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:

| | |
|---|---|
| Color | Clear/Amber |
| Viscosity, 25°C, cps | |
| Polyol | 800 |
| Isocyanate | 20,000 |
| Mixed | 3,200 |
| Specific gravity @ 25°C | |
| Polyol | .96 |
| Isocyanate | 1.14 |
| Mix ratio (Polyol:Iso) | |
| By Volume | 100:94 |
| By Weight | 116:100 |
| Gel time, Minutes | 90 @ 25°C, 20 @ 60°C |
| Hardness, Shore A | 65 |
| Elongation, % | 155 |
| Tensile strength, psi | 2,000 |
| Tear strength, PLI | 119 |
| Coefficient of thermal expansion, °C | $2.10 \times 10^{-4}$ |
| Linear shrinkage, in./in. | .014 |
| Thermal conductivity, W/m- °K | .3 |

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| | |
|---|---|
| Operating temperature range, °C | -30 to +125 |
| Dielectric strength, V/mil | 650 |
| Volume resistivity, ohm-cm | $7.2x10^{14}$ |
| Surface resistivity, 25°C, ohm | $>1.0x10^{15}$ |
| Dielectric constant @1 KHz | 3.4 |
| Dissipation Factor @ 1 KHz | .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:

| | |
|---|---|
| 25°C | 24 Hours |
| 45°C | 2.5 Hours |
| 65°C | 1.5 Hours |
| 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. Carefully read Safety Data Sheets before using.

**AVAILABILITY:**

This product is available in quarts, gallons, five gallon pails and 55 gallon drums.

**IMPORTANT:**



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