

### FLEXIBLE COATING/ENCAPSULANT ULTRA LIGHT-WELD® 9-20351

#### DESCRIPTION

Ultra Light-Weld 9-20351 is a flexible, single component, 100% solids conformal coating specifically formulated for providing a moisture barrier to all electrical devices on the board. Coatings cure almost instantly in layers up to 1/4" thickness. Ultra Light-Weld 9-20351 exhibits excellent adhesion to a variety of metal, ceramic and glass-filled epoxy surfaces. It is a high viscosity coating which can be cured by exposure to UV/visible light and secondarily with heat for shadowed areas on densely populated circuit boards.

#### TYPICAL UNCURED PROPERTIES (not specifications)

Solvent Content	None, 100% solids	
Appearance	Gel	
Color (specify when ordering)	Clear	
Solubility	Alcohols/Chlorinated Solvents/Ketones	
Toxicity	Low	
Flash Point	>93°C (200°F)	
Viscosity (20 rpm)	17,000 cP (nominal)	ASTM D-2556

#### TYPICAL CURED PROPERTIES (not specifications)

Durometer Hardness	D45	ASTM D-2240
Elongation at Break	75%	ASTM D-638
Tensile at Break	1,000 psi	ASTM D-638
Modulus of Elasticity	3,500 psi	ASTM D-638
Water Absorption (24 h)	1.0%	ASTM D-570
Boiling Water Absorption (2 h)	2.4%	ASTM D-570
Coefficient of Thermal Expansion, $\alpha_1$	$95 \times 10^{-6}$ in/in/°C	ASTM E-831
Coefficient of Thermal Expansion, $\alpha_2$	$180 \times 10^{-6}$ in/in/°C	ASTM E-831
Thermal Limits	-60°C to 125°C	DSTM D-200*
Volume Resistivity	$500 \times 10^{12}$ ohm cm	ASTM D-1304
Surface Resistivity	$6,000 \times 10^{12}$ ohm	ASTM D-1304

\*DSTM Refers to Dymax Standard Test Method

#### CURE SCHEDULE

UV Cure with 365 nm UV light:

Cure Time (seconds)	Intensity mW/cm <sup>2</sup>
35	250
1	3,000

Dymax Corporation - 51 Greenwood Road - Torrington, CT 06790 - Phone: 860-482-1010 - Fax: 860-496-0608  
E-mail: [info@dymax.com](mailto:info@dymax.com) - [www.dymax.com](http://www.dymax.com)

Dymax Europe GmbH - Trakehner Strasse 3 - D-60487 Frankfurt am Main - Germany - Phone: (49) 69-7165-3568  
Fax: (49) 69-7185-3830 - E-mail: [dymaxinfo@dymax.de](mailto:dymaxinfo@dymax.de)

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### Heat Cure Following UV Exposure

Heat can be used as a secondary cure mechanism where all adhesive cannot be cured with UV light. UV cure must be done prior to heat cure. Application may involve dip, spray or curtain coat. The following cure schedule may be used:

110°C	(225°F)	1 hour
120°C	(250°F)	30 minutes
150°C	(300°F)	15 minutes

### DISPENSING AND HANDLING ADHESIVE

Brief exposures to ambient (fluorescent) lighting should not polymerize Dymax 9-20351 adhesives. However, exposure to higher intensity Halogen bulbs will cause the adhesive to cure and should be avoided.

Dymax 9-20351 may be dispensed from a variety of automatic bench-top syringe applicators or other equipment. Skin contact should be avoided. Use barrier hand cream. Wear impervious gloves. Do not wear absorbent gloves. Adhesive may be removed with basic soap and water. Avoid eye contact. See CAUTION below. Wipe excess adhesive with paper towels and remove residue with isopropanol.

### STORAGE AND SHELF LIFE

Store in a cool, dark place when not in use. Do not place in view of UV light source or sunlight. Shelf life of Dymax 9-20351 is one year when stored in original, unopened container. There is no need for refrigerated storage. Dymax 9-20351 does not support fungal or bacterial growth.

### CAUTION

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

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