HERNON® ISO 9001 Registered
High Performance Adhesives and Sealants

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Technical Data Sheet
Fusionbond® 375

Product Description

Hernon® Fusionbond® 375 is a highly thixotropic, two component, room temperature curing, 1:1 ratio, methacrylate adhesive system. **Fusionbond® 375** is formulated to provide fixturing strength within 7 to 10 minutes. This adhesive forms resilient bonds and maintains its strength over a wide range of temperatures. **Fusionbond® 375** is suitable for bonding a variety of substrates with a minimum of surface preparation. **Fusionbond® 375** provides superior toughness at temperatures from -67 to 250˚F. Recommended substrates: PVC, acrylic, ABS, stainless steel and some types of fiberglass.

Product Features

- Non-sagging gaps filled to 0.375 inch
- Superior impact and peel strength
- Little or no surface preparation
- Rapid room temperature cure
- 100% reactive
- Excellent environmental and chemical resistance
- Gasoline resistance

Bondable Substrates

ABS
Acrylics (PMMA)
Aluminum
Brass
Ceramics
Copper
Epoxy
Fiberglass
Gel Coats
Nylon 6 or Nylon 6 Alloys[1]
PBT blends
PET blends
Phenolics
Polycarbonate and blends
Polyurethanes [1]
PPO and PPO blends
PVC & Vinyls
Rim urethane
Rubber
Stainless steel
Steel

[1] May need special treatment

Typical Properties (Uncured)

Property	Part A	Part B
Chemical Type	Methacrylate	Methacrylate
Appearance	Blue	Amber
Specific gravity	1.05	0.97
Viscosity at 25ºC, cP	40,000 to 64,000	40,000 to 64,000
Mix ratio (by weight)	1	1
Flash Point	See MSDS	See MSDS

Typical Curing Performance

Property	Value
Working time, minutes	4 to 8
Fixture time, as received steel, mins.	6 to 10

Typical Properties (Cured)

Property	Value
Elongation, ASTM D638, %	< 5
Hardness, ASTM D2240, Shore D	75 to 80
Glass Transition Temperature, ºC	95 to 100
Temperature Range, ºC (ºF)	-55 to 121 (-67 to 250)
Gap Fill, inches	0.380

Typical Cured Performance

Shear Strength, ASTM D1002
Gritblasted lap-shear specimens

Substrate	Cure at 22ºC	Value, psi
Steel	24 Hours	>4,500
Steel	72 Hours	>5,500
Aluminum	24 Hours	>4,000

Impact Strength, ASTM D6110
Gritblasted lap-shear specimens

Substrate	Cure Time at 22ºC	Value, Joules
Steel	24 hours	>12

Block- Shear Strength
Cured 24 Hours @ 22ºC - tested according to ASTM D4501

Substrate	Shear Strength (psi)
PVC blocks	≥ 2000*
Polycarbonate blocks	≥ 700
ABS blocks	≥ 400

*Substrate failure

Typical Environmental Resistance

Cured 24 hours at 22ºC
Gritblasted lap-shear specimens

Cold & Hot Strength
Shear Strength, ASTM D1002

Test Condition	Value, psi
At 22ºC	≥ 4,500
At -40 ºC, cold strength	≥ 5,300
At 95 ºC, hot strength	≥ 3,000

Impact Strength, ASTM D6110

Test Condition	Value, Joules
At 22ºC	≥ 12
At -40 ºC, cold strength	≥ 2
At 95 ºC, hot strength	≥ 45

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).

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® 375** 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 (70ºF to 75ºF) will 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® 375** is flammable. Keep containers tightly closed after use. Keep away from heat, sparks, and open flames.

Storage

Fusionbond® 375 should be stored in a cool, dry location in unopened containers at a temperature between 45ºF and 85ºF unless otherwise labeled. Shelf life can be extended by refrigeration at 45ºF to 55ºF (7ºC to 13ºC). 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.