

## UVE4050

### UV Cure Epoxy Resin

#### DESCRIPTION:

**UVE4050** is a member of Star Technology's line of rigid and impact resistant, UV curable epoxy resins. **UVE4050** is a 100% solids product and contains no solvents or unreactive diluents. These resins may be cross-linked via UV light in the 200 - 360 nm ranges. Any shadowed areas can be post cured with exposure to heat. UV light sources should have an effective radiated power of at least 100 mW/cm<sup>2</sup>. As with all of Star Technology's UV cure epoxy products, there are no problems with oxygen inhibition causing loss of cure or tackiness at the surface of the adhesive. UV cure epoxy products have all the chemical resistance and tenacity of standard two part and heat cured epoxy compounds. **UVE4050** should not be used on surfaces that are moist or alkaline in nature, as these surfaces will poison the UV photoinitiators within the adhesive.

Data contained herein are believed to be reliable. Fit-for-use testing should be conducted by each user.

#### TYPICAL PROPERTIES

	TEST METHOD	VALUE
Cure Time [at 100mW/cm <sup>2</sup> ] (seconds):		30 typ. to 1/16" depth
Shore D Hardness:	ASTM D2240	80
Lap Shear [CRS to CRS] (psi):	ASTM D1002	1500
Tensile Strength (psi):	ASTM D638	8700
Elongation (%):		3
Shrinkage upon cure [linear] (%):		1.6
Compressive Strength (psi):		> 30,000
Refractive Index: D <sub>n20</sub>		1.5715
Dielectric Strength (volts/mil):		427
Volume Resistivity (ohm-cm):	ASTM D257	1.4x10 <sup>15</sup>
CTE $\alpha_1$ ( $\mu\text{m}/(\text{m}^\circ\text{C})$ )		25.48
Tg ( $^\circ\text{C}$ ): TMA	ASTM D3418	125.69
CTE $\alpha_2$ ( $\mu\text{m}/(\text{m}^\circ\text{C})$ )		164.0
24 Hr Water Immersion (%)		0.37
Product:		
Viscosity (cps):	ASTM D2393	11000
Color:		Colorless



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#### **PRECAUTIONS**

For industrial use only. Keep away from children.

Refer to the Material Safety Data Sheets (MSDS forms) pertaining to this product before using.

Avoid contact with skin or eyes. In the event of an eye splash or contact, immediately flush with cold water for 15 minutes and contact a physician. If skin contact occurs, wash with mild soap and water. The wearing of safety glasses with side shields and impervious gloves is recommended.

#### **PRODUCT WARNING STATEMENT**

May cause allergic skin reaction. Avoid all contact with skin, eyes, and clothing. Wash thoroughly after handling.

To the best of our knowledge, the information contained herein is accurate. However, STAR TECHNOLOGY, Inc., does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of the suitability of any material is the sole responsibility of the user. The information contained herein is considered typical properties and is not intended to be used as specifications for our products. This information is offered solely to assist purchaser in selecting the appropriate products for purchaser's own testing. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein and in the material safety data sheet, we cannot guarantee that these are the only hazards that exist. Repeated and prolonged exposure to epoxy resins can cause sensitization or other allergic responses.