

20-2183

POLYURETHANE POTTING & ENCAPSULATING RESIN

DESCRIPTION:

This polyurethane is engineered for electronic potting, encapsulating, and casting applications. It is low in viscosity, low in toxicity and available in the popular TriggerBond® dual barrel cartridge dispensing system. This elastomeric system is suitable for a variety of electronic insulating applications. A key feature of this product is the quick demolding time of 1 Hour for encapsulating or casting. 20-2183 is a faster gelling version of 20-2180.

GREEN:

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

FEATURES:

- 1 Hour Demolding
- Green
- Low Viscosity
- Available in TriggerBond®
- Low Durometer
- Moisture Resistant
- Low Shrinkage & Exotherm

BENEFITS:

- Need fewer molds for production
- Reduce demand on non-renewable fossil fuels
- Quick self leveling around components
- Easy to use packaging
- Low stress on components & vibration resistant
- Can be used in wet environments
- Less stress to components during cure

TYPICAL PROPERTIES:

| | <u>20-2183</u> | <u>20-2180</u> |
|---------------------------------|-----------------------|-----------------------|
| Viscosity, 25°C, cps | | |
| Polyol Resin | 2,200 | 2,200 |
| Isocyanate | 1,500 | 1,500 |
| Mixed | 1,700 | 1,700 |
| Mix Ratio (Iso:Polyol) | | |
| By Volume | 1:2 | 1:2 |
| By Weight | 60:100 | 60:100 |
| Color | Black | Black |
| Hardness, Shore A | 80 | 80 |
| Operating temperature range, °C | -55 to +125 | -55 to +125 |
| Gel Time, 25°C, Minutes | 15 | 20 |
| Demold Time, 25°C, Hours | 1 | 16-24 |
| Specific gravity, 25°C | | |
| Polyol Resin | 0.97 | 0.97 |
| Isocyanate | 1.15 | 1.15 |

TYPICAL PROPERTIES (continued):

| | <u>20-2183</u> | <u>20-2180</u> |
|--------------------------------------|------------------------|-----------------------|
| Elongation % | 220 | 220 |
| Tensile strength, psi | 1700 | 1700 |
| Tear strength, pli | 80 | 80 |
| Coefficient of thermal expansion, °C | 2.00 x10 ⁻⁴ | 2.10x10 ⁻⁴ |
| Thermal conductivity, W/m-K | 0.3 | 0.3 |
| Dielectric strength, V/mil | 650 | 650 |
| Volume resistivity, ohm-cm | 7.2x10 ¹⁴ | 7.2x10 ¹⁴ |
| Surface resistivity, 25°C, ohm | >1.0x10 ¹⁵ | >1.0x10 ¹⁵ |
| Dielectric constant, 1 kHz | 3.4 | 3.4 |
| Dissipation Factor, 1 kHz | 0.017 | 0.017 |

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

INSTRUCTIONS FOR USE:

1. Weighing & mixing is not necessary when using TriggerBond® cartridges. Follow the instructions for dispensing with TriggerBond® cartridges.
2. Cure according to one of the following cure schedules:

| <u>20-2183</u> | <u>20-2180</u> |
|-------------------|------------------|
| 25°C - 1 Hour | 25°C - 24 Hours |
| 65°C - 20 Minutes | 65°C - 1.5 Hours |

STORAGE & HANDLING & SAFETY:

Store cartridges at 75-85°F. Avoid exposure to moisture or humidity.

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

AVAILABILITY:

This product is available in the convenient TriggerBond® dual barrel cartridges (50ml, 200ml & 400ml). 20-2183 is also available in quarts and gallon containers.

IMPORTANT:

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05/2025