



PRODUCT INFORMATION

HIGH TECHNOLOGY MATERIALS

METRE-SET 321

ONE-PART ADHESIVE EPOXY

METRE-SET 321 is a unique, one-part, high strength, thermosetting, epoxy adhesive. It does not contain plasticizers, other resin modifiers which detract from properties or solvents which release vapors during cure.

The bonds formed are strong and resilient, have good electrical insulation, high dielectric strength, low loss factor, chemical resistance and are capable of continuous duty up to temperatures of 200°C (400°F).

METRE-SET 321 bonds to glass, ceramics, wood, metals including brass and many plastics (not for use with acetal) including Ryton (Phillips Petroleum).

METRE-SET 321 is cured with heat. Sources of heat include ovens, infra-red and hot plates. Recommended curing temperatures range from 140°C (285°F) to 204°C (400°F).

TYPICAL PRODUCT PROPERTIES

Color	Black, brown or gray
Form	Soft paste
Viscosity (25°C), cP	60,000
Specific Gravity (25°/25°C)	1.33
Flash Point, °F	380

INSTRUCTIONS FOR USE

1. Thoroughly clean and remove grease from bonding area. See listings under RELATED MERECO LITERATURE for preparing individual substrates.
2. Apply **METRE-SET 321** to one surface by spreading with a spatula, with drops or dots from a syringe or use of an automatic dispenser. Glue lines should be from 1 to 10 mil.
3. Pressure is not required, but fixturing to maintain position during cure may be desirable.

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

4. Select one of the following cure schedules.

<u>Temperature</u>		<u>Time, Minutes</u>
<u>°C</u>	<u>°F</u>	
150	302	120
163	325	90
177	350	70
204	400	40

TYPICAL CURED PROPERTIES

(after 2 hours at 150°C)

Mechanical		
Color		Brown
Form		Solid
Specific Gravity (25°/25°C)		1.34
Tensile Shear		
(Aluminum to Aluminum), psi		
25°C (77°F)		3200
85°C (185°F)		3000
120°C (250°F)		2000
150°C (300°F)		1300
Hardness, Shore D		92
Glass Transition Temperature, °C		111
Thermal		
Operating Range, °C		-55 to 204
Thermal Conductivity, W/m°K		0.25
Coefficient of Thermal Expansion ppm/°C		
		67 (Below Tg)
		178 (Above Tg)
Electrical		
Dielectric Constant (1000 Hz)		3.8
Dissipation Factor (1000 Hz)		0.02
Volume Resistivity, ohm·cm		3 x 10 ¹²
Dielectric Strength, kV/in		400

STORAGE

METRE-SET 321 is a uniform blend of epoxy resins, curing agents, minerals and pigments. The warranted shelf-life is six (6) months when kept tightly closed in the original container at temperatures from 50° to 90°F.

Store all products inside and in a cool, dry, well-ventilated location.

HANDLING PRECAUTIONS

Consult Material Safety Data Sheet before handling. Keep containers closed when not in use. Check uniformity of contents before using. These products are chemicals. Observe good industrial hygiene practices. Avoid breathing vapors. Irritation may result from repeated skin contact. Prevent eye contact. Effective ventilation, goggles and protective clothing are recommended for personnel. In case of accidental skin contact, wash the affected area with soap and water. In case of eye contact, flush eyes thoroughly with soap and water and consult a physician. Contaminated clothing should be promptly removed and not worn until thoroughly cleaned. Discard contaminated leather. Wash thoroughly after handling and before eating, drinking, smoking or using the toilet.

All products are for industrial use only.

AVAILABILITY AND ORDER INFORMATION

A. PACKAGING

This MEREKO product is a one-component system. Standard packaging is in quarter-pint, half-pint, pint, quart, gallon and five gallon containers. Other sizes are available on special order.

B. COLOR

Standard colors are brown, black and gray. Other colors are available on special order to suit your requirements.

C. ORDERING

Specify the name, number, color, quantity and container size. Orders may be placed with your MEREKO area factory representative or directly to **MEREKO TECHNOLOGIES, 1505 MAIN STREET, WEST WARWICK, RI 02893-2992**. Minimum order size is one hundred dollars. Evaluation kits are available on request.

AUXILIARIES

Clean hands with waterless **METATERGE 1421**.

Clean uncured MEREKO resins from utensils and equipment with isopropyl alcohol or with formulated **METATERGE 1405** (not flammable or corrosive; water soluble).

Soften cured MEREKO resins to salvage valuable components with **META-STRIP 701** (liquid or gel). It is an effective non-corrosive solvent.

For vigorous stripping of stubborn, cured resins, use **META-STRIP DP-705**. It is a highly active, corrosive solvent.

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

RELATED MEREKO LITERATURE

Resin Selector Guide

Application Bulletins

TSB 3-625 Preparation of Polyethylene Surfaces for Bonding with Epoxy Adhesives.

TAB 3-626 Preparation of Miscellaneous Surfaces for Bonding.

TSB 3-627 Preparation of Steel Surfaces for Bonding with Epoxy Adhesives.

TSB 3-628 Preparation of Teflon® and Rulon® Surfaces for Bonding with Epoxy Adhesives.

