



>>Entry Name: **1,10-Decanediamine**, 9CI

Synonym(s): Decamethylenediamine. 1,10-Diaminodecane

CAS Registry Number: 646-25-3

$\text{H}_2\text{NCH}_2(\text{CH}_2)_8\text{CH}_2\text{NH}_2$

Molecular Formula: $\text{C}_{10}\text{H}_{24}\text{N}_2$

Molecular Weight: 172.313

Accurate Mass: 172.193948

Percentage Composition: C 69.70%; H 14.04%; N 16.26%

Use/Importance: Comonomer for polyamides

Melting Point: Mp 62-64°

Boiling Point: Bp₁₀ 140°

Hazard & Toxicity: May cause dermatitis

Aldrich: D1420-4

Fluka: 32880

Sigma: D2639

>>Derivative: Hydrochloride (1:2)

CAS Registry Number: 7408-92-6

Melting Point: Mp 288-289°

>>Derivative: Dipicrate

Physical Description: Needles (H_2O)

Melting Point: Mp 134°

>>Derivative: *N*-Me

CAS Registry Number: 31417-68-2

Molecular Formula: $\text{C}_{11}\text{H}_{26}\text{N}_2$

Molecular Weight: 186.34

Accurate Mass: 186.209598

Percentage Composition: C 70.90%; H 14.06%; N 15.03%

Physical Description: Yellow solid

Melting Point: Mp 40°

>>Derivative: *N,N*-Di-Me

Synonym(s): 10-Dimethylaminodecylamine

CAS Registry Number: 1938-59-6

Molecular Formula: $\text{C}_{12}\text{H}_{28}\text{N}_2$

Molecular Weight: 200.367

Accurate Mass: 200.225248

Percentage Composition: C 71.93%; H 14.08%; N 13.98%

Boiling Point: Bp₆ 128°

References:

- Aldrich Library of FT-IR Spectra, 1st edn.*, 1985, **1**, 293D, (*ir*)
Aldrich Library of 13C and 1H FT NMR Spectra, 1992, **1**, 469B, (*nmr*)
Aldrich Library of FT-IR Spectra: Vapor Phase, 1989, **3**, 378A, (*ir*)
Phookan, R.D. *et al.*, *Ber.*, 1892, **25**, 2252, (*synth*)
Brown, R. *et al.*, *J.C.S.*, 1946, 781, (*synth*)
Nystrom, R.F., *J.A.C.S.*, 1955, **77**, 2544, (*synth*)
Org. Synth., Coll. Vol., 3, 1955, 229, (*synth*)
McCloskey, J.A., *J.A.C.S.*, 1971, **93**, 4955, (*ms*)
Mansour, El.S.M.E. *et al.*, *J. Macromol. Sci., Chem., Part A*, 1981, **16**, 669, (*polyamides*)
Murakami, Y. *et al.*, *J.C.S. Perkin I*, 1981, 2800, (*deriv*)
Jourdain, F. *et al.*, *Synth. Commun.*, 1999, **29**, 1785-1799, (*N-Me*)