

## Technical Data Sheet Fusionbond<sup>®</sup> 376

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### Product Description

**Hernon<sup>®</sup> Fusionbond<sup>®</sup> 376** is a two component, room temperature curing, 1:1 ratio, methacrylate adhesive system. **Fusionbond<sup>®</sup> 376** is formulated to provide fixturing strength within 10 to 15 minutes. This adhesive is Halogen free. **Fusionbond<sup>®</sup> 376** forms resilient bonds and maintains its strength over a wide range of temperatures. **Fusionbond<sup>®</sup> 376** is suitable for bonding a variety of substrates with a minimum of surface preparation. **Fusionbond<sup>®</sup> 375** provides toughness at temperatures from -67 to 250°F. Recommended substrates: PVC, acrylic, ABS, stainless steel, aluminum and some types of fiberglass.

### Product Features

- Halogen free 3<sup>rd</sup> party independent tested
- Non-sagging gaps filled to 0.376 inch
- Superior impact and peel strength
- Little or no surface preparation
- Rapid room temperature cure
- 100% reactive
- Excellent environmental resistance

### Bondable Substrates

ABS	Phenolics
Acrylics (PMMA)	Polycarbonate and blends
Aluminum	Polyurethanes <sup>1</sup>
Brass	PVC & Vinyls
Ceramics	Stainless steel
Copper	Steel
Fiberglass	

<sup>1</sup> May need special treatment

### Typical Properties (Uncured)

Property	Part A	Part B
Chemical Type	Methacrylate	Methacrylate
Appearance	Clear	Clear Pale yellow
Specific gravity	0.97	0.94
Viscosity at 25°C, cP	30,000 to 50,000	30,000 to 50,000
Mix ratio (by weight)	1	1

### Typical Properties (Cured)

Property	Value
Hardness, ASTM D2240, Shore D	60 - 70

### Typical Curing Performance

Property	Value
Working time, minutes	15 to 20
Fixture time*, G/B steel, minutes	10 to 15

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

### Typical Cured Performance

Shear Strength, ASTM D1002  
Gritblasted lap-shear specimens

Substrate	Cure Time at 22°C	Value, psi
Aluminum	24 Hours	≥ 2000
Steel	24 Hours	≥ 2000
Steel	24 Hours + 25 min @ 400°F (204°C)	≥ 3500
Steel	72 Hours	≥ 2000

Impact Strength, ASTM D6110  
Gritblasted lap-shear specimens

Substrate	Cure Time at 22°C	Value
Steel	24 hours	>30 Joules
Steel	24 hours + 25 min @ 400 °F (204 °C)	≥ 25 Joules
Aluminum	24 hours	>24 Joules

T-peel Strength, ASTM D1876  
Gritblasted lap-shear specimens

Substrate	Cure Time at 22°C	Value
Aluminum	24 hours	≥ 20 PIW

### Typical Environmental Resistance

Cured for 24hrs @ 22°C  
Steel lap-shear specimens (grit blasted)

### Cold & Hot Strength

Shear Strength, ASTM D1002

Test Condition	Value, psi
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At 22°C	≥ 2000
At -40°C, cold strength	≥ 3000
At 95°C, hot strength	≥ 4000

Impact Strength, ASTM D6110

Test Condition	Value, Joules
At 22°C	>30
At -40°C, cold strength	11- 21
At 95°C, hot strength	34 - 44

### 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 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. Heat buildup during and after mixing is normal.

**Applying:** Bonding surfaces should be clean, dry, and free of contamination. Extensive surface preparation is not required for **Fusionbond® 376** 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) may slow the fixturing time. Temperatures above room temperature will shorten the open time and the fixturing time.

**Clean Up:** It is important to clean up excess adhesive from the work area and application equipment before it cures. Use **Hernon® EF® Cleaner 62** for removing uncured adhesive. **Fusionbond® 376** is flammable. Keep containers tightly closed after use. Keep away from heat, sparks, and open flames.

### **Storage**

**Fusionbond® 376** should be stored in a cool, dry location in unopened containers at a temperature between 45°F and 85°F unless otherwise labeled. Shelf life can be extended by refrigeration at 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.