HERNON®
Formulating Solutions

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Ultrabond® 740

Product Description

Hernon® Ultrabond® 740 is a specially formulated, UV-curable adhesive engineered for high-performance bonding, tacking, coating, and potting applications. Upon exposure to high-intensity ultraviolet (UV) light, it cures rapidly to form a hard, durable surface with a high refractive index. This makes it an excellent choice for applications requiring optical clarity and strong, reliable bonds.

Ultrabond® 740 demonstrates exceptional adhesion to a wide variety of substrates and its fast cure profile and ease of application make it ideal for industrial manufacturing, electronics, and precision assemblies.

Typical Applications

- High optical clarity and superior light transmission
- Rapid UV cure for increased throughput
- Strong, durable bonds to a wide variety of substrates
- Bonding glass, metals, ceramic, filled polyamide, composites, and other materials
- Ideal for bonding, tacking, potting, and coating
- Smooth flow and easy dispensing for precision applications

Typical Properties (Uncured)

Property	Value
Resin	Modified Acrylic
Appearance	Clear- Light yellow liquid
Viscosity @ 25ºC, cP	6000 to 7300
Specific gravity	1.02
Flash point	See SDS
Refractive Index, nD	1.476

Typical Properties (Cured)

Physical Properties

Property	Value
Shore Hardness, ASTM D2240, Shore D	55-70
Temperature Range, ºC (ºF)	-55 to 121 (-65 to 250)
Tensile Strength at break, psi	3400
Elongation at break, %	32
Shrinkage, %	≤1

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: ≤10 seconds.
By using LED9, at ¼ inch distance: ≤20 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/Glass	US 1000, at ½ inch distance	≤ 10 seconds

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 for 30 sec, post-cured for 24 hours at 22 ºC	≥ 500
Glass to Steel	UV-cured for 30 sec, post-cured for 24 hours at 22 ºC	≥ 100
Glass to FR4 composite	UV-cured for 30 sec, post-cured for 24 hours at 22 ºC	300-500

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 feedlines.
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. Recommended intensity for cure in bond-line situation is 40mW/cm² minimum (measured at the bond-line) with an exposure time of 4-5 times the fixture time at the same intensity.
6. For dry curing of exposed surfaces, higher intensity UV is required (≥100mW/cm²).
7. Cooling should be provided for temperature sensitive substrates such as thermoplastics.
8. Plastic grades should be checked for risk of stress cracking when exposed to liquid adhesive.
9. Excess adhesive can be wiped away with organic solvent.
10. Bonds should be allowed to cool before subjecting to any service loads.

Storage

Ultrabond® 740 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.

Dispensing Equipment

Hernon® offers a complete line of semi and fully automated dispensing equipment. Contact **Hernon® Sales** for additional information.