) selenide. Antimony triselenide (incorr.). Antimonous selenide

CAS Registry Number: 1315-05-5

Sb₂Se₃

Molecular Formula: Sb₂Se₃

Molecular Weight: 480.38

Accurate Mass: 481.557202

Percentage Composition: Sb 50.69%; Se 49.31%

General Statement: Orthorhombic. Possesses two crystallographically independent Sb atoms per unit cell. The first is 6 coordinated by Se (Se-Sb 266.4-324.8 pm) the second is 7 coordinated by Se (Sb-Se 258.9-348.5 pm). Isostructural with Sb₂S₃ and Bi₂Se₃

Source/Synthesis: Synth. from Sb + Se, or Sb + Se + Na oxalate at 265°/50 atm.

Use/Importance: Employed in laser and optical recording materials and solar cells

Physical Description: Acicular cryst.

Melting Point: Mp 615° (609°)

Other Data: Semiconductor

Aldrich: 40119-6

References:

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Cambi, L. *et al.*, *Chim. Ind. (Milan)*, 1968, **50**, 94, (synth)

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Grigas, J. *et al.*, *Krist. Tech.*, 1978, **13**, 683, (electrical, optical props)

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