



Technical Data Sheet

POLYMARK UVE-301HV Glob-Top Encapsulant

Features:

- **Dual Curing - UV or Heat**
- **Low CTE**
- **Excellent Moisture Resistance**
- **Bonds well to FR4 and Flex**

Product Description:

Polymark UVE-301HV is a one-component, dual cure, UV/Heat-curing Glob-Top. Polymark UVE-301HV has excellent adhesive characteristics to a wide variety of materials making it an excellent choice for bonding and sealing mounted bare die.

Polymark UVE-301HV may be rapidly cured in place using a high intensity UV lamp. High Intensity metal halide or LED lamps are recommended for adequate curing.

The thermal curing feature will cure in shadowed areas not able to be exposed to UV light. Thermal curing is rapid depending on the time, temperature, type of oven and the part assembly. A typical thermal cure is 60°C for 30 minutes.

Polymark UVE-301HV has excellent resistance to moisture and many chemicals. The low cure shrinkage and CTE make it ideal for protecting ICs by providing low stress.

Typical Product Handling Properties:

CHARACTERISTIC	VALUE
Absorption Peak	310 nm
Density (gram/cc)	1.70
Viscosity @25°C	Thixotropic
Average Particle Size	10 microns
Shelf Life @-40°C	6 months
Working Life @25°C	24 hours
Convection Oven Cure Time 60°C	30 minutes

Typical Cured Physical Properties

CHARACTERISTIC	VALUE
Color	Cream
Cured Hardness (Shore D)	D92
CTE	25 ppm
Moisture Absorption (24hrs)	<0.10%
Cured Density:	1.70 g/cc.

Application:

Polymark UVE-301HV is designed to be cured by UV light at a maximum depth of 2-3 mm. Substrate temperatures should not be below 25°C as lower temperatures will inhibit UV curing.

Polymark UVE-301HV will cure rapidly with elevated temperatures. Testing is advised to determine optimal times and temperature for specific applications. Due to high reactivity, Polymark UVE-301HV has limited working life at ambient temperatures.

Shelf Life and Storage:

Polymark UVE-301HV has a shelf life of 6 months when stored in sealed containers at -40°C. Higher storage temperatures shorten Polymark UVE-301HV's shelf life.

Polymark UVE-301HV is reactive to ambient light. Care should be taken to protect it from light exposure after removal from original containers. Contact Polymark for recommendations.

Polymark UVE-301HV will equilibrate to ambient temperature in approximately two hours for a 30cc syringe and one hour for a 10cc syringe. Thawing of the materials should be conducted at ambient temperature and should not be accelerated in an oven or warm water.

Handling Safeguards:

All Polymark materials include information on the hazards associated with each particular product. Most epoxy resin systems are skin and eye irritants. 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.