



>>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



**Molecular Formula:** C<sub>4</sub>H<sub>13</sub>N<sub>3</sub>

**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°. Bp<sub>3</sub> 82-83°

**Solubility:** Misc. H<sub>2</sub>O, EtOH

**Density:** d<sub>4</sub><sup>20</sup> 0.9542

**pKa Value:** pK<sub>a1</sub> 10.1; pK<sub>a2</sub> 9.1; pK<sub>a3</sub> 3.9 (25°)

**Refractive Index:** n<sub>D</sub><sup>20</sup> 1.4826

**Other Data:** Vp 0.37 mmHg (20°)

**Hazard & Toxicity:** Corrosive and irritating to skin, eyes and respiratory tract. Skin and pulmonary sensitiser. LD<sub>50</sub> (rat, orl) 1080 mg/kg. LD<sub>50</sub> (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<sub>2</sub>O)

**Melting Point:** Mp 210-212 dec.°

>>Derivative: Tri-Ac

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

**Molecular Formula:** C<sub>10</sub>H<sub>19</sub>N<sub>3</sub>O<sub>3</sub>

**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:** C<sub>25</sub>H<sub>25</sub>N<sub>3</sub>O<sub>3</sub>

**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<sub>3</sub>)

**Melting Point:** Mp 166°

**Rare Chemicals Library:** S1593-9