



>>Entry Name: Diethylamine

Synonym(s): *N*-Ethylethanamine, 9CI

CAS Registry Number: 109-89-7

Related CAS Registry Numbers(s): 19497-23-5

Et₂NH

Molecular Formula: C₄H₁₁N

Molecular Weight: 73.138

Accurate Mass: 73.089149

Percentage Composition: C 65.69%; H 15.16%; N 19.15%

Source/Synthesis: Manuf. by catalytic reaction of Ethanol [BGT97-X](#) and ammonia

Use/Importance: Base used in org. synth. and for manuf. of vulcanisation accelerators. Used in indirect photometric detn. of CS₂

Physical Description: Liq. with powerful amine odour

Melting Point: Fp –50°

Boiling Point: Bp 55.5°

Solubility: Misc. H₂O

Density: d₄¹⁸ 0.711

pKa Value: pK_a 11.1

Refractive Index: n_D¹⁸ 1.3873

Other Data: Usually encountered as aq. soln. Forms a dihydrate, Fp –19°

Hazard & Toxicity: Extremely flammable, fl. p. –39°, autoignition temp. 312°. Skin, respiratory tract and severe eye irritant. Contact with liquid can damage eyes, and cause skin necrosis. Inhalation can cause coughing and chest pains. OES: long-term 10 ppm; short-term 25 ppm

Aldrich: 32027-7

Fluka: 31731

Sigma: D6632

>>Derivative: Hydrochloride

Synonym(s): Diethylammonium chloride

CAS Registry Number: 660-68-4

Physical Description: Leaflets

Melting Point: Mp 223.5°

Boiling Point: Bp 320-330°

Solubility: Sol. H₂O, EtOH, CHCl₃; insol. Et₂O

Aldrich: 12774-4

Fluka: 31740

Sigma: D3256

>>Derivative: Hydrobromide

CAS Registry Number: 6274-12-0

Melting Point: Mp 218-220°

Aldrich: 31090-5

>>Derivative: Phosphate salt

CAS Registry Number: 68109-72-8

Melting Point: Mp 158-160°

Aldrich: 14115-1

>>Derivative: *N*-Ac

see Acetamide, [DFR77-W](#)

>>Derivative: *N*-Benzoyl

see Benzamide, [DVK80-R](#)

>>Derivative: *N*-Me

see Diethylmethylanine, [DCT41-W](#)

>>Derivative: *N*-Et