

CURE DATA – Using 365 nanometer UV light:

	Cure Time (seconds)	Intensity ⁽²⁾ mW/cm ²	Dymax Light-Welder® Lamp
Tack-free cure (1/8 inch bead)	35	175	5000-EC
Depth of Cure (1/4 inch)	30	175	5000-EC
Fixture Between Glass Slides	1-2	50	2000-EC

Shadowed areas can be cured with activator or heat.

Activator is placed on one surface and the adhesive on the mating surface. Curing takes place at room temperature when the parts are mated. Activator requires well-mated parts (up to 0.010 – inch gap). Well-mated parts fixture (achieve handling strength) in less than a minute. See Dymax Technical Bulletin “Guidelines for Activator Curing” for complete instructions for all activators.

Heat may be used after UVcure to cure shadowed areas or after activator cure to accelerate cure. The following guidelines depend on the amount of adhesive:

<u>Minimum Adhesive Temperature</u>	<u>Time</u>
110°C (225°F)	60 Minutes
120°C (250°F)	30 Minutes
150°C (300°F)	15 Minutes

DISPENSING AND HANDLING ADHESIVE

Multi-Cure 621 Series adhesives are available in various packages such as syringes, cartridges, bottles, and pails. They 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 Technical Center at 860-482-1010.

Wear impervious gloves and/or barrier cream. Repeated or continuous skin contact with liquid resin 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 a 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 the 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 Material Safety Data Sheet.

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The data contained in this bulletin which represents typical results, is furnished for information only, and is believed to be reliable. We cannot assume responsibility for results obtained by others over whose methods we have no control. It is the users responsibility to determine suitability for the user's purpose of any product or method mentioned herein and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use thereof. Nothing in this bulletin is to be interpreted as a representation of freedom from domination of patents owned by others or a license under a Dymax Corporation patent. We recommend that each prospective user test the proposed application before repetitive use, using the data as a guide. For specific information, refer to the Material Safety Data Sheet before use.

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621 SERIES
MULTI-CURE[®]
PHENOLIC & FILLED PLASTICS TO GLASS & METAL**DESCRIPTION**

Dymax 621 Series adhesives are high tensile strength, UV-curable resins that are especially well suited for rigid adhesive applications. Multi-cure 621 Series adhesives form clear, hard, bonds to glass, metal, phenolic, filled Nylon, ferrite, ceramic and other materials. Multi-cure 621 Series can be cured with UV light, heat, or pre-applied activator. Dymax adhesive/activator bonding systems comply with the Montreal Protocol and U.S. Clean Air Act of 1990.

TYPICAL UNCURED PROPERTIES (not specifications)

Solvent Content		None - 100% Reactive Solids	
Chemical Class		Urethane Acrylate	
Appearance		Clear/Straw Liquid	
Flash Point		>93° C (200° F)	
Solubility		Alcohols/Chlorinated Solvents/Keytones	
Toxicity		Low	
Viscosity	621	750 cP (nominal)	ASTM D-1084
	621-T	3,500 cP (nominal)	ASTM D-2556
	621-VT	11,000 cP (nominal)	ASTM D-2556
	621-GEL	25,000 cP (nominal)	ASTM D-2556

TYPICAL CURED PROPERTIES (not specifications)

Durometer Hardness	D75	ASTM D-2240
Tensile at Break	5,200 psi (35.9 MPa)	ASTM D-638
Elongation at Break	35%	ASTM D-638
Modulus of Elasticity	320,000 psi	ASTM D-638
Tensile Lap Shear (steel to steel)	3,600 psi	ASTM D-1002
Tensile Compression Shear		
Glass to Glass	4,000 psi (exceeds strength of glass)	* DSTM D-250
Glass to Steel	5,000 psi (exceeds strength of glass)	* DSTM D-251
Water Absorption (24 h)	1.1%	ASTM D-570
Boiling Water Absorption (2 h)	3.0%	ASTM D-570
Linear Shrinkage	3%	* DSTM D-101
Coefficient of Linear Thermal Expansion	90 x 10 ⁻⁸ in/in/°C	ASTM D-696
Thermal Limit (brittle/degrades)	-43° to +177°C (-45°/+350°F)	* DSTM D-200

*DSTM refers to Dymax Standard Test Method

ELECTRICAL

Dielectric Strength	1,600 V/mil	ASTM D-1304
Volume Resistivity	7.5 x 10 ¹³ Ω*cm	ASTM D-1304
Surface Resistivity	2.2 x 10 ¹⁴ Ω	ASTM D-1304
Dissipation Factor, 1 MHz	0.06	ASTM D-1304
Dielectric Constant, 1 MHz	4.10	ASTM D-1304