

Ultra Light-Weld® 3-20261 Moisture-Resistant Polycarbonate Bonder

APPLICATIONS

- Lens Assembly
- Housing Displays
- Plastic Appliances

FEATURES

- UV/Visible Light Cure
- Fast Cures with Dymax UV Lamps
- Deeper Visible-Light Cures
- Cures Through UV-Blocked or Tinted Plastics
- Excellent Moisture, Thermal Shock, and Vibration Resistance

RECOMMENDED SUBSTRATES

- Polycarbonate and Plastic Substrates

Dymax Ultra Light-Weld® 3-20261 adhesive provides rapid bonding and sealing to polycarbonate and a variety of other plastic substrates. It is a solvent-free, visible and UV light-curable resin, and has excellent dispensing rheology for precise substrate bonding. Bonds generally exceed the strength of the polycarbonate substrate bonded. 3-20261 exhibits excellent moisture resistance.

Ultra Light-Weld® materials contain no nonreactive solvents and cure upon exposure to light. Their ability to cure in seconds enables faster processing, greater output, and lower processing costs. When cured with Dymax light-curing spot lamps, focused-beam lamps, or flood lamps, these adhesives provide optimum process flexibility. Dymax lamps offer the optimum balance of UV and visible light for the fastest, deepest cures. This product is in full compliance with RoHS directives 2015/863/EU.

UNCURED PROPERTIES *

| Property | Value | Test Method |
|------------------------|---------------------------------------|-------------|
| Solvent Content | None - 100% Reactive Solids | N/A |
| Chemical Class | Urethane (Meth) Acrylate Blends | N/A |
| Appearance | Clear | N/A |
| Solubility | Alcohols/Chlorinated Solvents/Ketones | N/A |
| Flash Point | >93°C (200°F) | N/A |
| Density, g/ml | 1.10 | ASTM D1875 |
| Viscosity, cP (20 rpm) | 1,300 (nominal) | ASTM D1084 |

OTHER CURED PROPERTIES *

| Property | Value | Test Method |
|-----------------------------------|-----------------------------|-------------|
| Refractive Index (20°C) | 1.51 | ASTM D542 |
| Boiling Water Absorption, % (2 h) | 2.6 | ASTM D570 |
| Water Absorption, % (24 h) | 1.0 | ASTM D570 |
| Thermal Limit (brittle/degrades) | -54° to 177°C (-65°/+350°F) | DSTM D200† |

CURED MECHANICAL PROPERTIES *

| Property | Value | Test Method |
|-----------------------------|-------------|-------------|
| Durometer Hardness | D60 | ASTM D2240 |
| Tensile at Break, MPa [psi] | 14 [2,000] | ASTM D638 |
| Elongation at Break, % | 160 | ASTM D638 |
| Elongation at Yield, % | 10 | ASTM D638 |
| Tensile at Yield, MPa [psi] | 9.3 [1,350] | ASTM D638 |

* Not Specifications

N/A Not Applicable

‡ DSTM Refers to Dymax Standard Test Method



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CURING DATA

| Lamp | 2000-EC UV Flood | 5000-EC UV Flood | PC-3 UV Spot | 3000-EC UV Spot |
|---------------------------------|---------------------|---------------------|-----------------|--------------------|
| Intensity*, mW/cm ² | 50 | 150 | 1,000 | 1,800 |
| Wavelength Working Range, nm | 300-500 | 300-500 | 300-500 | 300-500 |
| Cure Speed, Sec. | - | - | - | - |
| Between Glass | <5 | 1 | 1 | <1 |
| 1/8" Bead | 30-60 | 25-30 | 10 | 3-5 |
| Surface Cure | 45-90 | 45 | 10 | 8 |
| Cure Depth in 1 min, in. | 0.375 | 0.375 | 0.375 | 0.375 |

* At peak wavelength

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.

Repeated or continuous direct skin contact should be avoided. The use of barrier hand cream and plastic gloves are recommended. Do not wear absorbent gloves. Do not wear jewelry. Adhesive may be removed with hand soap and water. Avoid eye contact. Wipe excess wet adhesive off parts with paper towels and remove cured residue with chlorinated solvents, Freon, methanol or ethanol. See CAUTION at right.

STORAGE AND SHELF LIFE

Store the material in a cool, dark place when not in use. Do not expose to light. This product may polymerize upon prolonged exposure to ambient and artificial light. Keep covered when not in use. Ultra Light-Weld® 3-20261 adhesive should be stored in a warm area, 24°C (75°F), in the dark, when not in use. Should product cool below 18°C (65°F), it may begin to crystallize and thicken. If this should occur, nominal viscosity can be restored by gentle warming at 38° to 49°C (100° to 120° F) with occasional stirring. This "freeze"/melt process has no effect on the product's properties. This material has an 18-month shelf life from date of manufacture, unless otherwise specified, when stored between 10°C (50°F) and 35°C (90°F) in the 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.

GENERAL INFORMATION

This product is intended for industrial use only. Keep out of the reach of children. Avoid breathing vapors. Avoid contact with skin, eyes, and clothing. Wear impervious gloves. Repeated or continuous skin contact with uncured material may cause irritation. Remove material from skin with soap and water. Never use organic solvents to remove material from skin and eyes. For more information on the safe handling of this material, please refer to the Safety Data Sheet before use.

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