

Ultra Light-Weld® 3095 Series Fast Tacking Adhesives

INTRODUCTION

Dymax Ultra Light-Weld® structural adhesives can be cured with UV or visible light. Ultra Light-Weld® materials' faster, deeper cure increases productivity, lowers assembly costs, and enhances worker safety. When cured with Dymax light-curing spot lamps, focused-beam lamps, or flood lamps, they deliver optimum speed and performance for maximum efficiency. Dymax lamps offer the optimum balance of UV and visible light for the fastest, deepest cures. This product is in full compliance with the RoHS Directives 2002/95/EC and 2003/11/EC.

DESCRIPTION

Ultra Light-Weld® 3095 Series adhesives are designed for the fastest bonding, tacking, and sealing possible with photocurable adhesives. Solvent-free, UV/Visible light-curable 3095 Series adhesives dispense easily and cure "on demand" for precise bonding and placement of components. Excellent adhesion to common PCB substrates, fabric, and other porous surfaces, and their shock-absorbing capabilities make them excellent choices for a variety of potting and tacking applications.

TYPICAL UNCURED PROPERTIES (not specifications)

Solvent Content		None - 100% Reactive Solids	
Chemical Class		Urethane (Meth) Acrylate	
Appearance		Straw	
Solubility		Alcohols/Chlorinated Solvents/Ketones	
Flash Point		>95°C (200°F)	
Viscosity (20 rpm)	3095	2,500 cP (nominal)	ASTM D1084
	3095-T	6,400 cP (nominal)	ASTM D2556
	3095-GEL	25,000 cP (nominal)	ASTM D2556

TYPICAL CURED PROPERTIES (not specifications)

PHYSICAL

Durometer Hardness	D65	ASTM D2240
Elongation at Break	20%	ASTM D638
Tensile at Break	2,600 psi	ASTM D638
Modulus of Elasticity	100,000 psi	ASTM D638
Water Absorption (24 h)	5.0%	ASTM D570
Boiling Water Absorption (2 h)	5.0%	ASTM D570
Glass Transition T _g , °C	135	DSTM 256*
Linear Shrinkage, %	0.07	ASTM D2566

*DSTM refers to Dymax Standard Test Method



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Technical Data Collection Prior to 2004

Rev. 08/20/2014

TYPICAL LIGHT-CURE DATA

Lamp	2000-EC	5000-EC	Cure Spot 50	BlueWave® 200
Light Type	UV	UV	UV	UV
Lamp Type	Flood	Flood	Spot	Spot
Maximum Intensity (mW/cm ²)	50	250	4,000	20,000
Intensity Taken at Time of Test (mW/cm ²)	35	150	2,500	12,000
Measured at Peak Wavelength	365 nm	365 nm	365 nm	365 nm
Wavelength (nm) Working Range	300-500	300-500	300-500	300-500
Cure Speed (seconds)				
Between Glass	<1	<1	<1	<1
1/8" Bead	20-30	10-15	1-3	1
Surface Cure	30	15	2	1
Cure Depth in 1 Minute (inch)	0.33	0.33	0.35	0.4

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 Application 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 visible or UV light. This product may polymerize upon prolonged exposure to ambient and artificial light. Keep covered when not in use. This material has a six-month shelf life from date of shipment, unless otherwise specified, when stored between 10°C [50°F] and 32°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.