EPOXIES
INNOVATIVE BONDING SOLUTIONS ETC.

TECHNICAL BULLETIN

POLYURETHANE POTTING & ENCAPSULATING RESINS

THE GREEN SERIES
20-2101 Enterable Gel
20-2160 Shore A 60
20-2180 Shore A 80

DESCRIPTION:

This series of polyurethane systems is engineered for electronic potting, encapsulating, and casting applications. They are low in viscosity, low in toxicity and available in the popular TriggerBond® dual barrel cartridge dispensing system. These elastomeric systems are suitable for a variety of electronic insulating applications. The durometers range from an enterable gel to Shore A 80. 20-2183 is a faster gelling version of 20-2180 that can be demolded in 1 hour.

GREEN:

The base Natural Oil Polyol (NOP) used in these systems is obtained directly from a plant source without chemical modifications. Renewable resources, like NOP's, reduce the demand on non-renewable fossil fuels and the overall production of carbon dioxide.

FEATURES:	BENEFITS:
• Green	Reduce demand on non-renewable fossil fuels
• Low Viscosity	Quick self leveling around components
• Available in TriggerBond®	Easy to use packaging
• Low Durometer	Low stress on components & vibration resistant
• Moisture Resistant	Can be used in wet environments
• Convenient Mix Ratios	Easy to process by hand or with meter mix
• Low Shrinkage & Exotherm	Less stress to components during cure

TYPICAL PROPERTIES:

	20-2101	20-2160	20-2180
Viscosity, cps, 25°C			
Polyol Resin	1,500	1,500	2,000
Isocyanate	3,000	13,000	2,500
Mixed	1,600	2,500	1,700
Available Colors	Clear	Clear, Black	Clear, Black
Hardness, Shore A	Gel	60	80
Mix Ratio (Iso:Polyol)			
By Volume	1:4	1:2	1:2
By Weight	25:100	55:100	60:100
Operating Temp. Range,°C	-55 to +125	-55 to +125	-55 to +125
Pot Life, 25°C, Minutes	20	20	20

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	20-2101	20-2160	20-2180
Specific Gravity, 25° C			
Polyol Resin	0.97	1.03	0.97
Isocyanate	1.15	1.13	1.15
Elongation	N/A	150	220
Tear Strength, pli	N/A	40	80
Tensile Strength, psi	N/A	375	1700
Dielectric Constant, 1 KHz	4.0	3.6	3.4
Dissipation Factor, 1 KHz	0.017	0.017	0.017
Dielectric Strength, V/mil	625	625	650
Surface Resistivity, ohm, 25°C	1.0×10^{15}	1.0×10^{15}	1.0×10^{15}
Volume Resistivity, ohm-cm	7.2×10^{14}	7.2×10^{14}	7.2×10^{14}
Coefficient of Thermal Expansion, ppm/°C	200	200	200
Thermal Conductivity, W/m·°K	0.3	0.3	0.3

Note: When cured at room temperature final properties are achieved in 7-10 days.

INSTRUCTIONS FOR USE:

1. By weight, thoroughly mix according to mix ratio provided in the above table. Two components should be carefully weighed in metal, plastic, or glass containers. Avoid using paper cups and wooden stirrers.
2. Mixed material can be degassed at 1 to 5 mm Hg to ensure bubble free castings. Containers should be large enough to allow frothing.
3. Cure according to one of the following cure schedules:
   a) 25°C for 24 Hours
   b) 45°C for 2.5 Hours
   c) 65°C for 1.5 Hours
   d) 85°C for 40 Minutes

STORAGE & HANDLING & SAFETY:

Store both components at 25 °C. If the containers are opened and the contents partially used, the material left in the container should be blanketed with dry nitrogen before sealing. The expected shelf life is 12 months in original unopened containers.

Please read the Safety Data Sheet before using this or any other chemical.

AVAILABILITY:

These products are available in the convenient TriggerBond® dual barrel cartridges (50ml, 200ml & 400ml), quarts, gallons, five-gallon pails and 55-gallon drums.

IMPORTANT:

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