

# DYMAX CORPORATION

## PRODUCT DATA SHEET

### 4-20638 ULTRA LIGHT-WELD<sup>®</sup> ADHESIVE ONE-PART UV CURING DECORATIVE COATING

#### DESCRIPTION

Dymax Light Weld 4-20638 is a clear, decorative coating that cures in seconds upon exposure to long wave (365 nm) UV light. The coating has a low viscosity for thin coating applications and resists many solvents. 4-20638 has good adhesion to plastics, metal, glass and decals. QUV tests suggest that 4-20638 may be suitable for most indoor and some outdoor applications. Users should thoroughly test 4-20638 for suitability in their application. Dymax 4-20638 is best suited to coating novelty items, such as knives and nameplates.

- **Clear, High Gloss**
- **Slick, Abrasion Resistant Surface**
- **Low Viscosity**
- **Fast Curing**
- **No Isocyanates**

#### UNCURED PROPERTIES

|                      |  |             |
|----------------------|--|-------------|
| Solvent Content      | None   |             |
| Composition          | 100% Solids, Urethane acrylate                       |             |
| Appearance           | Clear  |             |
| Solubility           | Isopropyl alcohol, ketones, and chlorinated solvents |             |
| Toxicity             | Low  |             |
| Flash Point          | >95°C (200°F)  |             |
| Viscosity (@ 20 rpm) | 65 cP (nominal)                                      | ASTM D-1084 |

#### CURED PROPERTIES

##### *PHYSICAL*

|                                 |             |             |
|---------------------------------|-------------|-------------|
| Durometer Hardness              | D85         | ASTM D-2240 |
| Tensile at Break                | 4,200 psi   | ASTM D-638  |
| Modulus of Elasticity           | 625,000 psi | ASTM D-638  |
| Elongation                      | 2.3%        | ASTM D-638  |
| Water Absorption (24 hr)        | 0.2%        | ASTM D-570  |
| Boiling Water Absorption (2 hr) | 1.3%        | ASTM D-570  |

#### CURE DATA

UV Light - Using 365 nm wavelength UV light <sup>[1]</sup>:

|                                | <u>Cure Time</u> | <u>Intensity</u> <sup>[2]</sup><br><u>mW/cm<sup>2</sup></u> | <u>Dymax Light-Welder</u> <sup>®</sup><br><u>Lamps</u> |
|--------------------------------|------------------|---|--|
| Coating Cures                  | 20 sec           | 150   | 5000-EC  |
| Coating Cures                  | 15 ft/min        | 350   | UVC6/12002   |
| Coating Cures                  | 15 ft/min        | 1,000   | UVC6/F300  |
| Nominal Cure Depth (0.12 inch) | 10 sec           | 150   | 5000-EC  |

Dymax Corporation - 51 Greenwood Road - Torrington, CT 06790 - Phone: 860-482-1010 - Fax: 860-496-0608  
E-mail: [info@dymax.com](mailto:info@dymax.com) - [www.dymax.com](http://www.dymax.com)

Dymax Europe GmbH - Trakehner Strasse 3 - D-60487 Frankfurt am Main - Germany - Phone: (49) 69-7165-3568  
Fax: (49) 69-7185-3830 - E-mail: [dymaxinfo@dymax.de](mailto:dymaxinfo@dymax.de)

Dymax<sup>®</sup>, Light-Weld<sup>®</sup>, Light-Welder<sup>®</sup>, Multi-Cure<sup>®</sup>, Ultra Light-Weld<sup>®</sup>, *MEDI-CURE*<sup>®</sup> and MD<sup>®</sup> are trademarks of Dymax Corporation



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4-20638, 2/2002

### DISPENSING AND HANDLING ADHESIVE

Dymax 4-20638 is available in various packages such as syringes, cartridges, bottles, and pails. It may be dispensed with a variety of automatic bench-top syringe applicators or other equipment as required. Direct questions relating to dispensing and curing systems for specific applications to Dymax Technical Representatives.

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 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. Refrigerated storage may extend shelf life.

### 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.

### NOTES

1. Use of lamps that emit high levels of short wave light (for example, more than 15% 200-300 nanometer UV light) are not recommended.
2. Nominal intensity taken at a predetermined distance. This reading does not reflect the maximum intensity capabilities emitted from each unit.

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Dymax Corporation - 51 Greenwoods Road - Torrington, CT 06790 - Phone: 860-482-1010 - Fax: 860-496-0608  
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