HERNON®
High Performance Adhesives and Sealants
ISO 9001:2008 Registered

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Technical Data Sheet
Fusionbond® 373

Product Description

Hernon® Fusionbond® 373 is a two component, room temperature curing, 10:1 ratio, methacrylate adhesive system. **Fusionbond® 373** is formulated to provide working life of 30 to 35 minutes, gel time of 40 to 45 minutes, and hardening time of 90 to 130 minutes. This adhesive is low halogen and phthalate-free. **Fusionbond® 373** forms resilient bonds and maintains its strength over a wide range of temperatures. **Fusionbond® 373** 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

- Thixotropic, non-sagging gaps
- Excellent impact, shear, and tensile strength
- Little or no surface preparation
- 90-130 minute room temperature cure
- 100% reactive
- Excellent environmental resistance
- Low halogen content
- Phthalate-free

Bondable Substrates

ABS
Acrylics (PMMA)
Aluminum
Brass
Ceramics
Copper
Fiberglass
Phenolics
Polycarbonate and blends
Polyurethanes [1]
PVC & Vinyls
Stainless steel
Steel

[1] May need special treatment

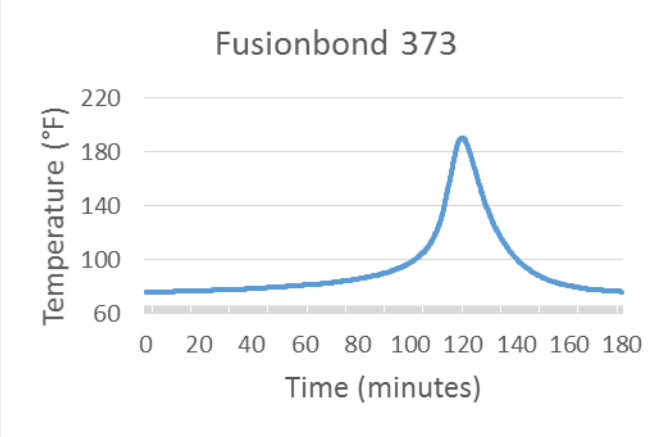
Typical Properties (Uncured)

Property	Part A	Part B
Chemical Type	Methacrylate	Methacrylate
Appearance	Off-White	Blue
Specific gravity (g/cc)	1.05	0.97
Viscosity at 25ºC, cP	300,000 to 600,000	30,000 to 60,000
Mix ratio (by weight)	10	1

Typical Curing Performance

Property	Value
Working time, minutes	30-35
Gel time (50 gram mass), mins.	40-45
Hardening time, mins.	90-130
Max Exotherm Temperature	185°F / 85°C @ 120 minutes
Temperature Range, ºC (ºF)	-55 to 121 (-67 to 250)
Gap Filling	0.03 in – 2.0 in (0.75 mm – 51 mm)

Exotherm Profile of Fusionbond 373



*Experiment based on 20 gram mass

Typical Cured Performance

Shear Strength, ASTM D1002
Gritblasted lap-shear specimens

Substrate	Cure at 22ºC	Value
Hardness, Shore D	24 Hours	50 - 60
Impact Str. GB-Steel	24 Hours	8 - 15 J
Shear Str. GB-Steel	24 Hours	3000 - 4000 psi
Impact Str. GB-Aluminum	24 Hours	8 – 15 J
Shear Str. GB-Aluminum	24 Hours	2000 - 3000 psi
Impact Str. Fiberglass	24 Hours	5 – 10 J
Shear Str. Fiberglass	24 Hours	1,500 – 2,500 psi
Impact Str. PVC	24 Hours	3 – 7 J
Shear Str. PVC	24 Hours	100 – 200 psi

Thermal Conductivity	24 Hours	0.36 W/m·K
Glass Transition Temp.	24 Hours	221°F – 230°F 105°C – 110°C
Coefficient Of Thermal Expansion	24 Hours	1.5 x 10^{-4} in/in°C
Tensile Strength (ASTM D412)	24 Hours	10,000 psi 68.9 MPa
Tensile Modulus (ASTM D638)	24 Hours	2.9 x 10^{6} psi 20,000 MPa
Elongation at Break, % (ASTM D412)	24 Hours	66

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® 373** 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) 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® 373** is flammable. Keep containers tightly closed after use. Keep away from heat, sparks, and open flames.

Storage

Fusionbond® 373 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.