

Technical Data Sheet Ultrabond[®] 47371

December 2009

Page 1 of 2

Product Description

Hernon[®] Ultrabond[®] 47371 is a single component, medium viscosity, UV curable adhesive sealant formulated to provide high performance, fast curing, flexible, impact and temperature resistant seals on components. This product offers exceptional adhesion to a wide variety of substrates.

Product Benefits

- UV fluorescence for in-process inspection
- 100% solid system (no solvents)
- Excellent adhesion to a variety of surfaces
- Excellent environmental resistance
- Good gap filling properties
- No shrinkage due to solvent evaporation
- Rapid room temperature cure

Typical Properties (Uncured)

Property	Value
Chemical Type	Modified Acrylic Ester
Appearance	Blue fluorescent liquid
Viscosity @ 25°C, cP	2600
Fluorescent	Yes
Specific Gravity @ 25°C	1.10
Flash Point	See MSDS

Typical Curing Performance

Ultrabond[®] 47371 will cure rapidly at room temperature when exposed to high intensity ultraviolet light (365 nm). UV light intensities above 600 mW/cm² will insure optimum surface cure.

Fixture Time

100mW/cm² at 365 nm
Glass microscope slides

Property	Value
Fixture time, seconds	5

Tack Free Time

100mW/cm² at 365 nm

Property	Value
Tack free time, seconds	< 20

Typical Properties (Cured)

Physical Properties

Property	Value
Coefficient of thermal expansion, K ⁻¹ , ASTM D696	80 × 10 ⁻⁶
Coefficient of thermal conductivity, W/(m·K), ASTM C177	0.1
Tensile strength, psi, ASTM D638	3250
Modulus, psi, ASTM D638	108000
Elongation, %, ASTM D638	85
Hardness, Shore B, ASTM D2240	95
Temperature range, °C, (°F)	-54 to 177 (-65 to 350)
UV depth of cure, mm (in.)	2.54 (0.10)

Electrical Properties

Property	Value
Dielectric Strength, kV/mm, ASTM D149	36
Dielectric Constant at 1 kHz, ASTM D150	4.25
Dissipation Factor at 1 kHz, ASTM D150	0.03
Volume Resistivity, Ω·cm, ASTM D257	1.7 × 10 ¹⁵

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 Material Safety Data Sheet (MSDS).

Factors Affecting UV Curing

- Dark surfaces lengthen cure time.
- Full range (UV-A, B & C) lamps provide faster cures than filtered sources.
- All UV sources degrade with use. Check output with a radiometer.
- Thicker films require longer cures.
- Light intensity decreases as distance from UV source increases.
- Some clear plastics may contain UV inhibitors.

Precautions When Using UV Lamps

- Never look directly at UV source.
- Wear protective UV goggles
- Do not expose bare skin to high intensity UV light.
- Wear protective clothing.
- Use in a well-ventilated area. Some UV sources generate ozone. Provide shielding around high intensity UV sources.
- High intensity UV sources generate heat. Take appropriate precautions.

Storage

Ultrabond® 47371 should be stored in a cool, dry location in unopened containers at a temperature between 46°F to 82°F (8°C to 28°C) 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.

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 is registered to the ISO 9001 Quality Standard.