HERNON®
Formulating Solutions

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Ultrabond® 3443

Product Description

Hernon® Ultrabond 3443 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 3443** 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
- Ideal for encapsulating, potting, sealing, and bonding
- Strong peel and fatigue resistance

Typical Properties (Uncured)

Property	Value
Resin	Modified Acrylic
Appearance	Clear Liquid
Fluorescent	Yes
Specific Gravity	1.11
Viscosity @ 25ºC	15,000 to 35,000 cPs
Flash point	See SDS
Refractive Index	1.47

Typical Properties (Cured)

Physical Properties

Property	Value
Shore Hardness, ASTM D2240, Shore D	40-50
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: ≤ 7 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
G/B Aluminum	with Activator 56	≤ 45 minutes
G/B Steel	with Activator 59	≤ 10 minutes

Ultrabond 3443 can be also cured with heat above 200°F (93°C). At least, 25 minutes is needed to achieve cured properties. *
*Bondline must reach this temperature

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	500-1000
Glass to Aluminum	UV-cured + 15 minutes @ 95ºC and post-cured for 24 hours @ 22 ºC	≥ 400
Glass to Aluminum	UV-cured + 15 minutes @ 95ºC and post-cured for 24 hours @ 22 ºC and tested at -40 ºC	≥ 400

*Substrate Failure

Shear Strength on lap-shear specimens
Tested according to ASTM D1002.

Specimen	Cure Conditions	Value, psi
G/B Steel	Cured for 24 hours @ 22ºC with Primer 56	≥ 1,000
G/B Aluminum	Cured for 24 hours @ 22ºC with Primer 56	≥ 600
G/B Aluminum	Cured @ 95ºC for 25 min and post-cured for 24 hours @ 22 ºC	≥ 1000
G/B Steel	Cured @ 95ºC for 25 min and post-cured for 24 hours @ 22 ºC	≥ 1000

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

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 bondline 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 (≥100mW/cm²).
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 3443 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.

These suggestions and data are based on information we believe to be reliable and accurate, but no guarantee of their accuracy is made. HERNON MANUFACTURING®, INC. shall not be liable for any damage, loss or injury, direct or consequential arising out of the use or the inability to use the product. In every case, we urge and recommend that purchasers, before using any product in full scale production, make their own tests to determine whether the product is of satisfactory quality and suitability for their operations, and the user assumes all risk and liability whatsoever, in connection therewith. Hernon's Quality Management System for the design and manufacture of high -performance adhesives and sealants are registered to the ISO 9001 Quality Standard.