

Technical Data

Resin Solubility

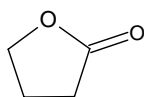
NMP and GBL

Introduction

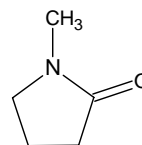
N-Methyl-2-pyrrolidone, NMP, is a powerful solvent with broad solubility for resins and with high chemical and thermal stability. This stability allows NMP to serve as a co-solvent with many other liquids including water, alcohols, glycol ethers, ketones, and aromatic/chlorinated hydrocarbons. NMP is both recyclable by distillation and biodegradable. Gamma-butyrolactone, GBL, is another powerful solvent with broad solubility for resins and with high chemical and thermal stability. This nonflammable material is miscible with a variety of organic solvents. Both NMP and GBL are ideal for a variety of applications especially as a resin and clean-up solvent.

Physical Properties

	NMP	GBL
Freezing Point	-25°C	-44°C
Boiling Point	202-205°C	204°C
Flash Point	93°C(199°F)	98°C(209°F)
Vapor Pressure mm Hg	<0.3 @20°C	<1.5 @20°C
Specific Gravity	1.028 @ 25°C	1.13 @20°C
Molecular Weight	99.13 g/mole	86.1 g/mole
Evaporation Rate (nBuAc = 100)	3	3



GBL



NMP

Resin Solubility

Resin (Solubility at 10% Level)	NMP	GBL
Polyethylene	I	I
Polypropylene	I	I
Poly(ethylene/vinylacetate)	I	I
Nylon 6	I	I
Nylon 6, 6	I	I
Polycarbonate	S	I
Polyacetal	I	I
Polyphenylene Oxide	I	I
Polyethylene Terephthalate (PET)	I	I
Polystyrene	S	PS
Poly(styrene/acrylonitrile)	S	S
Poly(styrene/maleic anhydride)	S	S
Poly(styrene/butadiene) (ABA)	G	PS
Poly(acrylonitrile/butadiene/styren)	S	PS
Cellulose Acetate	S	PS
Ethyl Cellulose	S	PS
Poly(methyl methacrylate) (PMMA)	S	S
Poly(vinyl acetate)	S	S
Poly(vinyl chloride) (PVC)	PS	I

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Key: I = Insoluble, S = Soluble, PS = Partially Soluble, G = Gel
Solubility experiments were conducted at room temperature (25°C).

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World Headquarters
Lyondell Chemical Company
1221 McKinney
Houston, TX 77010
Tel (713) 652-7200
Toll-free (888) 777-0232
MSDS Hotline: (800) 700-0946

European Headquarters
Lyondell Chemical Europe, Inc.
P. O. Box 2416
3000 CK Rotterdam
The Netherlands
Tel (31) 10 275-5500
Tel (33) 3 44 24 92 05 (tech svc)

Lyondell South America
Av Roque Petroni Jr,
999, cj 123
Sao Paulo, SP 04707-910
Brazil
Tel (55) 11-5185-9300

Asian Headquarters
Lyondell Asia Pacific, Ltd.
41st Floor – The Lee Gardens
33 Hysan Avenue
Causeway Bay, Hong Kong
Tel (852) 28822-668
Tel (33) 3 44 24 92 05 (tech svc)