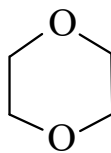




>>Entry Name: 1,4-Dioxane, 9CI

Synonym(s): Diethylene dioxide. Diethylene oxide. Ethylene glycol ethylene ether. Dioxan. Tetrahydro-*p*-dioxin



CAS Registry Number: 123-91-1

Related CAS Registry Numbers(s): 17647-74-4

Molecular Formula: C<sub>4</sub>H<sub>8</sub>O<sub>2</sub>

Molecular Weight: 88.106

Accurate Mass: 88.05243

Percentage Composition: C 54.53%; H 9.15%; O 36.32%

Source/Synthesis: Manuf. by acidic dehydration and ring closure of 2,2'-Oxybisethanol [BGL75-B](#)

Use/Importance: Solv. freq. used in chemical anal.

Physical Description: Liq. with pleasant odour

Melting Point: Mp 11.8°

Boiling Point: Bp 101.4-101.6°

Solubility: Sol. EtOH, C<sub>6</sub>H<sub>6</sub>

Density: d<sub>4</sub><sup>20</sup> 1.033

Refractive Index: n<sub>D</sub><sup>20</sup> 1.4175

Other Data: Crit. point 312°/50.7 atm. Forms azeotrope with H<sub>2</sub>O contg. 18.4% H<sub>2</sub>O, Bp 87.8°

**Hazard & Toxicity:** Highly flammable, fl. p. 11°, autoignition temp. 180°, may form explosive peroxide leading to a dist. haz. Poss. human carcinogen. Vapour is irritant to mucous membranes and eyes. CNS depressant. High vapour conc. cause nausea, headache, dizziness, drowsiness. Prolonged or repeated exposure can damage liver and kidneys and may be fatal. Skin contact can result in dermatitis. Exp. carcinogen and teratogen. OES: long-term 25 ppm; short-term 100 ppm (Sk)

Aldrich: 36048-1

Fluka: 42530

Sigma: D3558

Supelco: R47-2225

>>Derivative: Br<sub>2</sub> complex

Synonym(s): Dioxane dibromide

CAS Registry Number: 15481-39-7

Melting Point: Mp 60°

Other: PB D48820

>>Derivative: Picrate

Physical Description: Cryst.

Melting Point: Mp 66°

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