

## Technical Data Sheet Fusionbond<sup>®</sup> 378

January 2017

Page 1 of 2

### Product Description

**Hernon<sup>®</sup> Fusionbond<sup>®</sup> 378** is a highly thixotropic, two component, room temperature curing, 1:1 ratio, methacrylate adhesive system. **Fusionbond<sup>®</sup> 378** is formulated to provide fixturing strength within 12 to 15 minutes. This adhesive forms resilient bonds and maintains its strength over a wide range of temperatures. **Fusionbond<sup>®</sup> 378** is suitable for bonding a variety of substrates with a minimum of surface preparation.

**Fusionbond<sup>®</sup> 378** provides superior toughness at temperatures from -40 to 250°F. Recommended substrates: Galvanized and anodized metals, PVC, acrylic, ABS, aluminum, steel, and some types of fiberglass.

### Product Features

- Contains glass beads to control bond-line thickness
- Superior shear and impact strength
- Excellent strength at bonding dissimilar substrates including anodized and galvanized metals
- Maintains strength from -40°F to +220°F
- Non-sagging gaps filled to 0.375 inch
- Little or no surface preparation
- Rapid room temperature cure
- 100% solids formula
- Excellent environmental and chemical resistance

### Bondable Substrates

|  |                            |
|--|----------------------------|
| ABS                                    | PBT blends                 |
| Acrylics (PMMA)                        | PET blends                 |
| Aluminum                               | Phenolics                  |
| Anodized metals                        | Polycarbonate and blends   |
| Brass                                  | Polyurethanes <sup>1</sup> |
| Ceramics                               | PPO and PPO blends         |
| Copper                                 | PVC & Vinyls               |
| Epoxy                                  | Rim urethane               |
| Fiberglass                             | Rubber                     |
| Galvanized metals                      | Stainless steel            |
| Gel Coats                              | Steel                      |
| Nylon 6 or Nylon 6 Alloys <sup>1</sup> |                            |

### Typical Properties (Uncured)

| Property              | Part A            | Part B            |
|-----------------------|-------------------|-------------------|
| Chemical Type         | Methacrylate      | Methacrylate      |
| Appearance            | White             | Blue              |
| Specific gravity      | 1.05              | 0.97              |
| Viscosity at 25°C, cP | 50,000 to 100,000 | 50,000 to 100,000 |
| Mix ratio (by weight) | 1                 | 1                 |
| Flash Point           | See MSDS          | See MSDS          |

### Typical Curing Performance

| Property                               | Value    |
|--|----------|
| Working time, minutes                  | 5 to 10  |
| Fixture time, as received steel, mins. | 12 to 15 |

### Typical Properties (Cured)

| Property                      | Value                      |
|-------------------------------|----------------------------|
| Hardness, ASTM D2240, Shore D | 60 to 75                   |
| Temperature Range, °C (°F)    | -40 to 121<br>(-40 to 250) |
| Gap Fill, inches              | 0.375                      |

### Typical Cured Performance

Shear Strength, ASTM D1002

Grit-blasted lap-shear specimens

| Substrate                                  | Cure at 22°C           | Value, psi |
|--|------------------------|------------|
| Steel, shear strength                      | 24 Hours               | ≥ 3200     |
| Impact Strength, Steel                     | 24 Hours               | 50 Joules  |
| Impact Strength, Galvanized Steel to Steel | 24 Hr then 1 Hr @ -40F | 50 Joules  |
|  | 24 Hr then 1 Hr @ 220F | 50 Joules  |

### 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® 378** 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) 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® 378** is flammable. Keep containers tightly closed after use. Keep away from heat, sparks, and open flames.

## Storage:

**Fusionbond® 378** should be stored in a cool, dry location in unopened containers at a temperature between 45°F and 82°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.