Technical Data Sheet
N-Ethylpyrrolidone (NEP)

Chemical Synonym

Ethyl Pyrrolidinone; 1-Ethyl-2-pyrrolidine; Ethyl Pyrrolidone; NEP

Applications

- Industrial electronics
- Paints & coatings
- Pharmaceutical chemicals
- Process solvents

Product Description

N-Ethylpyrrolidone (NEP) is a clear, almost colorless liquid.It can be used for the following applications:

Microelectronics
Ethylpyrrolidone can be used as solvent in photoresist stripper formulations.

Electronics
Ethylpyrrolidone can be used in electrolyte formulations for electrolytic capacitors.

Cryogenic applications
Due to its low freezing point, ethylpyrrolidone is used as solvent in cryogenic reaction conditions.

Pharmaceuticals
Ethylpyrrolidone can be used as raw material for the production of several antipsychotics and antibiotics.
Solvent for diclofenac in topical formulations, solvent in acne remedies.
Transdermal transport enhancer.

Lithographic printing
Ethylpyrrolidone can be used in dampening water for lithographic printing plates.

Jet printing ink
Ethylpyrrolidone is used in the formulation of jet printing ink.

Other
Liquid cleaning composition.
Solvent for radical polymerisation inhibitor.
Composition of detergent for liquid crystal cell.

Typical Properties

Property	Typical Value, Units
General	
Molecular Formula	$C_6H_{11}NO$
Molecular Weight	113.16 g/mol
Appearance	Colorless liquid
Autoignition Temperature	245 °C
Boiling Point	212.5 °C

Density @ 20°C	0.9974 g/cm^3
Flash Point Closed Cup	90.8 °C
Freezing Point	<-120 °C
Octanol-water partition coefficient, log Pow @ 20°C	-0.2
Refractive Index @ 20°C	1.4652
Surface Tension @ 20°C	69 mN/m
Vapor Pressure @ 20°C	0.18 hPa
Viscosity @ 20°C	2.1 mPa·s
Water solubility	Miscible

Packaging

- Bulk
- Steel drums (205 kg net)

Storage

NEP (N-Ethyl-Pyrrolidone) is hygroscopic and must be stored in a dry place, preferably in its original packaging.

Carbon steel is adequate for storage of NEP. Stainless steel is preferable if color stability is to be maintained over long periods. For bulk storage a nitrogen atmosphere is necessary to prevent absorption of moisture and discoloration.

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