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  $16 \times 10^{-5}$

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  $1.2 \times 10^{14}$

Surface resistivity, ohms  $4.6 \times 10^{13}$

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:
EPOXIES, ETC. MAKES NO EXPRESS OR IMPLIED WARRANTIES OR MERCHANTABILITY, FITNESS OR OTHERWISE WITH RESPECT TO ITS PRODUCTS. The information in this brochure is based on data obtained by our own research and is considered reliable. However, no warranty is expressed or implied regarding the accuracy of these data, the results to be obtained from the use thereof, or that any such use will not infringe any patent. The properties given are typical values and are not intended for use in preparing specifications. This information is furnished upon the condition that the person receiving it shall make his own tests to determine the suitability thereof for his particular purpose.

03/14