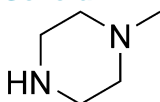


Technical Data Sheet N-METHYLPIPERAZINE (NMP)

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 | 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/m3 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 mm2/s at 20 °C |

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