

(11) Diethyl phosphite, $C_4H_{11}O_3P$
CAS No. 762-04-9
HS No. 29.20.90.90
NIOSH/RTECS No. TG 7875000

Synonyms: Diethyl hydrogen phosphite; Phosphorous acid, diethyl ester; phosphonic acid, diethyl ester.

Physical Properties: MW: 138.12, bp: 187-188°, d1.074, n_D^{20} 1.4076

Synthesis: Reaction of phosphorous trichloride with ethanol in dry benzene at temperatures below 10°. Yield 83% [R.A. McIvor et al., Can. J. Chem., 34, 1819 (1956)].

Toxicology: Moderately toxic by ingestion or dermal contact. LD₅₀ is 3900 mg/kg (rat). Decomposition produces toxic fumes of PO_x.

Uses: Organic synthesis, pesticides, lubricant additives and paint solvent.

Suppliers: There are four suppliers listed: USA (1), India (1), Germany (1) and the UK (1).