

## Technical Data Sheet Fusionbond<sup>®</sup> 372

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### Product Description

**Hernon<sup>®</sup> Fusionbond<sup>®</sup> 372** is a two component, room temperature curing, 1:1 ratio, methacrylate adhesive system. **Fusionbond<sup>®</sup> 372** is formulated to provide fixturing strength within 10 to 15 minutes. This adhesive is Halogen free. **Fusionbond<sup>®</sup> 372** forms resilient bonds and maintains its strength over a wide range of temperatures. **Fusionbond<sup>®</sup> 372** 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 3<sup>rd</sup> party independent tested
- Non-sagging gaps filled to 0.372 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 <sup>1</sup> |
| Brass           | PVC & Vinyls               |
| Ceramics        | Stainless steel            |
| Copper          | Steel                      |
| Fiberglass      |                            |

<sup>1</sup> May need special treatment

### Typical Properties (Uncured)

| Property              | Part A           | Part B           |
|-----------------------|------------------|------------------|
| Chemical Type         | Methacrylate     | Methacrylate     |
| Appearance            | Blue             | White            |
| Specific gravity      | 0.97             | 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

Cured 24 Hours @ 22°C

### Physical Properties

| Property  | Value                      |
|---|----------------------------|
| Working time, minutes                                   | ≥ 15                       |
| Fixture time, grit blasted steel, mins.                 | 10 to 15                   |
| Temperature Range, °C (°F)                              | -55 to 121<br>(-67 to 250) |
| Hardness, ASTM D2240, Shore D                           | 55 - 75                    |
| Coefficient of thermal conductivity, W/(m·K), ASTM C177 | 0.24                       |

### Electrical Properties

| Property                                | Value   |
|---|---------|
| Dielectric Strength, kV/mm<br>ASTM D149 | 78.5    |
| Dielectric Constant<br>ASTM D150        | 1.5 Mhz |
| Dissipation Factor<br>ASTM D150         | 0.006   |

### Typical Cured Performance

Shear Strength, ASTM D1002  
Gritblasted lap-shear specimens

| Substrate | Cure Time at 22°C                    | Value, psi |
|-----------|--------------------------------------|------------|
| Aluminum  | 24 Hours                             | ≥ 2500     |
| Steel     | 24 Hours                             | ≥ 2000     |
| Steel     | 24 Hours + 25 min @<br>400°F (204°C) | ≥ 3500     |
| Steel     | 72 Hours                             | ≥ 2000     |

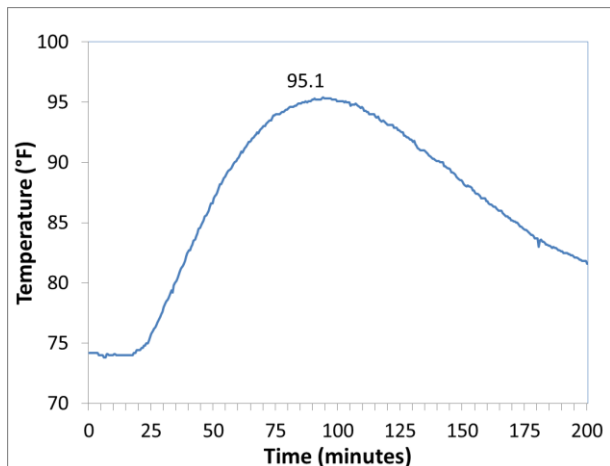
Impact Strength, ASTM D6110  
Gritblasted lap-shear specimens

| Substrate | Cure Time at 22°C                | Value       |
|-----------|----------------------------------|-------------|
| Steel     | 48 hours                         | >50 Joules  |
| Steel     | 24 hours                         | >30 Joules  |
| Steel     | 24 hrs + 25 min @ 400F<br>(204C) | ≥ 40 Joules |
| Aluminium | 48 hours                         | >30 Joules  |

T-peel Strength, ASTM D1876  
 Gritblasted lap-shear specimens

| Substrate | Cure Time at 22°C | Value    |
|-----------|-------------------|----------|
| Aluminium | 24 hours          | ≥ 20 PIW |

Typical Exothermic Curve for 372 @ 23°C (30 gms)



**Typical Environmental Resistance**

Cured for 24hrs @ 22°C  
 Steel lap-shear specimens (grit blasted)

**Cold & Hot Strength**  
 Shear Strength, ASTM D1002

| Test Condition           | Value, psi |
|--------------------------|------------|
| At 22 °C                 | ≥ 2000     |
| At -40 °C, cold strength | ≥ 3000     |
| At 95 °C, hot strength   | ≥ 4000     |

Impact Strength, ASTM D6110

| Test Condition           | Value, Joules |
|--------------------------|---------------|
| At 22 °C                 | ≥ 2000        |
| At -40 °C, cold strength | 11 - 21       |
| At 95 °C, hot strength   | 34 - 44       |

**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® 372** 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® 372** is flammable. Keep containers tightly closed after use. Keep away from heat, sparks, and open flames.

**Storage**

**Fusionbond® 372** 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 Quality Standard.