



Technical Data Sheet

POLYMARK C321

TWO-COMPONENT POLYURETHANE THERMALLY CONDUCTIVE POTTING

Product Description:

Polymark C321 is a two-component, 100% solids, room temperature curing, thermally conductive potting system. Polymark C321 provides excellent thermal conductivity while having good adhesion to various metals, plastics, and other common assembly surfaces. The polybutadiene base imparts excellent moisture resistance and thermal stability.

Polymark C321 Resin and Hardener are self-leveling materials. Each component has enough body to inhibit settling of fillers and when mixed, prevent leakage from electronic assemblies. C321 will cure completely at room temperature but may be accelerated with mild heating.

Product Handling Properties (typical):

<u>CHARACTERISTIC</u>	<u>VALUE</u>
RESIN:	
Density (lbs./gallon)	17.3
Viscosity (centipoise)	100,000
Color	Black
HARDENER:	
Density (lbs./gallon)	17.3
Viscosity (centipoise)	35,000
Color	White
MIXED:	
Mix ratio (parts of A to B):	
by weight:	1 to 1
by volume:	1 to 1
Viscosity (centipoise):	70,000
Gel Time (at 25°C, 100 g.)	25 minutes
Typical Cure Time 25°C	24 hours

Cured Physical Properties (typical):

<u>CHARATERISTIC</u>	<u>VALUE</u>
Color	Gray
Cured Hardness (Shore)	A65
Water Absorption	0.01%
Glass Transition Temp.	-50°C
Dielectric Constant (1MHz)	4.4
Dielectric Strength (volts/mil)	>500
Thermal Conductivity	2.3 W/m*K
Maximum Service Temp.	140°C

*The physical properties are based on ASTM test procedures.

The cured physical properties were developed using a cure schedule of 72 hours at 25°C. The choice of the user's cure schedule will depend on the application and the user must determine suitability.

Polymark C321 can be proportioned by weight or volume. These ratios are stoichiometrically calculated and should be closely followed. Automated meter-mix dispensing equipment may be used for high volume production. Fillers in both resin and hardener may settle in storage. Thoroughly mix each component individually prior to use.

C321 hardener is moisture sensitive and must be kept away from atmospheric moisture during storage. After opening a sealed container, thoroughly purge the remaining air space with dry nitrogen (or equivalent inert gas) before closing the container.

Handling Safeguards

Closely follow instructions on the labels of Polymark materials containing information on the hazards associated with each particular product. Most polyurethane resin systems are skin and eye irritants and can cause respiratory sensitization. Other problems, such as skin sensitization and more serious health hazards may exist. Consult the Material Safety Data Sheet for further information.

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Important Notice to Users: Typical properties are shown in this technical bulletin and should not be used or taken as specifications. Contact Polymark prior to establishing specifications. The information given for product description, handling properties and cured physical properties are offered solely to assist the purchaser's own testing. Polymark, its sales agents and distributors make NO WARRANTY OF MERCHANTABILITY OF THE PRODUCT OR THE FITNESS OF THE PRODUCT FOR ANY PARTICULAR PURPOSE. This product and all information supplied in connection with it is used at the purchaser's own risk, conditions of use being beyond Polymark's knowledge or control. The purchaser assumes all risk of use or handling of the product, whether in accordance with directions or not.