



Technical Data Sheet

POLYMARK P272FR

TWO-COMPONENT POLYURETHANE POTTING SYSTEM

Features:

- Fast Curing
- UL94VO Flame Rating*
- Moisture Resistant
- Low Cost

Product Description:

Polymark P272FR is a user friendly, room temperature curing, polyurethane potting system intended for encapsulating electronic devices. As an encapsulant, it has low viscosity, excellent adhesion, low stress and good electrical insulation properties. The FR designation signifies that it has been formulated for flame retardance.

P272FR is non-abrasive to dispensing equipment and well suited to automated operations. It is a DOT non-hazardous material and contains no TDI, MOCA, or other reportable substances. The cure time may be accelerated with the application of moderate heat.

Typical Product Handling Properties:

<u>CHARACTERISTIC</u>	<u>VALUE</u>
Resin:	
Color	Black
Density (g/cc)	1.19
Viscosity, 25°C	15,000 mPa.s
Hardener:	
Color	Clear
Density (g/cc)	1.03
Viscosity, 25°C	40 mPa.s
Mixed:	
Mix Ratio (Resin/Hardener):	
by weight	100 to 86
by volume	1 to 1
Mixed Viscosity, 25°C	400 mPa.s
Geltime, 25°C	3-4 minutes
Tack-free Time, 25°C	<10 minutes

Typical Cured Physical Properties

<u>CHARATERISTIC</u>	<u>VALUE</u>
Cured Density (gram/cc)	1.11
Cured Shore 00 Hardness	60-70
Color, Cured	Opaque Black
Service Temperature	-40°C to 125°C
Dielectric Constant	4.0
Dielectric Strength (V/mil)	500+
Flammability Level*	UL94VO

*Not listed with Underwriter's Laboratory. P272FR meets the 94VO criteria as determined by Polymark.

The cured physical properties were developed using a cure schedule of 24 hours at 25°C. The choice of the user's cure schedule will depend on the application and the user must determine suitability.

Polymark P272FR can be mixed by weight or volume. These ratios are stoichiometrically calculated and should be closely followed. Automated meter-mix dispensing equipment is recommended for high volume production.

P272FR hardener is moisture sensitive and must be kept away from atmospheric moisture during storage and use. Polymark recommends the use of desiccant cartridges in the replacement air inlet as the material is consumed from the container. Alternatively, purge the head space with dry nitrogen (or equivalent inert gas) before closing the container.

Shelf Life:

The shelf life of P272FR Resin and Hardener is 6 months from the date of manufacture when stored at temperatures between 60°F and 90°F in the original, unopened container.

Handling Safeguards

Closely follow instructions on the labels of Polymark materials containing information on the hazards associated with each particular product. Consult the Safety Data Sheet (SDS) for further information prior to use.

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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.