



Technical Data Sheet

POLYMARK UVE301-390 Active Alignment Adhesive

Features:

- **Dual Curing - UV or Heat**
- **Low CTE**
- **Excellent Moisture Resistance**
- **Active Alignment Applications**

Product Description:

Polymark UVE301-390 is a one-component, dual cure, UV/heat-curing adhesive. Polymark UVE301-390 has excellent adhesive characteristics to a wide variety of materials making it an excellent choice for bonding and sealing various metals, plastics, glass and other common assembly materials.

Polymark UVE301-390 may be rapidly cured in place using a high intensity UV light. Longer wavelength UV lamps (or those within the range of the absorption peak) are recommended for adequate curing.

The thermal curing feature will allow curing 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 80°C for 30 minutes.

Polymark UVE301-390 has excellent resistance to moisture and many chemicals. The low cure shrinkage and low CTE make it ideal for many optical, fiber and MEMS positioning applications.

Typical Product Handling Properties:

CHARACTERISTIC	VALUE
Absorption Peak	390 nm
Density (gram/cc)	1.70
Viscosity @25°C (10rpm)	14,000 cps
Average Particle Size	10 microns
Shelf Life @-40°C	6 months
Working Life @25°C	24 hours
Convection Oven Cure Time 80°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 UVE301-390 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 UVE301-390 will cure rapidly with elevated temperatures. Testing is advised to determine optimal times and temperature for specific applications. Due to high reactivity, Polymark UVE301-390 has limited working life at ambient temperatures.

Shelf Life and Storage:

Polymark UVE301-390 has a shelf life of 6 months when stored in sealed containers at -40°C. Higher storage temperatures shorten Polymark UVE301-390's shelf life.

Polymark UVE301-390 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 UVE301-390 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.