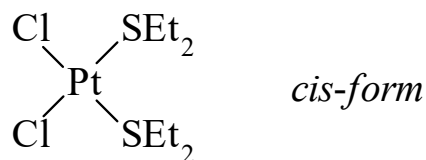




>>Entry Name: Dichlorobis(diethyl sulfide)platinum(II)

ENTRY UNDER REVIEW

Synonym(s): Dichlorobis(ethyl sulfide)platinum, 8Cl. Dichlorobis[1,1'-thiobis(ethane)]platinum, 9Cl. Bis(diethyl sulfide)dichloroplatinum



CAS Registry Number: 14873-92-8

Molecular Formula: C<sub>8</sub>H<sub>20</sub>Cl<sub>2</sub>PtS<sub>2</sub>

Molecular Weight: 446.363

Accurate Mass: 445.00311

Percentage Composition: C 21.53%; H 4.52%; Cl 15.89%; Pt 43.70%; S 14.37%

Source/Synthesis: Synth. from PtCl<sub>2</sub> or K<sub>2</sub>PtCl<sub>4</sub> + SEt<sub>2</sub>; use of excess SEt<sub>2</sub> gives *cis*-isomer

Use/Importance: Synth. use by substitution of Cl. Catalyses crosslinking of siloxanes. Vulcanisation accelerator

Other Data: Configuration inversion at S has been studied

>>Variant: *cis*-form

CAS Registry Number: 15442-57-6

Molecular Formula: C<sub>8</sub>H<sub>20</sub>Cl<sub>2</sub>PtS<sub>2</sub>

Molecular Weight: 446.363

Accurate Mass: 445.00311

Percentage Composition: C 21.53%; H 4.52%; Cl 15.89%; Pt 43.70%; S 14.37%

General Statement: Less sol. form

Physical Description: Pale green-yellow flakes (Me<sub>2</sub>CO/petrol)

Melting Point: Mp 107-108°

Solubility: Sol. polar org. solvs.; insol. hydrocarbons

Other Data: Dec. at 300° to give PtS. Dipole moment 9.5μD

Aldrich: 43284-9

>>Variant: *trans*-form

CAS Registry Number: 15337-84-5

Molecular Formula: C<sub>8</sub>H<sub>20</sub>Cl<sub>2</sub>PtS<sub>2</sub>

Molecular Weight: 446.363

Accurate Mass: 445.00311

Percentage Composition: C 21.53%; H 4.52%; Cl 15.89%; Pt 43.70%; S 14.37%

General Statement: More sol. form

Physical Description: Bright yellow needles (EtOH aq.)

Melting Point: Mp 107-108° (93-100°)

Solubility: Sol. org. solvs. including hydrocarbons

Other Data: Dec. at 200°. Dipole moment 2.4μD

References:

Mann, F.C. *et al.*, *J.C.S.*, 1935, 1549, (*synth*)

Jensen, K.A. *et al.*, *Z. Anorg. Allg. Chem.*, 1935, **225**, 97, (*dipole*)

*Inorg. Synth.*, 1960, **6**, 211, (*synth*)

Allen, E.A. *et al.*, *Spectrochim. Acta A*, 1972, **28**, 725, (*ir*, *Raman*)

Clark, D.T. *et al.*, *J.C.S. Dalton*, 1973, 169, (*nqr*)

McFarlane, W., *J.C.S. Dalton*, 1974, 324, (*Pt-195 nmr*)

Kochetkova, A.P. *et al.*, *Zh. Neorg. Khim.*, 1975, **20**, 210; *CA*, **82**, 92471y, (*thermochem*)

Cross, R.J. *et al.*, *J.C.S. Dalton*, 1976, 382; 1150; 1486, (*pmr*, *dipole*, *ir*, *Raman*)

Skvortsov, N.K. *et al.*, *Zh. Obshch. Khim.*, 1994, **64**, 1663; *CA*, **122**, 203842m, (*cryst struct*)