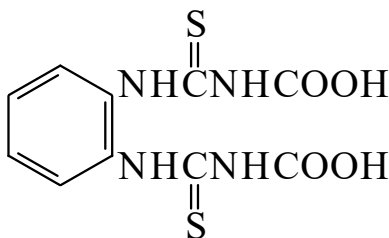




>>Entry Name: 1,2-Phenylenebis(iminocarbonothioyl)biscarbamic acid, 9CI

Synonym(s): 4,4'-o-Phenylenebis(3-thioallophanic acid), 8CI



CAS Registry Number: 53306-25-5

Molecular Formula: C₁₀H₁₀N₄O₄S₂

Molecular Weight: 314.345

Accurate Mass: 314.014346

Percentage Composition: C 38.21%; H 3.21%; N 17.82%; O 20.36%; S 20.40%

>>Derivative: Di-Me ester

Synonym(s): Thiophanate methyl, ANSI, BSI, ISO, JMAF. Topsin M. NF44. Neotopsin

CAS Registry Number: 23564-05-8

Molecular Formula: C₁₂H₁₄N₄O₄S₂

Molecular Weight: 342.399

Accurate Mass: 342.045646

Percentage Composition: C 42.09%; H 4.12%; N 16.36%; O 18.69%; S 18.73%

Use/Importance: Fungicide. Precursor of Carbendazim [DKX40-T](#)

Physical Description: Cryst.

Melting Point: Mp 172 dec.°

pKa Value: pK_a 7.28

Hazard & Toxicity: LD₅₀ (rat, orl) 7500 mg/kg. Exp. reprod. effects

>>Derivative: Di-Et ester

Synonym(s): Thiophanate, BAN, BSI. Cercobin. Helminate. Nemafox. Topsin. NF 35

CAS Registry Number: 23564-06-9

Molecular Formula: C₁₄H₁₈N₄O₄S₂

Molecular Weight: 370.453

Accurate Mass: 370.076946

Percentage Composition: C 45.39%; H 4.90%; N 15.12%; O 17.28%; S 17.31%

Use/Importance: Anthelmintic for veterinary use, fungicide. Now superseded

Physical Description: Plates

Melting Point: Mp 195°

Calculated Log P Data: Log P 2.46 (calc)

Hazard & Toxicity: LD₅₀ (rat, ipr) 2400 mg/kg

References:

Ger. Pat., 1969, *Japan Soda*, 1 806 123; *CA*, **71**, 70347h, (*synth*)

Kikkawa, K., *Jpn. Pestic. Inf.*, 1971, 27; 1972, 80, (*rev*)

Fuchs, A. *et al.*, *Pestic. Biochem. Physiol.*, 1972, **2**, 191, (*activity*)

Eichler, D.A., *Br. Vet. J.*, 1973, **129**, 533, (*rev*)

Matsu, T. *et al.*, *Yakugaku Zasshi*, 1973, **93**, 977, (*synth*)

Bogan, J.A., *Drugs of Today (Barcelona)*, 1978, **14**, 256, (*rev*)

Martindale, The Extra Pharmacopoeia, 31st edn., *Pharmaceutical Press*, 1996, 127

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 9th edn., *Van Nostrand Reinhold*, 1996, DJV000; PEX500