

# 20-2521

## POLYURETHANE

### POTTING & ENCAPSULATING COMPOUND

#### DESCRIPTION:

20-2521 is a high performance two component urethane system. This easy to use polyurethane is very low in viscosity and ideal for potting or encapsulating delicate electronic components. 20-2521 exhibits very low shrinkage, stress, and exotherm throughout the cure cycle. This system is also well known for its outstanding thermal shock and excellent dielectric properties.

20-2521 is ideal for potting applications where a wide operating temperature (-55 to +130°C) is required. It is also a good choice when exposure to salt water, mild acids and bases, and aliphatic hydrocarbons is expected.

#### FEATURES:

- Does not contain MOCA or TDI
- Excellent dielectric properties
- Easy to handle
- Very good thermal shock and vibration resistance
- Low stress on components
- Low viscosity
- Low shrinkage
- Hydrolytic stability

#### TYPICAL SPECIFICATIONS:

Mix ratio	
By weight (Polyol, Isocyanate)	100:20
By volume (Polyol, Isocyanate)	100:26
Viscosity, 25 °C, cps	
Polyol	15,000
Isocyanate	200
Mixed	5,500
Standard color	Black
Pot life, @ 25°C 1 lb. mass	75 Minutes
Specific gravity, @ 25°C	
Polyol	1.6
Isocyanate	1.2
Hardness, shore D	65
Tensile strength, psi	1,600
% Elongation	40
Linear shrinkage, %	0.71
Thermal shock 10 cycles	
-65°C to +130°C	Pass



**TYPICAL SPECIFICATIONS (continued):**

Thermal expansion coefficient	
in/in 1 °C	16 x 10 <sup>-5</sup>
Water absorption, %	
24 hrs.	0.19
7 days	0.55
Operating temperature range, °C	-55 to +130
Dielectric strength, V/mil	630
Dielectric constant, 100 Hz	4.8
Dissipation factor, 60 Hz	0.72
Volume resistivity, ohm-cm	1.2 x 10 <sup>14</sup>
Surface resistivity, ohms	4.6 x 10 <sup>13</sup>

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 20 parts Isocyanate to 100 parts Polyol. By volume, thoroughly mix 26 parts Isocyanate to 100 parts Polyol. 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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