HERNON®
Formulating Solutions

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Ultrabond® 3444

Product Description

Hernon® Ultrabond 3444 is a single-component, tri-cure formula designed for bonding a wide range of substrates including glass, metals, and engineered materials. It offers versatile curing options: UV light for rapid surface cure, heat above 200°F (93°C), or **Hernon Activator 56 or 59** for areas shadowed from UV exposure. **Ultrabond 3444** provides a strong, dry finish ideal for tacking, sealing, and structural bonding applications.

Typical Applications

- Bonding glass to glass or metal
- Bonding to nylon, fiberglass, phenolics, ceramics, filled polyamides, and composites
- Wire tacking and general component positioning

Product Benefits

- Good Moisture and Environmental Resistance
- Solvent-free formulation
- Excellent for Encapsulating, Potting, Sealing and Bonding

Typical Properties (Uncured)

Property	Value
Resin	Modified Acrylic
Appearance	Clear Liquid
Fluorescent	Yes
Specific Gravity	1.02
Viscosity @ 25ºC	750-2,000 cP
Flash point	See SDS

Typical Properties (Cured)

Physical Properties

Property	Value
Shore Hardness, ASTM D2240, Shore D	40-60
Temperature Range, ºC (ºF)	-55 to 121 (-65 to 250)

Typical Curing Performance

Adhesive Properties

This product is cured when exposed to UV radiation of 365nm. The speed of cure will depend on the UV intensity as measured at the product surface.

Tack Free Time
Measured @ 365 nm, using medium pressure, mercury arc lamp: US 1000, at ½ inch distance: ≤ 5 seconds
By using LED9, at ¼ inch distance: ≤ 10 seconds

Fixture Time
Fixture time is defined as the time to develop a shear strength of 0.1 N/mm².

Specimen	Cure Conditions	Fixture Time
Glass/Steel	US 1000, at ½ inch distance	≤ 10 seconds
Glass/Glass	US 1000, at ½ inch distance	≤ 10 seconds
G/B Steel	with Activator 56	≤ 45 minutes

Ultrabond 3444 can be also cured with heat above 200°F (93°C, bondline temperature). At least, 25 minutes is needed to achieve cured properties.

Typical Cured Performance

Block- Shear Strength on different specimens
Cured with US 1000, at ½ inch distance
Tested at RT, according to ASTM D4501

Specimen	Cure Conditions	Value, psi
Glass to Glass	UV-cured, post-cured for 24 hours @ 22 ºC	≥ 300
Glass to Steel	UV-cured, post-cured for 24 hours @ 22 ºC	≥ 300
Glass to FR4 composite*	UV-cured for 30 sec, post-cured for 24 hours at 22 ºC	300-700

*Substrate Failure

General Information

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials. For safe handling information on this product, consult the Safety Data Sheet (SDS).

Directions for use (UV- curing)

1. This product is light sensitive, exposure to daylight, UV light and artificial lighting should be kept to a minimum during storage and handling.
2. The product should be dispensed from applicators with black feed lines.
3. For best performance bond surfaces should be clean and free from grease.
4. Cure rate is dependent on lamp intensity, distance from light source, depth of cure needed or bond-line gap and light transmittance of the substrate through which the radiation must pass.
5. For dry curing of exposed surfaces, higher intensity UV is required.
6. Plastic grades should be checked for risk of stress cracking when exposed to liquid adhesive.
7. Excess adhesive can be wiped away with organic solvent.
8. Bonds should be allowed to cool before subjecting to any service loads.

Storage

Hernon® Ultrabond 3444 should be stored in a cool, dry location in unopened containers at a temperature between 45ºF to 85ºF (7ºC to 29ºC) unless otherwise labeled. Optimal storage is at the lower half of this temperature range. To prevent contamination of unused material, do not return any material to its original container.