TECHNICAL DATA SHEET

MAXLINER®

Max UP Resin

Polyester Resin for Sewer Pipe Applications

DESCRIPTION

MAX UP (L705-NDA-06) is an unprompted thixotropic polyester resin formulation with exceptional mechanical properties. This product has excellent water resistance and has been formulated as an ambient cure resin using Benzoyl Peroxide as the catalyst and N,N-Diethylaniline as the accelerator. Similar resins are in wide use in Europe for CIPP. Catalyzed pot-life of 1.5 to 2.0 hours at 63°F | 17°C gives fast cycle times on ambient cured lateral repair.

SIGNIFICANT CHARACTERISTICS

- Fast cure rates
- Stable viscosity
- Excellent water resistance

APPLICATION

- Sewer pipe repair

TYPICAL LIQUID RESIN PROPERTIES*

PROPERTY	NOMINAL
Viscosity at 77°F | 25°C, RVF Brookfield Spindle #4 at 20 RPM, cps.	1,850
Thix ratio (2:20 RPM)	2.8
Specific Gravity at 77°F | 25°C	1.08
Color	Yellow Haze
Non-Volatiles	57%

TYPICAL CURING PROPERTIES*

PROPERTY	NOMINAL
100 Gram Mass Catalyst, 4.0% Benzoyl Lucidol CH-50 (0.4% N,N-Diethylaniline added)	
Gel time in 140°F | 60°C water bath, minutes	6
Gel to peak, minutes	2
Peak Exotherm	400°F | 205°C
Gel time at 77°F | 25°C, minutes	24
Gel to peak, minutes	6
Peak Exotherm	420°F | 216°C

*1 See back page.

TYPICAL CAST MECHANICAL PROPERTIES*

PROPERTY	VALUE	TEST METHOD
Tensile Strength	9700 psi | 66.6 MPa	ASTMD638
Tensile Modulus	590,000 psi | 4.1 GPa	ASTMD638
Tensile Elongation	2.0%	ASTMD638
Flexural Strength	18,900 psi | 130 MPa	ASTMD790
Flexural Modulus	610,000 psi | 4.2 GPa	ASTMD790
Heat Distortion Temperature at 264 psi	225°F | 107°C	ASTMD648
Barcol Hardness	45	ASTMD2583

*Typical properties are not to be construed as specifications.

*2 See back page.

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PERFORMANCE GUIDELINES

A. Keep full strength catalyst levels between 1.0% – 2.0% of the total resin weight.
B. Maintaining shop temperatures between 65°F | l8°C and 90°F | 32°C and humidity between 40% and 90% will help the fabricator make a high quality part. Consistent shop conditions contribute to consistent gel times.

STORAGE STABILITY

Resins are stable for three months from date of production when stored in the original containers away from sunlight at no more than 70°F | 21°C. After extended storage, some drift may occur in gel time. During the hot summer months, no more than two months stability at 86°F | 30°C should be anticipated.

SAFETY

See appropriate Material Safety Data Sheet for guidelines.

FOOTNOTES

1 The gel times shown are typical but may be affected by catalyst, promoter and inhibitor concentrations and resin, mold and shop temperature. Variations in gelling characteristics can be expected between different lots of catalysts and at extremely high humidities. Pigment and fillers can retard or accelerate gelation. It is recommended that the fabricator check the gelling characteristics of a small quantity of resin under actual operating conditions prior to use.

2 Based on tests of P084 base resin at 77°F | 25°C and 50% relative humidity. All tests performed on unreinforced cured resin castings. Thixotropic components, if applicable, are excluded from casting samples. Castings prepared using 0.1% Cobalt 12% 1.25% MEKP, post cured for 2 hours at 194°F| 90°C using AOC test method X-12Ab.

DISCLAIMER

The information contained herein is offered without charge for use by technically qualified personnel at their discretion and risk. All statements, technical information and recommendations contained herein are based on tests and data which we believe to be reliable, but the accuracy or completeness thereof is not guaranteed, and no warranty of any kind is made with respect thereto. Exact coating type and thickness depend on the specific types of resin being used. Always read, understand, and comply with hazard warnings described in the products' Safety Data Sheet(s) before use.