HERNON®
High Performance Adhesives and Sealants
ISO 9001 Registered

121 Tech Drive
Sanford, FL 32771
(407) 322-4000
Fax: (407) 321-9700
www.hernonmfg.com

Technical Data Sheet
Ultrabond® 55391

Product Description

Hernon® Ultrabond® 55391 is a UV curable adhesive product that provides excellent impact resistance, and adhesion to a wide selection of substrates including composites, metals, glass, ceramics, and plastics such as polyester, PVC, cellulose acetate, and nylon.

Product Benefits

- UV fluorescence for in-process inspection
- Color changes from blue to clear after UV exposure for process verification
- 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	Light blue liquid
Specific Gravity @ 25°C	1.10
Viscosity @ 25°C, cP	3500 to 5000
Flash Point	See MSDS

Typical Curing Performance

Ultrabond® 55391 will cure rapidly at room temperature when exposed to high intensity ultraviolet light (365 nm).

Fixture and Tack Free Time
100mW/cm² at 365 nm

Property	Value
Fixture time, glass, seconds	5
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
Hardness, Shore A, ASTM D2240	70
Temperature range, ºC, (ºF)	-55 to 135 (-65 to 275)

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® 55391 should be stored in a cool, dry location in unopened containers at a temperature between 46ºF to 82ºF (8ºC to 28ºC) 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.