

Technical Data Sheet Fusionbond[®] 376

June 2017

Page 1 of 2

Product Description

Hernon[®] Fusionbond[®] 376 is a two component, room temperature curing, 1:1 ratio, methacrylate adhesive system. **Fusionbond[®] 376** is formulated to provide fixturing strength within 10 to 15 minutes. This adhesive is Halogen free. **Fusionbond[®] 376** forms resilient bonds and maintains its strength over a wide range of temperatures. **Fusionbond[®] 376** is suitable for bonding a variety of substrates with a minimum of surface preparation. Recommended substrates: PVC, acrylic, ABS, stainless steel, aluminum and some types of fiberglass.

Product Features

- Halogen free 3rd 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 ¹
Brass	PVC & Vinyls
Ceramics	Stainless steel
Copper	Steel
Fiberglass	
Glass	

¹ May need special treatment

Typical Properties (Uncured)

Property	Part A	Part B
Chemical Type	Methacrylate	Methacrylate
Appearance	Clear	Pale Yellow
Specific gravity	0.95	0.94
Viscosity at 25°C, cP	30,000 to 50,000	30,000 to 50,000
Mix ratio (by weight)	1	1
Flash Point	See MSDS	See MSDS

Typical Curing Performance

Property	Value
Working time, minutes	≥ 10
Fixture time, grit blasted steel, mins.	10 to 15
Temperature Range, °C (°F)	-55 to 121 (-67 to 250)

Typical Cured Performance

Shear Strength, ASTM D1002
Gritblasted lap-shear specimens

Substrate	Cure at 22°C	Value
Hardness, Shore D		55 - 65
Shear Str Steel	24 Hours	>2500 psi
Shear Str Steel, 24 hr cure + 25 min @ 400F (204C)		>2500 psi
Shear Str Aluminum	24 Hours	>2000 psi
Impact Str, Stl after 48 hrs	ASTM D4812	≥45 Joules
Impact Str, Stl 24 hrs + 25 min @ 400F (204C)		≥ 40 Joules
Impact Str, Alum after 48 hrs	ASTM D4812	≥30 Joules
T- peel Str, Alum	24 hr	≥ 20 PIW
Thermal Conductivity	24 hr	0.24 W/m·K
Dielectric Strength	ASTM D149	78.5 V/mil
Dielectric Constant	ASTM D150	1.5 Mhz
Dissipation factor	ASTM D150	0.006
Glass Transition Temperature	24 Hours	221°F / 105°C
Coefficient of Thermal Expansion (below Tg)	24 Hours	2 x 10 ⁻⁴ in/in°C
Coefficient of Thermal Expansion (above Tg)	24 Hours	5 x 10 ⁻⁵ in/in°C

Strength Properties at Different Temperatures
(0.25 mm gap and ½ inch overlap on grit-blasted steel)

Temperature	Shear Strength, (psi)
23°C	2,000 – 3,000
-55°C	4,000 – 5,000
80°C	2,500 – 3,500
155°C	1,000 – 2,000

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 Material Safety Data Sheet, (MSDS).

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 9001:2008 Quality Standard.