

UVLED82



UV LED Adhesive

UVLED82 is a 1-part, low-viscosity, UV-curable adhesive formulated for rapid cure upon exposure to UV light. The adhesive is specially formulated to cure using both broadband and LED light sources such as 365, 385, 395 and 405 nm.

This product is ideal for edge bonding chips and other circuit components when high throughput is needed. The low viscosity coupled with depth of cure enables encapsulation of parts up to a thickness of 5 mm (1/5"). The adhesive contains a secondary cure mechanism that allows for curing in shadowed areas.



Features & Benefits

- Bonds strongly to metal, glass and many plastics
- Cures with LED exposure (365–405 nm)
- Can cure up to 5 mm thick, ideal for encapsulation
- Secondary moisture cure
- Low viscosity, easily wets out horizontal surfaces

Available Packaging

| Cat. No. | Packaging | Net Vol. | Net Wt. |
|---------------|-----------|----------|---------|
| UVLED82-30ML | Cartridge | 30 mL | 32.1 g |
| UVLED82-300ML | Cartridge | 300 mL | 321 g |
| UVLED82-1L | Can | 945 mL | 1.01 kg |
| UVLED82-3.78L | Can | 3.78 L | 4.05 kg |

Contact Information

MG Chemicals, 1210 Corporate Drive
Burlington, Ontario, Canada L7L 5R6

Email: support@mgchemicals.com

Phone: North America: +(1)800-340-0772

International: +(1) 905-331-1396

Europe: +(44)1663 362888

Cured Properties

| | |
|--|---|
| Breakdown Voltage @ 3.175 mm | 44 900 V |
| Dielectric Strength @ 3.175 mm | 360 V/mil |
| Resistivity | $3.0 \times 10^{13} \Omega \cdot \text{cm}$ |
| Hardness | 77 D |
| Tensile Strength | 30 N/mm ² |
| Lap Shear (polycarbonate) | 6.2 N/mm ² |
| Glass Transition Temperature (T _g) | 42 °C |
| CTE Prior T _g | 74 ppm/°C |
| CTE After T _g | 191 ppm/°C |
| Thermal Conductivity @ 25 °C | 0.2 W/(m·K) |

Usage Parameters

| | |
|---------------------------|------------|
| Service Temperature Range | -40–135 °C |
| Intermittent Temperature | 155 °C |

Uncured Properties

| | |
|-------------------|------------|
| Density | 1.1 g/mL |
| Viscosity @ 25 °C | 1 180 Pa·s |

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Application Instructions

Read the product SDS for more detailed instructions before using this product (downloadable at www.mgchemicals.com).

Recommended Preparation

Clean the substrate with Isopropyl Alcohol, MG #824, so the surface is free of oils, dust, and other residues.

Cartridge

1. Cut the end of the cartridge tip and screw the tip on the cartridge.
2. Insert the cartridge in a caulking gun.
3. Dispense the adhesive evenly to both surfaces.
4. To stop the flow, pull back on the plunger.
5. Clean nozzle to prevent contamination and material buildup.
6. Replace the cap on the cartridge.

Dispensing Accessories

The cartridges are compatible with caulking guns that are readily available for purchase at local hardware stores.

Cure Instructions

The product only cures upon UV exposure. Cure the adhesive at one of these options:

| Light Source | Irradiance (W/cm ²) | Dosage (J/cm ²) | Exposure Time (s) |
|-----------------------|---------------------------------|-----------------------------|-------------------|
| Broadband, 320–500 nm | 5 | 25 | 5 |
| LED, 365 nm | 2 | 50 | 25 |
| LED, 395 nm | 2 | 50 | 25 |
| LED, 405 nm | 5 | 50 | 10 |

Storage and Handling

Store between 4 and 40 °C in a dry area, away from sunlight (see SDS). To maximize shelf life, recap product firmly when not in use.

Disclaimer

This information is believed to be accurate. It is intended for professional end-users who have the skills required to evaluate and use the data properly. M.G. Chemicals Ltd. does not guarantee the accuracy of the data and assumes no liability in connection with damages incurred while using it.