

Light Weld[®] 425

OPTICALLY CLEAR STRUCTURAL ADHESIVE FOR GLASS ASSEMBLY

DESCRIPTION

DYMAX Light Weld[®] 425 forms water-white bonds in seconds to glass substrates upon exposure to longwave (365 nanometer) UV light. These durable bonds are dishwasher safe and exhibit exceptional tensile strength as well as vibration and impact resistance. Acceptable bonds form to a variety of other substrates such as ceramic, ferrite and metal surfaces. Light Weld 425[®] should be evaluated for applications where exceptional moisture resistance is required.

UNCURED PROPERTIES (not specifications)

Solvent Content	None	
Composition	100% Solids	
Appearance	Clear	
Flash Point	95°C (200°F)	
Solubility	Isopropyl Alcohol	
Toxicity	Low	
Viscosity (@20 rpm)	4,000 cP	ASTM D-1084

CURED PROPERTIES (not specifications)

PHYSICAL

Durometer Hardness	D80	ASTM D-2240
Tensile at Break	6,200 psi	ASTM D-638
Elongation at Break	7.3%	ASTM D-638
Tensile at Yield	7,300 psi	ASTM D-638
Elongation at Yield	3.5%	ASTM D-638
Tensile (Compression) Glass-to-Glass	4,000 psi	DSTM D-250*
Modulus of Elasticity	500,000 psi	ASTM D-638
Water Absorption	0.7%	ASTM D-570
Refractive Index	1.50	Bausch & Lomb Refractometer
Thermal Limit (brittle/degrades)	-40° to 190°C (-40° to +375°F)	DSTM D-200*
Linear Shrinkage	1.9%	

*DSTM refers to DYMAX Standard Test Method

UV LIGHT CURE DATA (Using 365 nm wavelength UV light ^[1])

	Cure Time (seconds)	Intensity ^[2] mW/cm ²	DYMAX Light-Welder [®] Lamps
Fixture between glass slides	>1	50	2000-EC
Nominal Cure Depth (0.25")	60	50	2000-EC
Tack Free Cure Time	30	250	5000-EC
	2	2,500	Fusion F-450**

**Equip Fusion with D-bulb ^[2]

DISPENSING AND HANDLING ADHESIVE

DYMAX 425 is available in various packaging sizes such as syringes, cartridges, bottles, and pails. It may be dispensed with a variety of automatic bench-top syringe applicators or other equipment as required. Direct any questions relating to dispensing and curing systems for specific applications to DYMAX Applications Engineering.

Wear impervious gloves and/or barrier cream. Repeated or continuous skin contact with liquid adhesive will cause irritation and should be avoided. Do not wear absorbent gloves. Remove adhesive from skin with soap and water. Never use solvents to remove adhesive from skin or eyes.

STORAGE AND SHELF LIFE

Store material in cool, dark place when not in use. Do not expose to UV light or sunlight. Material may polymerize upon prolonged exposure to ambient light. Replace lid immediately after use. Product has a one-year shelf life when stored below 90°F in the original, unopened container.

CAUTION

For industrial use only. Avoid breathing vapors. Avoid contact with eyes and clothing. In case of contact, immediately flush with water for at least 15 minutes; get medical attention. Wash clothing before reuse. Keep out of reach of children. Do not take internally. If swallowed, induce vomiting at once and call a physician. Repeated or continuous skin contact with liquid adhesive will cause irritation and should be avoided. For specific information, refer to the product Material Safety Data Sheet.

NOTES

- [1] Use of lamps, which emit high levels of shortwave light (for example, more than 15% 200-300 nanometer UV light), are not recommended.
- [2] Nominal intensity taken at a predetermined distance. This reading does not reflect the maximum intensity capabilities emitted from each unit.

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Technical Data Collection Prior to 09/15/2004

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