



>>Entry Name: Diethyl disulfide, 9CI

Synonym(s): Ethyl disulfide. 3,4-Dithiahexane

CAS Registry Number: 110-81-6

Et-S-S-Et

Molecular Formula: C₄H₁₀S₂

Molecular Weight: 122.255

Accurate Mass: 122.02239

Percentage Composition: C 39.30%; H 8.24%; S 52.46%

Biological Source: Constit. of *Dipteryx odorata* beans and *Durio zibethinus* fruit

Physical Description: Oil with garlic odour

Boiling Point: Bp 154°. Bp₁₁ 46°

Solubility: Spar. sol. H₂O

Density: d₄²⁰ 0.993

Refractive Index: n_D²⁰ 1.5063

Hazard & Toxicity: Flammable, fl. p. 42°. Skin and eye irritant. LD₅₀ (rat , orl) 2030 mg/kg

Aldrich: E2622-3

Rare Chemicals Library: S42688-1

Sigma: D3031

>>Derivative: S,S'-Dioxide

Synonym(s): Diethyl disulfoxide

Molecular Formula: C₄H₁₀O₂S₂

Molecular Weight: 154.254

Accurate Mass: 154.01222

Percentage Composition: C 31.15%; H 6.53%; O 20.74%; S 41.58%

Physical Description: Liq. with garlic odour

Boiling Point: Bp₁₁ 123-124°

Density: d^{19.5} 1.199

Other Data: Prob. a mixt. of diastereoisomers

References:

Aldrich Library of FT-IR Spectra, 1st edn., 1985, **1**, 266A, (*ir*)

Aldrich Library of 13C and 1H FT NMR Spectra, 1992, **1**, 427B, (*nmr*)

Aldrich Library of FT-IR Spectra: Vapor Phase, 1989, **3**, 348D, (*ir*)

Otto, R., *Ber.*, 1882, **15**, 125, (*dioxide*)

Haines, W.E. *et al.*, *J. Phys. Chem.*, 1954, **58**, 270, (*props, ir, uv*)

Baldry, J. *et al.*, *Phytochemistry*, 1972, **11**, 2081-2087, (*isol*)

Cohen, V.I., *Helv. Chim. Acta*, 1976, **59**, 840, (*synth*)

Drabowicz, J. *et al.*, *Synthesis*, 1980, 32, (*synth*)

Rybin, A.G., *Zh. Obshch. Khim.*, 1983, **53**, 1863, (*synth*)

Meshram, H.M., *Org. Prep. Proced. Int.*, 1993, **25**, 232, (*synth*)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials, 8th edn.*, Van Nostrand Reinhold, 1992, DJC600