



>>Entry Name: Diethylenetriamine, 8Cl

ENTRY UNDER REVIEW

Synonym(s): *N*-(2-Aminoethyl)-1,2-ethanediamine, 9Cl. Di(2-aminoethyl)amine. 2,2'-Diaminodiethylamine. Bis(2-aminoethyl)amine. 3-Aza-1,5-pentanediamine. 3-Aza-1,5-diaminopentane. 2,2'-Iminobisethylamine. 2,2'-Iminodi(ethylamine). 1,4,7-Triazaheptane

CAS Registry Number: 111-40-0

Related CAS Registry Numbers(s): 37296-80-3 52601-80-6 56187-04-3

$\text{H}_2\text{NCH}_2\text{CH}_2\text{N}^+\text{HCH}_2\text{CH}_2\text{N}^+\text{H}_2$

Molecular Formula: $\text{C}_4\text{H}_{13}\text{N}_3$

Molecular Weight: 103.167

Accurate Mass: 103.110947

Percentage Composition: C 46.57%; H 12.70%; N 40.73%

Source/Synthesis: Manuf. by reaction of ammonia with 1,2-Dichloroethane [BGD76-O](#) or 2-Aminoethanol [BGX64-F](#)

Use/Importance: Used in manuf. of chelating agents, wet strength resins, epoxy resin curing agents, polyamides, surfactants and corrosion inhibitors. Used in photometric detn. of Ni

Physical Description: Viscous liq. with an ammoniacal odour

Melting Point: Mp -39°

Boiling Point: Bp 208° . Bp₃ $82-83^\circ$

Solubility: Misc. H_2O , EtOH

Density: d_4^{20} 0.9542

pKa Value: $\text{p}K_{\text{a}1}$ 10.1; $\text{p}K_{\text{a}2}$ 9.1; $\text{p}K_{\text{a}3}$ 3.9 (25°)

Refractive Index: n_D^{20} 1.4826

Other Data: Vp 0.37 mmHg (20°)

Hazard & Toxicity: Corrosive and irritating to skin, eyes and respiratory tract. Skin and pulmonary sensitiser. LD₅₀ (rat, orl) 1080 mg/kg. LD₅₀ (rbt, skn) 1090 mg/kg. Fl. p. 98 ° (oc), autoignition temp. 358° . OES: long-term 1 ppm (Sk)

Aldrich: D9385-6

Fluka: 32305

Sigma: D1551

>>Derivative: Hydrochloride (1:3)

CAS Registry Number: 4109-20-0

Physical Description: Needles (EtOH/HCl)

Melting Point: Mp $228-230$ dec.°

>>Derivative: Tripicrate

Physical Description: Yellow prisms (H_2O)

Melting Point: Mp $210-212$ dec.°

>>Derivative: Tri-Ac

Synonym(s): *N,N*-Bis[2-(acetylamino)ethyl]acetamide

Molecular Formula: $\text{C}_{10}\text{H}_{19}\text{N}_3\text{O}_3$

Molecular Weight: 229.278

Accurate Mass: 229.142642

Percentage Composition: C 52.39%; H 8.35%; N 18.33%; O 20.93%

Physical Description: Felted needles (EtOH)

Melting Point: Mp 220°

>>Derivative: Tribenzoyl

CAS Registry Number: 95803-04-6

Molecular Formula: $\text{C}_{25}\text{H}_{25}\text{N}_3\text{O}_3$

Molecular Weight: 415.491

Accurate Mass: 415.189592

Percentage Composition: C 72.27%; H 6.06%; N 10.11%; O 11.55%

Physical Description: Prisms (CHCl_3)

Melting Point: Mp 166°

Rare Chemicals Library: S1593-9