

ULTRA FAST? 9-911 WIRE TACKING, FIXTURING, AND RUGGEDIZATION

ULTRA FAST INTRODUCTION

Dymax Ultra Fast structural adhesives can be cured with either UV or Visible light. Ultra Fast adhesives increase productivity, lower assembly costs and enhance worker safety. When cured with Dymax Light-Welder® UV/Visible lamps, Dymax 9-911 provides optimum process flexibility.

DESCRIPTION

Dymax 9-911 is a high tensile strength material that is especially well suited for fast fixturing, structural wire tacking, and component ruggedization. Dymax 9-911 has excellent adhesion to a wide variety of surfaces. It forms hard, smooth, translucent bonds to a variety of materials. 9-911 can be cured with either UV or visible light or activator. Shadowed adhesive can be cured with heat following primary cure.

TYPICAL UNCURED PROPERTIES

Solvent Content	None - 100% reactive solids	
Chemical Class	Urethane (Meth)acrylate	
Appearance	Clear/Straw liquid	
Flash Point	>93°C (200°F)	
Solubility	Alcohols/Chlorinated Solvents/Ketones	
Toxicity	Low	
Viscosity	42,000 cP (nominal)	ASTM D-2556

TYPICAL CURED PROPERTIES

PHYSICAL

Durometer Hardness	D75	ASTM D-2240
Elongation at Break	26%	ASTM D-638
Tensile at Break	3,000 psi	ASTM D-638
Refractive Index	1.5	ASTM D-542
Water Absorption (24 hr)	1.4%	ASTM D-570
Linear Shrinkage	3%	DSTM D-101

*DSTM refers to Dymax Standard Test Method

THERMAL

Coefficient of Linear Thermal Expansion	90×10^{-6} in/in/°C	ASTM D-696
Thermal Range (brittle/degrades)	-40° to +180°C (-45°/+350°F)	ASTM D-200

ELECTRICAL

Dielectric Strength	1,620 V/mil	ASTM D-1304
Volume Resistivity	$80 \times 10^{12} \text{ ? } * \text{cm}$	ASTM D-1304
Surface Resistivity	$230 \times 10^{12} \text{ ?}$	ASTM D-1304
Dissipation Factor, 1 MHz	0.06	ASTM D-1304

Dielectric Constant, 1 MHz

4.1

ASTM D-1304

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CURE DATA - Using 365 nanometer UV light^[1]:

	<u>Cure Time</u> <u>(seconds)</u>	<u>Intensity</u> ^[2] <u>mW/cm²</u>	<u>Dymax Light-Welder</u> [®] <u>Lamp</u>
Fixture between glass slides	1	50	2000-EC
Ruggedization	5	150	5000-EC
Wire Tack	1	2000	3010-EC
Depth of cure (0.125 inch)	40	50	2000-EC

HEAT CURE DATA (secondary)

Heat may be used as a secondary cure for shadow areas, but only after product has been cured with UV. The following is a guide and is dependent on the amount of material to be cured.

<u>Minimum Temperature</u>	<u>Time</u>
120°C (250°F)	30 minutes
150°C (300°F)	15 minutes

DISPENSING AND HANDLING ADHESIVE

Dymax 9-911 is available in various packages 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 questions relating to dispensing and curing systems for specific applications to the Dymax Tech Center.

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. Refrigerated storage extends shelf life.

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] Lamps emitting high levels of shortwave light are not recommended. Less than 15% of the lamps output should be 200-300 nanometer UV light.

[2] Nominal intensity measured at a predetermined distance. Listed intensity is not the maximum output of the lamp.