



>>Entry Name: Tetraethylenepentamine, 8Cl

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

CAS Registry Number: 112-57-2



Molecular Formula: C<sub>8</sub>H<sub>23</sub>N<sub>5</sub>

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<sub>1</sub> 151-152°

Solubility: Sol. H<sub>2</sub>O, most org. solvs.

Density: d<sub>20</sub><sup>20</sup> 0.998

pKa Value: pK<sub>a1</sub> 9.92; pK<sub>a2</sub> 9.08; pK<sub>a3</sub> 7.87; pK<sub>a4</sub> 4.25; pK<sub>a5</sub> 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<sub>50</sub> (rat, orl) 205 mg/kg; LD<sub>50</sub> (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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*U.K. Pat.*, 1956, 753 489; *CA*, **51**, 5821f, (*synth*)

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

Scrier, M. *et al.*, *Mikrochim. Ichnoanal. Acta*, 1965, 1091; *CA*, **64**, 16632e, (*use*)

Keana, J.F.W. *et al.*, *J.O.C.*, 1987, **52**, 2571, (*synth*)

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