

13 September 2004

## LOW OUTGASSING POLYCARBONATE HEADLAMP ADHESIVE ULTRA LIGHT-WELD® 3-20686

### DESCRIPTION

Ultra Light-Weld® 3-20686 was developed specifically for bonding headlamp and fog lamp lens to the reflector housings. 3-20686 has passed both GM and FORD qualifications for bonding polycarbonate headlamp assemblies. It is designed for low outgassing and will not fog metalized surfaces when properly cured. Curing in seconds upon exposure to visible light, 3-20686 permits efficient, automated, high-speed assembly operations with no 24-hour staging areas, racking or stacking of in-process parts.

### TYPICAL UNCURED PROPERTIES (not specifications)

Solvent Content	None-100% Reactive Solids	
Composition	Urethane (Meth) Acrylate	
Appearance	Clear	
Solubility	Alcohols/Ketones/Chlorinated Solvents	
Toxicity	Low	
Flash Point	Over 200°F (93°C)	
Viscosity (@20 rpm)	4,000 cP (nominal)	ASTM D-2556

### TYPICAL CURED PROPERTIES (not specifications)

Polycarbonate Tongue & Groove Laps		
Initial Strength	2,900 psi	Ford WSB-M11P28-B
Salt Spray, 500 h, wet pull	1,500 psi	Ford WSB-M11P28-B
4 Thermal cycles, 88°/-30°C	2,900 psi	Ford WSB-M11P28-B
Headlamp Performance Tests	Pass	Ford WSB-M11P28-B
Headlamp Performance Tests	Pass	GM 6432M
Durometer Hardness	D85	ASTM D-2240
Tensile at Break	11,400 psi	ASTM D-638
Elongation at Break	3.0%	ASTM D-638
Modulus of Elasticity	2,000,000 psi	ASTM D-638
24 hr Water Absorption	8.2%	ASTM D-570
2 hr Boiling Water Absorption	4.1%	ASTM D-570
Thermal Range (brittle/degrades)	-55° to 175°C (-65°/+350°F)	DSTM D-200*

\*DSTM Refers to DYMAX Standard Test Method

### CURE DATA

Lamp	2000-EC	5000-EC	Cure Spot 50
Light Type	UV	UV	UV
Lamp Type	Flood	Flood	Spot
Intensity (mW/cm <sup>2</sup> ) at Peak Wavelength	50 @ 365 nm	150 @ 365 nm	4000 @ 365 nm
Curing Wavelength Range	300-400	300-400	300-400
Cure Speed (seconds)			
Between Glass	1	1	1
1/8" Bead	7	3	2

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## DISPENSING AND HANDLING ADHESIVE

DYMAX 3-20686 is available in various packages such as syringes, cartridges, bottles, and pails. It may be dispensed with a variety of 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.

## STORAGE AND SHELF LIFE

Store in original, light blocking container. Do not expose to sunlight or any light source. This product has a one-year shelf life when stored below 32°C (90°F) in original, unopened container.

## 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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