

Ultra Light-Weld® 3093 Structural Plastic Bonder for Polycarbonate, PVC, Polysulfone

DYMAX Ultra Light-Weld® structural adhesives can be cured with UV or visible light. DYMAX Ultra Light-Weld® materials contain no nonreactive solvents and cure upon exposure to light. Their ability to cure in seconds enables faster processing, greater output, and lower processing costs. When cured with DYMAX light-curing spot lamps, focused-beam lamps, or flood lamps, these adhesives provide optimum process flexibility. DYMAX lamps offer the optimum balance of UV and visible light for the fastest, deepest cures. This product is in full compliance with RoHS directives 2015/863/EU.

DESCRIPTION

Recommended especially for polycarbonate, Ultra Light-Weld® 3093 plastic bonder cures in seconds upon exposure to longwave (365 nm) UV light. Tough, environmentally resistant bonds are formed between polycarbonate and a variety of other plastic substrates. Bonds combine flexibility with tensile strength and resistance to thermal shock.

TYPICAL UNCURED PROPERTIES (not specifications)

Solvent Content	None - 100% Reactive Solids	
Chemical Class	Urethane (Meth) Acrylate	
Appearance	Clear/Light Amber Liquid	
Solubility	Alcohol/Chlorinated Solvents/Ketones	
Refractive Index	1.49 (20°C)	
Density	1.10 g/mL	
Flash Point	95°C (200°F)	
Viscosity	3,100 cP (nominal)	ASTM D-1084

TYPICAL CURED PROPERTIES (not specifications)

PHYSICAL

Durometer Hardness	D80	ASTM D-2240
Tensile at Break	9,500 psi	ASTM D-638
Elongation at Break	5%	ASTM D-638
Modulus of Elasticity	500,000 psi	ASTM D-638
Coefficient of Thermal Expansion	65.0 x 10 ⁻⁶ /°C	ASTM D-696
Water Absorption (24 h)	2.6%	ASTM D-570
Boiling Water Absorption (2 h)	4.0%	ASTM D-570
Linear Shrinkage	2.6%	ASTM D-2566

*DSTM refers to DYMAX Standard Test Method

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Technical Data Collection Prior to 2005



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UV LIGHT-CURE DATA

Using 365 nanometer UV light ^[1]:

	Cure Time (seconds)	Intensity ^[2] mW/cm ²	DYMAX Lamps
Fixture Between Glass Slides	5	20	2000-EC
Nominal Cure Depth (3/16-inch)	60	20	2000-EC
Tack-Free Surface Cure (1/8-inch bead)	15	150	5000-EC

DISPENSING AND HANDLING ADHESIVE

This material may be dispensed with a variety of manual and automatic applicators or other equipment as required. Questions relating to dispensing and curing systems for specific applications should be referred 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 the material in a cool, dark place when not in use. Do not expose to light. This product may polymerize upon prolonged exposure to ambient and artificial light. Keep covered when not in use. This material has an 18-month shelf life from date of manufacture, unless otherwise specified, when stored between 10°C (50°F) and 35°C (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.

GENERAL INFORMATION

This product is intended for industrial use only. Keep out of the reach of children. Avoid breathing vapors. Avoid contact with skin, eyes, and clothing. Wear impervious gloves. Repeated or continuous skin contact with uncured material may cause irritation. Remove material from skin with soap and water. Never use organic solvents to remove material from skin and eyes. For more information on the safe handling of this material, please refer to the Safety Data Sheet before use.

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PRODUCT DATA SHEET

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