



>>Entry Name: Tris(2-aminoethyl)amine

Synonym(s): *N,N*-Bis(2-aminoethyl)-1,2-ethanediamine, 9Cl. 4-(2-Aminoethyl)diethylenetriamine, 8Cl. 2,2',2''-Triaminotriethylamine. 2,2',2''-Nitrilotrisethanamine. Tren

CAS Registry Number: 4097-89-6

(H₂NCH₂CH₂)₃N

Molecular Formula: C₆H₁₈N₄

Molecular Weight: 146.235

Accurate Mass: 146.153146

Percentage Composition: C 49.28%; H 12.41%; N 38.31%

Use/Importance: Quadridentate ligand for transition metal cations. Used in the manuf. of branched polyamides

Physical Description: Liq.

Boiling Point: Bp₁₅ 114°

Density: d²⁰ 0.977

pKa Value: pK_{a1} 10.13; pK_{a2} 9.44; pK_{a3} 8.42 (25°)

Refractive Index: n_D²⁰ 1.4970

Other Data: Component (*ca* 5%) of tech. grade Triethylenetetramine [BGT76-Q](#)

Aldrich: 22563-0

Fluka: 93303

Sigma: A8168

>>Derivative: Hydrochloride (1:3)

CAS Registry Number: 14350-52-8

Physical Description: Cryst. (EtOH aq.)

Other Data: Mp. >300°

>>Derivative: Hydrochloride (1:4)

Physical Description: Cryst. + H₂O

Melting Point: Mp 167-169 dec.°

Other Data: Converts into trihydrochloride on exposure to atmosphere, or when heated *in vacuo* at 100°

>>Derivative: *N*-Hexa-Me

Synonym(s): *N,N*-Bis(2-dimethylaminoethyl)-*N,N'*-dimethyl-1,2-ethanediamine, 9Cl. Tris(2-dimethylaminoethyl)amine. Tren-Me

CAS Registry Number: 33527-91-2

Molecular Formula: C₁₂H₃₀N₄

Molecular Weight: 230.396

Accurate Mass: 230.247046

Percentage Composition: C 62.56%; H 13.12%; N 24.32%

Physical Description: Oil

Boiling Point: Bp_{0.5} 70-71°

Other: PB T31572

>>Derivative: *N',N'',N'''*-Tri-Et

Synonym(s): Tris[2-(ethylamino)]amine

CAS Registry Number: 124764-04-1

Molecular Formula: C₁₂H₃₀N₄

Molecular Weight: 230.396

Accurate Mass: 230.247046

Percentage Composition: C 62.56%; H 13.12%; N 24.32%

Physical Description: Liq.

Boiling Point: Bp_{0.13} 72-74°

>>Derivative: *N',N'',N'''*-Tribenzyl

CAS Registry Number: 137516-01-9

Molecular Formula: C₂₇H₃₆N₄

Molecular Weight: 416.608

Accurate Mass: 416.293996

Percentage Composition: C 77.84%; H 8.71%; N 13.45%

Refractive Index: n_D²⁰ 1.5670

Aldrich: 39883-7

References: