



**>>Entry Name: Diethyl oxalate**

**Synonym(s):** Diethyl ethanedioate, 9Cl. Ethyl oxalate

**CAS Registry Number:** 95-92-1

EtOOC COOEt

**Molecular Formula:** C<sub>6</sub>H<sub>10</sub>O<sub>4</sub>

**Molecular Weight:** 146.143

**Accurate Mass:** 146.05791

**Percentage Composition:** C 49.31%; H 6.90%; O 43.79%

**Use/Importance:** Acylating reagent. Monomer for polyesters and polyamides

**Physical Description:** Liq.

**Melting Point:** Mp -40.6°

**Boiling Point:** Bp 185.4°. Bp<sub>20</sub> 97°

**Solubility:** Spar. sol. H<sub>2</sub>O. Misc. most org. solvs.

**Density:** d<sub>4</sub><sup>20</sup> 1.079

**Refractive Index:** n<sub>D</sub><sup>20</sup> 1.4101

**Other Data:** Gradual hydrol. in H<sub>2</sub>O

**Hazard & Toxicity:** Fl. p. 76°. LD<sub>50</sub> (rat, orl) 400 mg/kg

**Aldrich:** 13536-4

**Fluka:** 75712

**Sigma:** O2002

**References:**

*Aldrich Library of 13C and 1H FT NMR Spectra*, 1992, **1**, 934A, (nmr)

*Aldrich Library of FT-IR Spectra, 1st edn.*, 1985, **1**, 613C, (ir)

*Aldrich Library of FT-IR Spectra: Vapor Phase*, 1989, **3**, 636A, (ir)

*Org. Synth., Coll. Vol., 1*, 1932, 256; 258, (synth)

Kantlehner, W. *et al.*, *Chem. Ber.*, 1971, **104**, 3711, (synth)

Fenton, D.M. *et al.*, *J.O.C.*, 1974, **39**, 701, (synth)

Yamasaki, K. *et al.*, *Tet. Lett.*, 1977, 1231, (synth, cmr)

*Fieser and Fieser's Reagents for Organic Synthesis*, Wiley, 1979, **7**, 106; **11**, 247; **12**, 34; **15**, 133, (use)

Deits, W. *et al.*, *J. Macromol. Sci., Chem., Part A*, 1981, **15**, 1027, (polyamides)

Thibeault, B. *et al.*, *J. Polym. Sci., Part A: Polym. Chem.*, 1990, **28**, 1361, (polyesters)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials, 8th edn.*, Van Nostrand Reinhold, 1992, DJT200