

Technical Data Sheet Tuffbond[®] 317

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Product Description

Hernon[®] Tuffbond[®] 317 is a two component, room temperature cure system. By changing the ratio of resin and hardener, the cured adhesive can change from a tough and flexible to a hard and rigid system. The resin offers a unique combination of hardness and flexibility with high chemical and solvent resistance.

Tuffbond[®] 317 is recommended for bonding metal, glass, wood, concrete, and rubber, and can be used for potting and encapsulation of electrical and electronic components.

Typical Applications

- Tank lining
- Chemical resistant flooring
- Marine coating
- Underwater coating
- Potting electronic boards
- Encapsulating electrical and electronic components
- Repair bond for joints
- Glass reinforcement resin

Product Benefits

- Excellent resistance to organic acids and bases
- Excellent resistance to chemicals, alcohols and solvents
- Good Water resistance
- Good Toughness and Flexibility
- Outstanding resistance to abrasion
- Low temperature cure – Non-critical mixing

FDA Status

Cured coating formulated with **Tuffbond[®] 317** epoxy resins, crosslinking agents and adjuncts may be safely used as food-contact surfaces and conform to listing in section 175.300, Title 21 (21 CFR 175.300) of the Code of Federal Regulations. The cured **Tuffbond[®] 317** epoxy coating may be applied over a metal or other suitable substrate as a continuous film that serves as a functional barrier between food and the substrate. Please review the regulations.

Typical Properties (Uncured)

Property	Part A	Part B
Base	Epoxy	Amine
Appearance	Clear	Amber
Viscosity at 25°C, cP	10,000 - 20,000	8,000 – 18,000
Specific Gravity	1.17	0.97
Mix Ratio by Weight	100	40 to 110

Typical Properties (Cured)

Property	Value
Results for mixing ratio Part A: Part B	1:1
Working Life at 22°C (1qt), minutes	40-60
Working Life at 22°C (100g), minutes	80-100
Operating Temp., °F	-65 to 275
Glass Transition Temperature	221 °F / 105 °C
Coefficient of Thermal Expansion	10 x 10 ⁻⁵ in/in°C
Thermal Conductivity	0.45 W/m °K
Dielectric Strength at 20°C	9 kV/mm
Durometer Hardness, Shore D	60 - 70 (1:1 mix)
Shear Strength, G/B Steel, 24 hr cure	≥ 2000 psi
Shear Strength on Al, 7 day cure at 22°C	≥ 2000 psi
Property	Value
Results for mixing ratio Part A: Part B	100:60
Working Life at 22°C (200 g), minutes	100-120
Maximum Exotherm Peak, °C	150
Tack Free time, Hours	6

Strength Properties at Different Temperatures

0.25 mm gap and 1.0 inch overlap on grit-blasted steel

Temperature	Shear Strength, (psi)
23°C	1,000 – 1,500
-55°C	2,000 – 3,000
80°C	300 – 600
155°C	100 – 200

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).

Storage

Tuffbond® 317 should be stored in a cool, dry location in unopened containers at a temperature between 46°F to 82°F (8°C to 28°C) unless otherwise labeled. Optimal storage is at the lower half of this temperature range. To prevent contamination of unused material, do not return any material to its original container.

Dispensing Equipment

Heron® offers a complete line of semi and fully automated dispensing equipment. Contact **Heron® 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.** **Heron's Quality Management System** for the design and manufacture of high performance adhesives and sealants is registered to the ISO 9001:2008 Quality Standard.