



Technical Data Sheet

POLYMARK UVE-3553

Active Alignment Adhesive

Features:

- **UV Light or Heat Cure**
- **High Tg and Chemical Resistance**
- **Excellent Moisture Resistance**
- **Fiber Optic Applications**

Product Description:

Polymark UVE-3553 is a one-component UV light and heat-curing adhesive. Polymark UVE-3553 has excellent adhesive characteristics to a wide variety of materials making it an excellent choice for bonding common assembly materials used in fiber optics. Cured UVE-3553 has outstanding moisture and chemical resistance.

Polymark UVE-3553 may be rapidly cured in place using a high intensity UV light source in the 320-380 nm range. The material may also be cured thermally at temperatures between 110°C and 130°C. This feature makes it ideal for fixturing and aligning optical devices and fiber optics.

The thermal curing feature will allow curing in shadowed areas not able to be exposed to the curing light. Thermal curing is rapid depending on the time, temperature, type of oven and the part assembly. A typical thermal cure is 120°C for 20 minutes.

Typical Product Handling Properties:

<u>CHARACTERISTIC</u>	<u>VALUE</u>
Color	Clear
Density (gram/cc)	1.12
Viscosity @25°C	1,000 cps
Percent Solids	100%
Shelf Life @0°C	6 months
Curable Depth	3 mm
Ideal Curing Wavelength	365 nm

Typical Cured Physical Properties

<u>CHARATERISTIC</u>	<u>VALUE</u>
Percent Elongation	4 %
Dielectric Strength (1/8")	420 volt/mil
Shore D Hardness	D88
Glass Transition Temp.	145°C
Coeff. Thermal Expansion	55 ppm
Ionic Impurities (Na, K, Cl)	<10 ppm

Application:

UVE-3553 should be applied and light-cured in a temperature-controlled environment. Avoid excessively curing the material photochemically or thermally since this can cause internal stresses and poor results.

UVE-3553 should be cured using a high-intensity lighting source of between 320 – 380 nm (including LED powered lamps). Avoid thermal curing in ovens set higher than 130°C.

Shelf Life and Storage:

Polymark UVE-3553 has a shelf life of 6 months when stored in sealed containers at 0°C. Higher storage temperatures shorten Polymark UVE-3553's shelf life.

Polymark UVE-3553 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-3553 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 done 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 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.