HERNON®
Formulating Solutions

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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 product 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 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
- Kerosene 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	Pale Yellow
Specific gravity	1.05	0.97
Viscosity at 25ºC, 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 to 15
Fixture time*, using G/B steel, minutes	5 to 10

*Fixture time is defined as the time to develop a shear strength of 0.1 N/mm².

Typical Properties (Cured)

Property	Value
Hardness, ASTM D2240, Shore D	70 to 80
Glass Transition Temperature (Tg) ºC	110

Typical Cured Performance

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

Substrate	Cure at 22ºC	Value, psi
Steel	24 Hours	4000- 6000
Aluminum	24 Hours	3000-4500

Impact Strength
Gritblasted lap-shear specimens, 1 in overlap

Substrate	Cure at 22ºC	Value, psi
Steel	24 hours	>12
Aluminum	24 hours	>5

Typical Environmental Resistance

Cured 24 hours at 22 ºC.
Grit-blasted lap-shear specimens

Cold & Hot Strength
Shear Strength, ASTM D1002

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

Impact Strength, ASTM D6110

Test Condition	Value, Joules
At 22ºC	≥ 12
At -40ºC, cold strength	≥ 2
At 95ºC, 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 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® 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® 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 75ºF (7ºC and 24ºC) 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.

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.