



>>Entry Name: Diphenylmethanimine

Synonym(s): α -Phenylbenzenemethanimine, 9Cl. 1,1-Diphenylmethylenimine, 8Cl. Benzophenone imine. Benzhydrylideneimine

CAS Registry Number: 1013-88-3

$\text{Ph}_2\text{C}=\text{NH}$

Molecular Formula: $\text{C}_{13}\text{H}_{11}\text{N}$

Molecular Weight: 181.237

Accurate Mass: 181.089149

Percentage Composition: C 86.15%; H 6.12%; N 7.73%

Use/Importance: Key intermed. in an industrial synth. of hydrazine from NH_3 and O_2

Boiling Point: Bp₈ 151-152°. Bp_{3,5} 127-128°

Density: d_4^{15} 1.085

Refractive Index: n_D^{19} 1.1620

Aldrich: 29373-3

Fluka: 12756

>>Derivative: Hydrochloride

CAS Registry Number: 5319-67-5

Melting Point: Mp 295-300 dec.°

Rare Chemicals Library: S88641-6

>>Derivative: *N*-Ac

Synonym(s): *N*-(Diphenylmethylene)acetamide

CAS Registry Number: 22800-71-1

Molecular Formula: $\text{C}_{15}\text{H}_{13}\text{NO}$

Molecular Weight: 223.274

Accurate Mass: 223.099714

Percentage Composition: C 80.69%; H 5.87%; N 6.27%; O 7.17%

Physical Description: Needles (pentane)

Melting Point: Mp 43.5-44.5°

>>Derivative: *N*-Me

CAS Registry Number: 22627-00-5

Molecular Formula: $\text{C}_{14}\text{H}_{13}\text{N}$

Molecular Weight: 195.263

Accurate Mass: 195.104799

Percentage Composition: C 86.12%; H 6.71%; N 7.17%

Boiling Point: Bp_{2,5} 126-128°

>>Derivative: *N*-Nitro

Synonym(s): Benzophenone nitrimine

CAS Registry Number: 4371-81-7

Molecular Formula: $\text{C}_{13}\text{H}_{10}\text{N}_2\text{O}_2$

Molecular Weight: 226.234

Accurate Mass: 226.074228

Percentage Composition: C 69.02%; H 4.46%; N 12.38%; O 14.14%

Physical Description: Cryst. (MeOH or AcOH aq.)

Melting Point: Mp 67-69°

References:

Aldrich Library of 13C and 1H FT NMR Spectra, 1992, **3**, 543C, (*nmr*)

Horner, L. *et al.*, *Chem. Ber.*, 1961, **94**, 290, (*deriv*)

Perrier-Datin, A. *et al.*, *Spectrochim. Acta A*, 1969, **25**, 169, (*ir*)

van der Linde, R. *et al.*, *Spectrochim. Acta A*, 1969, **25**, 375, (*pmr*)

Org. Synth., Coll. Vol., 5, 1973, 55, (*synth*)

Allmann, R. *et al.*, *Chem. Ber.*, 1984, **117**, 1604, (*synth, pmr, cmr, cryst struct, deriv*)

Brenner, D.G. *et al.*, *J. Het. Chem.*, 1985, **22**, 805, (*synth*)

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