

## Fusionbond® 3751-10

### Product Description

**Herndon® Fusionbond® 3751-10** is two-component methacrylate adhesive designed for room-temperature curing with a 1:1 mix ratio. This next-generation formula offers enhanced stability when stored at room temperature.

**Fusionbond® 3751-10** achieves fixture strength within 10 minutes and provides durable performance across a wide temperature range of -67°F to 250°F.

Engineered for versatility, **Fusionbond® 3751-10** bonds a variety of substrates with minimal surface preparation. Recommended substrates include various metals, PVC, acrylic, ABS, and fiberglass.

### Product Features

- Non-sagging gaps filled to 0.125 inch.
- Superior impact and peel strength
- Minimal or no surface preparation
- Rapid room temperature cure
- 100% reactive
- Excellent environmental and chemical resistance
- Gasoline resistance

### Typical Properties (Uncured)

Property	Part A	Part B
Chemical Type	Methacrylate	Methacrylate
Appearance	Blue	Pale Yellow
Specific gravity	1.00	0.98
Viscosity at 25°C, cP	30,000 to 60,000	30,000 to 60,000
Mix ratio (by weight)	1	1

### Typical Curing Performance

Property	Value
Working time, minutes	10-15
Fixture time*, using G/B steel, minutes	10

\*Fixture time is defined as the time to develop a shear strength of 0.1 N/mm<sup>2</sup>.

### Typical Properties (Cured)

Property	Value
Hardness, ASTM D2240, Shore D	80-90
Glass Transition Temperature (Tg) °C	116
Modulus, psi	113,859

### Typical Cured Performance

Shear Strength, ASTM D1002  
Grit-blasted lap-shear specimens

Substrate	Cure at 22°C	Value, psi
Steel	24 Hours	4,000-5,000
Aluminum	24 Hours	3,000-4,000
Fiberglass (FR4)	24 Hours	1,072

### Impact Strength

Grit-blasted lap-shear specimens, 1 in overlap

Substrate	Cure at 22°C	Value, J
Steel	24 hours	11
Aluminum	24 hours	>5

### Typical Environmental Resistance; Cold and Hot Strength

**Fusionbond® 3751-10** demonstrates excellent mechanical performance across a wide temperature range. It maintains high shear strength, exceeding 4,000 psi at 22°C, with increased strength at -40°C ( $\geq$  4,500 psi) and reliable performance at elevated temperatures, sustaining  $\geq$  3,000 psi at 95°C.

The adhesive also exhibits strong impact resistance, withstanding 5-15 Joules, maintaining toughness at -40°C, and increasing impact absorption at 95°C.

These results confirm **Fusionbond® 3751-10**'s ability to perform in extreme cold and hot environments, making it a robust solution for applications requiring durability under fluctuating temperatures.

# Hernon® Technical Data Sheet

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### 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).**

### Handling and Application

**Mixing:** It is highly recommended that either meter mix equipment or cartridges with static mix nozzles be used to properly ratio and dispense the adhesive. For hand mixing, combine Part A and Part B in the correct ratio and mix thoroughly. Heat buildup during and after mixing is normal. To reduce the likelihood of exothermic reaction or excessive heat buildup, mix less than 100 grams at a time. Mixing smaller amounts will minimize heat buildup.

**Applying:** Bonding surfaces should be clean, dry, and free of contamination. Extensive surface preparation is not required for **Fusionbond® 3751-10** and good bonds can be formed on most substrates after a solvent wipe. To assure maximum bond strength, surfaces must be mated within the adhesive's open time. Use enough material to completely fill the joint when parts are clamped.

**Curing:** Parts should remain undisturbed during the interval between the adhesive's open time and fixture time. After the fixture time is achieved the material has reached handling strength. Cure temperatures below room temperature (70°F to 75°F) will slow the fixture time. Temperatures above room temperature will shorten the open-time and the fixture time.

**Clean Up:** It is important to clean up excess adhesive from the work area and application equipment before it cures.

Use **Hernon® Cleaner 62** for removing uncured adhesive. **Fusionbond® 3751-10** is flammable. Keep containers tightly closed after use. Keep away from heat, sparks, and open flames.

### Storage

**Fusionbond® 3751-10** should be stored in a cool, dry location in unopened containers at a temperature between 45°F and 75°F (7°C and 24°C) unless otherwise labeled. Shelf life can be extended by refrigeration from 45°F to 55°F (7°C to 13°C). 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.