

ADHESIVE AND SEALANT Multi-Cure® 652-A SERIES

DESCRIPTION

Multi-Cure 652-A Series adhesives are tough, flexible UV/Visible curing resins. Multi-Cure 652-A has good adhesion to many metals, glass, ceramic and thermoset plastics. Their ability to resist moisture and to withstand thermal shocks makes them candidates for many sealant applications. Multi-Cure 652-A Series can be cured with UV or visible 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/Ketones	
Toxicity	Low	
Viscosity (20 rpm) 652-A	5,000 cP (nominal)	ASTM D-1084
652-A-VT	13,000 cP (nominal)	ASTM D-2556
652-A-Gel	34,500 cP (nominal)	ASTM D-2556

TYPICAL CURED PROPERTIES (not specifications)

Durometer Hardness	A85	ASTM D-2240
Tensile at Break	400 psi (2.8 MPa)	ASTM D-638
Elongation at Break	100%	ASTM D-638
Modulus of Elasticity	1,400 psi (9.6 MPa)	ASTM D-638
Tensile Shear (steel laps)	2,500 psi (17 MPa)	ASTM D-1002
Water Absorption (24 h)	2.5%	ASTM D-570
Boiling Water Absorption (2 h)	1.8%	ASTM D-570
Thermal Limit (brittle/degrades)	-55° to +150°C (-65°/+300°F)	DSTM D-200*
Linear Shrinkage	1.9%	DSTM D-102*

*DSTM refers to DYMAX Standard Test Method

CURE DATA - Using 365 nm UV light:

	<u>Cure Time</u>	<u>Intensity</u> (mW/cm ²)	<u>DYMAX Light-Welder®</u> <u>Lamps</u>
Fixture between glass slides	9 sec	30	2000-EC
Depth of cure (1/8-inch deep)	8 sec	225	5000-EC
Tack-free cure (1/8-inch bead)	45 sec	200	5000-EC

* Recommend Fusion D-Bulb

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 0.020-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 UV cure 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 652-A -SV01, -T, -VT- and -Gel adhesives are available in various packages such as syringes, cartridges, bottles, and pails. Standard grade 652-A (5,000 cP) is not available in syringes or cartridges and may require stirring before use. They may be dispensed with a variety of automatic bench-top applicators or other equipment as required. Direct questions relating to dispensing and curing systems for specific applications to the DYMAX Tech Center at 860-482-1010.

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 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 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.

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