EPOXIES
INNOVATIVE BONDING SOLUTIONS ETC.

TECHNICAL BULLETIN

20-2121
ELASTOMERIC POTTING & ENCAPSULATING COMPOUND

DESCRIPTION:

20-2121 is formulated for electronic potting, encapsulating and casting applications. The 20-2121 is a two-component, low viscosity, room temperature curing system. This is an easy-to-use product that does not contain TDI, MbOCA or Mercury. 20-2121 will cushion and protect sensitive electronic components. It will impart very little stress on components during cure or thermal cycling.

The base Natural Oil Polyol (NOP) used in 20-2121 is obtained directly from a plant source without chemical modifications. Due to the raw materials selected, this product is low in toxicity and considered a ***GREEN*** potting compound. Using renewable resources such as NOPs will reduce the demand on non-renewable fossil fuels and reduce the overall production of carbon dioxide.

FEATURES:	BENEFITS:
• Low Toxicity	Reduce employee exposure to dangerous chemicals
• Green	Reduce demand on non-renewable fossil fuels
• Low Viscosity	Quick self-leveling around components
• Low Durometer	Low stress on components & vibration resistant
• Moisture Resistant	Can be used in wet environments
• Low Shrinkage & Exotherm	Will not damage components during cure

TYPICAL PROPERTIES:

Viscosity, 25°C, cps	
Polyol	800
Isocyanate	20,000
Mixed	3,200
Mix ratio (Polyol:Iso)	
By Volume	100:94
By Weight	116:100
Color	Clear/Amber
Hardness, Shore A	65
Operating Temperature Range, °C	-30 to +125
Gel time, Minutes	
25°C	90
60°C	20
Specific gravity @ 25°C	
Polyol	0.96
Isocyanate	1.14

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Elongation, %	155
Tensile strength, psi	2,000
Tear strength, PLI	119
Coefficient of thermal expansion, °C	2.10×10^{-4}
Linear shrinkage, in./in.	0.014
Thermal conductivity, W/m-K	0.3
Dielectric strength, V/mil	650
Volume resistivity, ohm-cm	7.2×10^{14}
Surface resistivity, 25°C, ohm	$>1.0 \times 10^{15}$
Dielectric constant, 1 kHz	3.4
Dissipation Factor, 1 kHz	0.017

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

INSTRUCTIONS FOR USE:

1. By weight, thoroughly mix 100 parts Isocyanate to 116 parts Polyol 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 29 in 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 24 Hours
   b) 45°C 2.5 Hours
   c) 65°C 1.5 Hours
   d) 85°C 40 Minutes

STORAGE & HANDLING & SAFETY:

Store both components at 75-85°F in original containers. If the containers are opened and the contents partially used, the material left in the container should be blanketed with dry nitrogen before sealing.

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

PACKAGING:

This product is available in quarts, gallons, and 5-gallon pails.

IMPORTANT:

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