

## Tuffbond® 321

### Product Description

**Hernon® Tuffbond® 321** is a flexible, low viscosity, general purpose resin system used for casting, potting, and encapsulating of electrical and electronic components. This unique product has been formulated to combine ease in handling with optimum physical, thermal and electrical insulation properties.

### Typical Applications

- Potting electronic boards
- Encapsulating electrical and electronic components
- Transformers
- Coils and chokes
- Solenoids
- Micro circuitry

### Product Benefits

- Low viscosity
- Clear and flexible
- Room temperature or heat curing

### Typical Properties (Uncured)

Property	Part A	Part B
Base	Epoxy	Modified Mercaptan
Appearance	Clear	Light Yellow
Viscosity at 25°C, cP	10,000 to 16,000	10,000 to 16,000
Specific Gravity	1.17	1.15
Mix Ratio, by Weight	1	1

### Typical Properties (Cured)

Property	Value
Working Life at 22°C (100g), hours	3 to 4
Cure Time @ 22°C (100 g), hours	24
Durometer Hardness, Shore A (24 hours)	25 – 35
Tensile Strength, psi, ASTM D638	24.25
Modulus, psi	16.44
Elongation, tensile strain at break, %	189.34
Operating Temperature*, °C	5 to 70

### Typical Cured Performance

#### Shear Strength

Lap-shear specimens tested according to ASTM D1002.  
Cured 24 Hours at 22°C

Substrates	Shear Strength (psi)
Grit-blasted Steel	100 – 500
Grit-blasted Aluminum	100 – 500
FR-4	100 – 500

#### Block Shear Strength

Block-shear specimens tested according to ASTM D4501.  
Cured 24 Hours at 22°C

Conditioning	Shear Strength (psi)
Polycarbonate/Polycarbonate	75-150
Glass/Glass	400

### 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).**

#### Directions for Use

1. For best results, make sure parts are clean and dry.
2. Mix the product (A&B) until a uniform mixture is achieved.
3. Apply completely mixed adhesive to the prepared surfaces.

#### Storage

**Tuffbond® 321** should be stored in a cool, dry location in unopened containers at a temperature between 45°F to 85°F (7°C to 29°C) unless otherwise labeled. 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

# Hernon® Technical Data Sheet

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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.