

UV2000

UV Cure Epoxy Adhesive

| Typical Properties | | | |
|---|-----------------------|-----------------------|---------------------|
| Property | Unit | Value | Test Method |
| Appearance | | Water Clear | Visual |
| Color of Component | Gardner Scale, Max | 1 | Visual & ASTM D1544 |
| Density | Gram /cc | 1.1 | ASTM D792 |
| Viscosity at 25°C | cps | 3,000 | ASTM D2196 |
| Property as Cured | | | |
| Appearance | | Water Clear | Visual |
| Color of Component | Gardner Scale, Max | 1 | Visual & ASTM D1544 |
| Hardness | Shore D | 75 | ASTM D2240 |
| Dielectric Constant | @1000Hz | 4.0 | ASTM D150 |
| Dielectric Strength | Volt/mil AC | > 400 | ASTM D149 |
| Volume Resistivity (@24°C) | Ohm-cm | > 10E+13 | ASTM D257 |
| Coefficient of Thermal Expansion | ppm/°C | 63 (<Tg) 124 (>Tg) | IPC-TM-650 |
| Tg | °C | 85 | DMA |
| Refractive Index | n _D (25°C) | 1.51 | ASTM D542 |
| Adhesion (Glass to / Al lap shear) | Psi | > 700 | ASTM D1002 |
| Temperature Usage | °C | -80 to 180 | TGA |
| Cure Profile | | | |
| UV A (220 and 365 nm) Mercury H bulb, 100mW/cm ² | second | ~ 20 | Durometer |
| UV A (300 to 365 nm) Iron D bulb, 120 mW/cm ² | second | ~ 30 | Durometer |
| Pot / Work Life at 25°C (no UV exposure) | Month | > 12 | Viscosity double |

These figures are only intended as a guide and should not be used in preparing specifications.

Processing Instruction

Cure speed is dependent upon the UV light spectral distribution (e.g. 240 nm to 365 nm), intensity of light, thickness of material, distance from the light, and UV transmission of substrates through which the UV light passes to reach the adhesive.

We recommend running preliminary tests to optimize conditions for the particular application. Comprehensive processing instructions can be obtained by contacting directly to United Adhesives, Inc.

Storage

UV2000 has a shelf life of at least 12 months when stored in closed container without exposure to UV light. The 'Best use before end' date of each batch appears on the product label. Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.

Safety information

General hygiene regulations should be observed. Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from United Adhesives, Inc.

Characteristics

UV2000 is a low viscosity single part UV cure epoxy acrylate adhesive. It can be cured rapidly in 20 seconds under medium intensity ultraviolet light of suitable wavelength. After cure it provides strong bonding to silicon, BGA, ceramics, FR4, LTCC, aluminum, copper, stainless steel, etc. with low shrinkage, low outgassing, and transparency. Its anti-oxygen formulation yields shining and smooth surface finish (non-stick) after UV cure. UV2000 is used for bonding, potting and coating applications.

Special Features and Benefits

- Fast cure under UV exposure
- Low viscosity for feasible thin coating
- Transparency and low shrinkage
- Strong bonding to various substrates
- Low bleeding, low volatile

Typical Applications

- Bonding of optical parts
- Bonding for film lamination
- Seal lids, covers, housings, connectors
- Conformal coating
- Potting and encapsulation
- Aerospace & Automotive electronics
- Semiconductor & Telecommunications

UV2000 has a shelf life of at least one year when stored in the originally sealed container without exposure to UV light.

The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the products for a particular purpose. For technical, quality, or product safety questions, please contact directly to United Adhesives Inc.