

## Technical Data Sheet Ultrabond™ 738

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Page 1 of 2

### Product Description

**Hernon® Ultrabond™ 738** is a high impact UV curable structural adhesive formulated for bonding glass to glass, glass to metal and for potting and tacking applications. **Ultrabond™ 738** has very high light transmission and reflective index similar to that of glass. **Ultrabond™ 738** cures on exposure to ultraviolet light with a wave length of 365 nm.

### Typical Applications

- Potting
- Wire tacking
- Coating

### Product Benefits

- One component
- 100% solid (no solvent)
- Fast cure speed with UV light
- Unlimited adjustment time until exposed to UV light
- Good adhesion to glass
- Bond is almost invisible

### Typical Properties (Uncured)

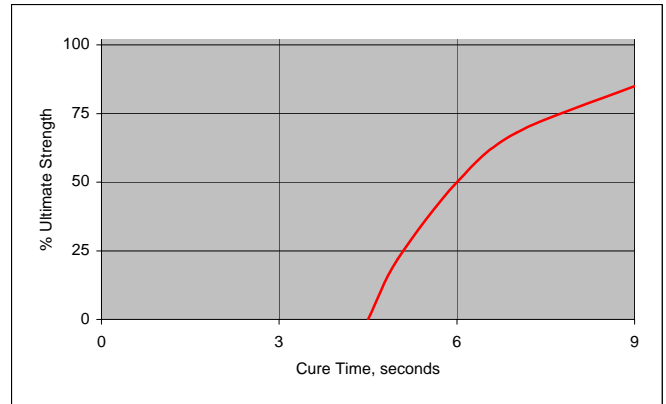
Property	Value
Resin	Modified acrylic ester
Appearance	Clear liquid
Viscosity @ 25°C, cP	1800 to 2400
Specific gravity	1.14
Flash point	See MSDS

### Typical Cured Performance

Property	Substrate	Value
Fixture Time, secs.	Glass to Glass	5
Shear Strength, psi	Glass to Metal	2200

### Factors Affecting Cure Rate and Strength

- Light transmittance of parts being bonded
- Cure lamp intensity and wave length
- Distance from the light source
- Temperature



### Post Cure

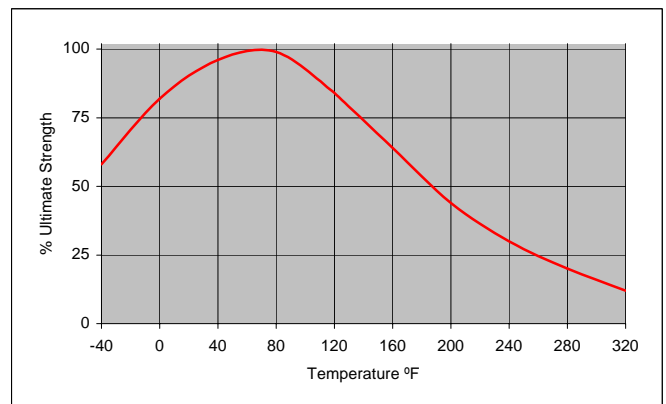
**Ultrabond™ 738** can be partially cured under UV light, and allowed to post cure for 48 hours to ultimate strength without further light exposure.

### Typical Environmental Resistance

**Ultrabond™ 738** offers good environmental resistance. The use of **Hernon® Adhesion Promoter 23** prior to adhesive application can significantly improve the durability of glass bonds.

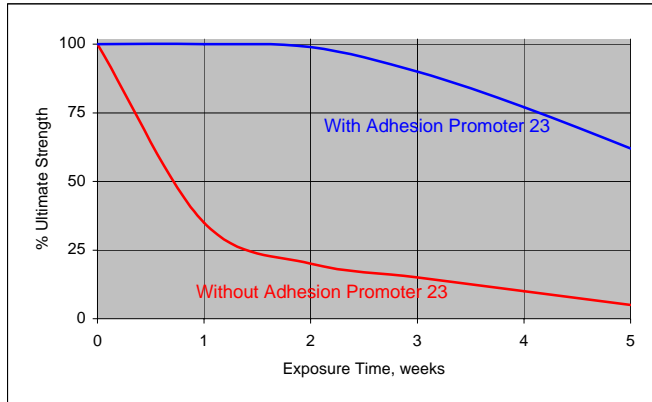
### Hot Strength

Tested at temperature



### Humidity Resistance

Tested at room temperature after exposure



### Typical Properties (Cured)

Property	Value
Refractive index	1.485
Coefficient of thermal expansion, ASTM D696, K <sup>-1</sup>	50 to 80 x 10 <sup>-6</sup>
Visible Light Transmittance	> 95%
Temperature Range, °C (°F)	-55 to 135 (-65 to 275)

### 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).**

### Directions for Use

**Ultrabond™ 738** is a UV sensitive adhesive. Exposure to daylight, UV light and artificial lighting should be kept to a minimum during storage and handling. Product should be dispensed from applicators with black feed lines. For best performance bond surfaces should be clean and free from grease. UV 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.

Recommended irradiance at the bondline for curing is 5mW/cm<sup>2</sup> minimum with an exposure time of 4-5 times the fixture time at this same irradiance. For dry curing of exposed surfaces higher UV irradiance is required (100 mW/cm<sup>2</sup> minimum).

Cooling should be provided for temperature sensitive substrates such as thermoplastics. Crystalline and semicrystalline thermoplastics should be checked for risk of stress cracking when exposed to liquid adhesive.

Excess adhesive can be wiped away with organic solvent. Bonds should be allowed to cool before subjecting to any service loads.

### Ultraviolet Light

Exposure to short wave ultraviolet light can cause a burning of the skin and eyes. Care should be taken to avoid exposure of operator to direct or reflected radiation. Suitable eye and skin protection should be used when mercury vapor lamps are in operation.

### Storage

**Ultrabond™ 738** 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 ISO9001:2000 Quality Standard.