

Technical Data Sheet Tuffbond[®] 321

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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	Clear
Viscosity at 25°C, cP	11,000 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	2 – 3
Cure Time @ 22°C (100 g), hours	24
Durometer Hardness, Shore A (24 hours)	15 – 20
Durometer Hardness, Shore A (72 hours)	18 – 25
Durometer Hardness, Shore A (1 week)	30 – 40
Operating Temp., °F	-60 to 250

Typical Cured Performance

Shear Strength

Steel lap-shear specimens tested according to ASTM D1002.

Conditioning	Shear Strength
Cured 24 Hours at 22°C, Grit-blasted Steel	150 - 250 psi
Cured 48 Hours at 22°C, Grit-blasted Steel	200 – 300 psi
Cured 1 week at 22°C, Grit-blasted Steel	200 – 300 psi
Cured 24 Hours at 22°C, Grit-blasted Aluminum	150 – 250 psi

Physical Properties

Test	Result
Thermal Conductivity (ASTM D7984, Modified Transient Plane Source)	0.26 W/mK
Dielectric Constant (ASTM D150)	3.0
Dissipation Factor (ASTM D150)	0.09
Breakdown Voltage (ASTM D149)	> 3 kV/mm
Elongation at Break (ASTM D638)	80%
Water Absorption after 24 Hours Immersion	< 3.0%

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).

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 46°F to 82°F (8°C to 28°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.

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