>>**Entry Name: Tetraethylenepentamine,** 8CI
Synonym(s): *N*-(2-Aminoethyl)-*N*'-[2-[(2-aminoethyl)amino]ethyl]-1,2-ethanediamine, 9CI. 1,4,7,10,13-Pentaazatridecane. 3,6,9-Triaza-1,11-undecanediamine. Tetren. TEPA

CAS Registry Number: 112-57-2

$H_2NCH_2CH_2NHCH_2CH_2NHCH_2CH_2NHCH_2CH_2NH_2$

Molecular Formula: $C_8H_{23}N_5$
Molecular Weight: 189.303
Accurate Mass: 189.195345
Percentage Composition: C 50.76%; H 12.25%; N 37.00%
Use/Importance: Organic base. Used in manuf. of lubricating oil additives. Used in the colorimetric anal. of nitro compds. Used as a 0.01*M* soln. in NaOH aq. for potentiometric titrimetric detn. of Cd, Cu, Hg, Ni, Zn. Masking agent. Curing agent for epoxy resins
Physical Description: Viscous, hygroscopic liq.
Melting Point: Mp –40°
Boiling Point: Bp 340°. Bp_1 151-152°
Solubility: Sol. H_2O, most org. solvs.
Density: d_{20}^{20} 0.998
pKa Value: pK_{a1} 9.92; pK_{a2} 9.08; pK_{a3} 7.87; pK_{a4} 4.25; pK_{a5} 2.65 (25°)
Other Data: Coml. grade material is a mixt. of linear, branched and cyclic congeners
Hazard & Toxicity: Fl. p. 163° (oc), autoignition temp. 321°. Corrosive and irritating to skin, eyes, and mucous membranes. LD_{50} (rat, orl) 205 mg/kg; LD_{50} (skn, rbt) 660 mg/kg

Aldrich: T1150-9
Fluka: 86700

>>**Derivative:** Hydrochloride (1:5)

CAS Registry Number: 4961-41-5
Physical Description: Cryst. (EtOH aq.)
Melting Point: Mp 266-268°
Aldrich: 37568-3
Sigma: T5424

References:

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Reilley, C.N. *et al.*, *Anal. Chem.*, 1959, **31**, 243; 887, *(detn, Zn)*
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