



PRODUCT INFORMATION

HIGH TECHNOLOGY MATERIALS

MERECO XL-193

TRANSPARENT EPOXY CEMENT FOR BONDING CLEAR STONES

MERECO XL-193 is a transparent, water-clear, free flowing 2 part epoxy resin cement developed as a multi-purpose industrial adhesive. **MERECO XL-193** clear cement is particularly suited to jewelry for bonding clear, colorless, and colored stones into settings and as a “staking” cement because of its clarity and opalescence. **MERECO XL-193** is designed to correct the optical quality of epoxy by interaction with ultra-violet and visible light.

MERECO XL-193 is intended for applications where there is need for sparkling clarity and superior structural mechanical and electrical properties. The “adhesive affinity” of **MERECO XL-193** provides tenacious bonds to a wide variety of substances. As a casting material **MERECO XL-193** hardens to a resilient clear plastic suitable for optical devices. It may be tinted or colored as required for applications in electronics such as light emitting diodes (LED) and ebulliometer windows.

MERECO XL-193 has a long working life at room temperature, and thus adapts readily to use in volume proportionating dispenser devices.

TYPICAL PROPERTIES BEFORE MIXING

<u>PROPERTY</u>	<u>XL-193 BASE</u>	<u>XL-193 AND XL-193RT ACTIVATOR</u>
Color	Clear, opalescent	Straw
Form	Thin syrup	Thin syrup
Odor	Mild fruity	None
Specific Gravity, 25°C/25°C	1.15	1.09
Viscosity cps, 25°C	600 - 1200	1500-3000
Solubility	Soluble in ketones and chlorinated solvents.	Soluble in alcohols, Cellosolves R and Aromatics.
	Insoluble in water.	Dispersible in water.
Equivalent Weights	160-195	110-125

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FORM 1105 REV. 0

MIXING RATIOS

<u>MEASUREMENT</u>	<u>XL-193 BASE</u>	<u>XL-193 AND XL-193RT ACTIVATOR</u>
By weight	100 parts	60 parts

TYPICAL PROPERTIES AFTER MIXING

<u>Property</u>	<u>Value</u>
Working Life - 75g at 25°C	4
Viscosity cps at 25°C	900 - 1600

TYPICAL PROPERTIES OF FULLY CURED MERECO XL-193

<u>PROPERTY</u>	<u>TEST METHOD VALUE</u>	
Appearance	Visual	Clear, opalescent
Color	Visual	Slight violet hue
Specific Gravity, 25°C/25°C	MTP*-2	1.12
Compressive strength, psi	ASTM D-695	5500
Hardness, D Scale	ASTM D-2240	80
Dielectric strength, volts/mil	ASTM D-149	360
Dielectric constant, 1 kHz, 25°C	ASTM D-150	4.82
Dissipation Factor, 1 kHz, 25°C	ASTM D-150	0.016
Volume resistivity, ohm-cm, 25°C	ASTM D-257	2.5 x 10 ¹⁴
Deflection temperature under load, °C	ASTM D-648	60

INSTRUCTIONS FOR USE

1. Measure out by weight the correct ratio of activator and base as follows:

Ratio by weight: 60 parts Activator
100 parts XL-193 cement

2. Stir thoroughly to insure that the Activator is intimately mixed with the cement.

3. Apply minimum quantity necessary to coat one surface of parts to be bonded. (Parts should be cleaned of grease and dirt to insure maximum bond strengths).
4. Place parts together. Clamping is not necessary unless parts will shift during cure.
5. Cure Schedule: Mereco XL-193 cement will set overnight. However, to insure complete bonding, a heat cure is recommended of at least 3 hrs at 150° to 200°F. If heat curing is not possible, substitute XL-193RT Activator for XL-193 Activator.

SHELF LIFE AND HANDLING

Containers of **MERECO XL-193** adhesive components should be kept tightly closed when not in use to prevent absorption of moisture, alkaline vapors, and carbon dioxide from the air. Exercise care to maintain shelf life. Direct skin contact should be avoided. If contact occurs, wash with soapy water. The liquid activator may become dull if kept cold for a long period. When warmed, the liquid returns to its original sparkling clear state.

SAFETY PRECAUTIONS

As with other epoxy resins, **MERECO XL-193** epoxy adhesive system requires special attention for safe handling. Generally maintain strict housekeeping, continually instruct workers in proper use and the use of suitable protective clothing, for eyes and hands. This product is not acutely irritating to the skin, however, alike all epoxy systems it is capable of causing sensitization of the skin. This sensitization capability varies from person to person. Consult Material Safety Data Sheets for specific instructions.

AVAILABILITY

MERECO XL-193 is available in quantities from 1 pint to 55 gallons. Quarter-pint (113g) trial evaluation units are also available.