



PRODUCT INFORMATION

HIGH TECHNOLOGY MATERIALS

MERECO XLN-540

SUBMERSIBLE ELECTRONIC POTTING

MERECO XLN-540 is a room temperature curing system with a high degree of toughness and flexibility. Typical applications are in high strength impact resistant adhesives; tooling; electrical potting, casting and encapsulating; troweling and coating preparations. The system is also characterized by its low viscosity, immediate activator-base compatibility and low vapor pressure. The low amine content curing agent affords less skin irritation potential than the common low mixing ratio curing agents. Castings and laminates are hard, tough and tack-free. (Note: high humidity may produce an aftertack.) Elevated temperature post-cure increases the heat deflection temperature, increases the hardness and raises the Izod impact value. Thin sections cured at room temperature develop handling strength in 24 hours or less and attain maximum properties in about 3 days. For complete cure, 2 weeks should be allowed.

For **MERECO XLN-540** elevated temperature post-cures improve the deflection temperatures from 50°C to 65°C, increases the water absorption in 24 hour immersion studies from 0.24 to 0.36% and cause some sacrifice in the dielectric properties.

TYPICAL APPLICATIONS

**CONNECTOR ENCAPSULANT
CASTING COMPOUND
ADHESIVE**

**SUBMERSIBLE POTTING
GENERAL POTTING
COATING**

FEATURES

**HIGH BOND STRENGTH
ROOM TEMPERATURE SET**

**IMPACT RESISTANCE
LOW VISCOSITY**

Pot Life
Exotherm
Mix Ratio
Heat Deflection Temperature
Appearance

Long
Low
Non-critical
50°C
Opaque

Technical information and recommendations made by Mereco Division and Metachem Resins Corporation concerning products and uses or applications thereof, are based on reliable laboratory tests and are believed to be accurate. No warranty, however, is expressed or implied, nor is any warranty expressed or implied as to results to be obtained from use of said materials, whether used singly or in combination with other products. No statements made are to be construed as constituting a license under any existing patent.

FORM 1105 REV. 0

MERECO TECHNOLOGIES GROUP * 1505 MAIN STREET * WEST WARWICK, R.I. 02893 * (401) 822-9300 * Fax (401) 822-9311

TYPICAL PROPERTIES*

A. UNCURED	<u>ACTIVATOR</u>	<u>BASE</u>	<u>BLEND</u>
Color	Amber	Unpigmented, black, dark blue, white, gray	Same as base
Form	Thin Syrup	Syrup	Syrup
Specific Gravity	0.9	1.6	1.4
Viscosity, cP	300	6,000	2,000
Flash Point, °F	>200	164	--
B. CURED 2 weeks at 25°C			
Mechanical			
Form			Tough, firm
Linear Shrinkage			0.0005
Shore Durometer, D Scale			79
Izod Impact, ft lb in ⁻¹ notch			1.5
Flexural Strength, psi			12,000
Flexural Modulus, psi·10 ⁶			0.3
Tensile Strength, psi			7,000
Tensile Elongation, %			6.5
Thermal			
Operating Range, °C			-60 to 145
Expansion Coefficient, 10 ⁶ ·°C ⁻¹			45
Deflection Temperature Under Load (264 psi), °C			
25° cure			50
heat cure			64
Thermal Conductivity, Btu in hr ⁻¹ ft ⁻² °F ⁻¹			2.2
Chemical			
Water Immersion (24 hr, 25°C), %			0.4
Electrical			
Dielectric Strength, v mil ⁻¹			
23°C			425
Volume Resistivity, ohm·cm			
23°C			3.7 x 10 ¹⁵
60°C			2.5 x 10 ¹²
Dissipation Factor (10 ⁶ Hz)			
23°C			0.02
Dielectric Constant (10 ⁶ Hz)			
23°C			3.3

*These typical properties should not be used as a basis for preparing specifications. Contact MEREKO TECHNOLOGIES for assistance in writing specifications.

CURING INFORMATION

Mixing Ratio, phr	25
Pot Life (25°C), hr	
Mass 100 g	10
500 g	7
1000 g	4
Exotherm, °C	
Mass 100 g	37
500 g	104
1000 g	167
Recommended Schedules	
Cure	16 hr at 25°C
Post Cure	2 hr at 50°C or 2 hr at 100°C

STORAGE

MERECO XLN-540 Activator is an amine resin. The product is hygroscopic, absorbing moisture which increases viscosity and reactivity. It is also basic, absorbing carbon dioxide which destroys the reactive amine groups. Keep dry and store inside.

MERECO XLN-540 Base is an epoxy resin. The product is a uniform liquid when packaged, but frequently crystallizes at room temperature because the pure diglycidyl ether of bisphenol-A has a melting point of 42°C. Crystallization is induced by cold temperatures or seeding by ordinary dust particles. The product is restored to the liquid state by application of low heat (50° to 60°C) and stirring. Flash point 165°F.

All products have a warranted shelf-life of 6 months when stored in unopened sealed containers away from excessive heat and humidity.

HANDLING

Check uniformity of contents before using. Do not leave containers open. These products are chemicals. Follow good industrial hygiene practices. Use only with adequate ventilation. Promptly remove contaminated clothing and wash before reuse. Discard contaminated leather. Wash thoroughly after handling and before eating, drinking, smoking or using the toilet.

MERECO XLN-540 Activator is a liquid with a mildly ammoniacal odor and corrosive properties somewhat like ammonia. Contact with skin, eyes and mucosa causes burns. Avoid contact and breathing of vapors which might cause sensitization.

MERECO XLN-540 Base is a combustible liquid (flash point 164°F) having a mild odor. Contact with skin, eyes and mucosa causes irritation and may cause sensitization and dermatitis. Avoid contact. Do not inhale. Avoid heat, sparks for flame.

All products are for industrial use only.

AVAILABILITY AND ORDER INFORMATION

A. PACKAGING

MERECO XLN-540 epoxy resin is available in pint, quart, gallon, five gallon and 55 gallon containers. The companion curing agent is available in half-pint, pint, quart, gallon, five gallon and 55 gallon containers.

B. COLORED COMPOUNDS

MERECO XLN-540 is available unpigmented (shaded white), black, dark blue, gray and white. A range of other colors are available on special order to suit your requirements.

C. ORDERING

Specify product name, number, color, quantity and container size. Send orders to your MERECO sales representative or directly to MERECO TECHNOLOGIES, 1505 MAIN STREET, WEST WARWICK, RI 02893-2992. Minimum order size is one hundred dollars. Evaluation kits are available on request.

AUXILIARIES

When a shorter pot life (greater exotherm), lower viscosity product is needed, order **MERECO CN-874**.

Clean hands with **METATERGE 1421** (waterless).

Clean uncured MERECO resins from utensils and equipment with your own solvent or use our formulated **METATERGE 1405** (not flammable or corrosive; water soluble).

For vigorous stripping of stubborn, cured resins, use **METASTRIP 705**. It is a highly active corrosive solvent.

For mold release, use our **METAPART 7521** or **METAPART 7582**.

For air release, use **MERECO XLN-760** (non-silicone).

MERECO TECHNOLOGIES offers a broad line of silicones and epoxies for coating, encapsulating, potting, sealing and adhering. Call or write to request information on your needs and help with your problems. Our toll free number is 800 556-7164. Our FAX number is 401 822-9311.