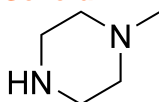


Technical Data Sheet N-METHYLPIPERAZINE (NMP)

General



MW: 100.19 g mol⁻¹
CAS No.: 109-01-3
EINECS No.: 203-639-5
IUPAC name: 1-methylpiperazine

N-Methylpiperazine (NMP; CAS 109-01-3) is another cyclic ethylene amine which appears as a clear, hygroscopic liquid. NMP is primarily used as raw material for pharmaceuticals.

Sales Specification

Characteristic	Unit	Specification	Methods of Analysis
Appearance	-	Clear liquid	200
Assay	w%	min 99.0	506
Water	w%	max 0.2	305
Organic Impurities	w%	max 0.5	506
Color	Hazen	max 20	201

Methods of Analysis are available upon request.

In case of dispute, the listed Method of Analysis will be used as reference methods.

Physical and Chemical Properties

Property	Value	Property	Value
Form	viscous liquid	pH	11 - 12 at 5 % solution
Colour	colourless	Melting point/freezing point	-5,57 °C at 1 013 hPa
Odour	ammoniacal	Boiling point/boiling range	133,66 °C at 1 013 hPa
Flammability (liquids)	Flammable liquid and vapour	Flash point	31,5 °C at 1 013 hPa Method: ISO 3679
Explosive properties	Not explosive	Ignition temperature	> 100 °C
Oxidizing properties	The substance or mixture is not classified as oxidizing	Vapour pressure	6,67 hPa at 19,73 °C
Water solubility	soluble	Relative vapour density	3,4
Solubility in other solvents	Soluble in ethanol and acetone	Density	900 kg/m ³ at 20 °C
		Relative density	0,902 at 20 °C
		Partition coefficient: n-octanol/water	log Pow: -0,57 at 25 °C
		Viscosity, dynamic	2,27 mm ² /s at 20 °C

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