

DYMAX CORPORATION

PRODUCT DATA SHEET

4-20623 LAMINATING ADHESIVE

INTRODUCTION

Dymax adhesives cure upon exposure to UV light in seconds and are designed to increase productivity, lower assembly cost and enhance worker safety. These results were obtained Dymax flood lamps. Dymax lamps deliver optimum speed and performance for a variety of optical applications.

DESCRIPTION

Ultra Light-Weld 4-20623 was designed for laminating large pieces of thin glass.. 4-20623 is a clear, UV or visible light-curing adhesive with high transmission across the optical spectrum. 4-20623 is very soft, low modulus and is designed for thermal cycling of fragile optical components. Its high Newtonian viscosity makes it useful for filling irregular or hand-made glass will minimizing air bubbles in the bond line.

SUBSTRATES BONDED:	• Glass • Ceramics • Plastics • Metal
FEATURES:	• Low Shrinkage UV Cure (<0.5%) • Thick, Flowing Viscosity To Fill Gaps • Fast, Total Cure In Seconds with UV or Visible Light
APPLICATIONS:	Laminating Glass Bonding Nonflat Glass

TYPICAL UNCURED PROPERTIES

Solvent Content	None-100% Reactive Solids	
Composition	Urethane Acrylate	
Appearance	Optical Clear	
Solubility	Alcohols/Ketones/Chlorinated Solvents	
Toxicity	Low	
Flash Point	Over 93°C (>200°F)	
Viscosity	21,000 cP (nominal)	ASTM D-1084

TYPICAL CURED PROPERTIES

Refractive Index, n_D^{20}	1.505	ASTM D-1218
Durometer Hardness	D55	ASTM D-2240
Modulus of Elasticity	3,000 psi	ASTM D-638
Elongation at Break	120%	ASTM D-638
Tensile at Break	1,500 psi	ASTM D-638
Thermal Range (brittle/degrades)	-55° to +180°C (-65 to 350°F)	DSTM D-200*
24 hr Water Absorption	1.0%	ASTM D-570
2 hr Boiling Water Absorption	2.0%	ASTM D-570
Linear Shrinkage	<0.5%	ASTM D-2566

*DSTM Refers to Dymax Standard Test Method

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4-20623, 7/27/2001

CURE DATA

Lamp	PC-3 Ultra	2000-EC	Bond Box	5000-EC
Light Type	UV/Visible	UV/Visible	UV/Visible	UV/Visible
Lamp Type	3/16" Spot	8" x 8" Flood	8" Rotating stage	5" x 5" Flood
Maximum Lamp Intensity @ 365 nm	4,000 mW/cm ²	50 mW/cm ²	150 mW/cm ²	300 mW/cm ²
Intensity @ time of test @ 365 nm	2,500 mW/cm ²	20 mW/cm ²	50 mW/cm ²	150 mW/cm ²
Adhesive Absorption Range (nm)	300-400	300-400	300-400	300-400
Equipment Output Range (nm)	300-500	300-500	300-500	300-500
Typical Cure speed (seconds)				
Fixture between glass slides	1	1	1	1
Tack-free surface cure	nm	nm	nm	nm
1/16-inch bead	nm	nm	nm	nm

DISPENSING & HANDLING ADHESIVE

Dymax 4-20623 adhesive is available in syringes, cartridges, or pails. Machine ready syringes may be dispensed from a variety of automatic bench-top syringe applicators or other equipment as required. Any questions relating to dispensing and curing systems for specific applications should be referred to the Dymax Technical Center at (860) 482-1010.

SAFETY

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.

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; 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 Material Safety Data Sheet before use.

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