

## Technical Data Sheet Tuffbond<sup>®</sup> 307

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Page 1 of 2

### Product Description

Hernon<sup>®</sup> Tuffbond<sup>®</sup> 307 is a specially formulated single component epoxy system which cures at temperatures of 212°F (100°C) and above. It has excellent storage stability and produces excellent shear strengths when used on metals, ceramics and many plastics. Optimum strength can be obtained after ten to twelve minutes cure at 300°F (149°C).

### Product Benefits

- Excellent adhesion
- One part - no mixing
- Six months latency at room temperature
- Good mechanical properties
- Highly reactive at 212°F (100°C)

### Typical Properties (Uncured)

Property	Value
Resin	Epoxy
Color	Tan
Viscosity @ 25°C, cP	120,000
Specific gravity	1.20
Flash point	See MSDS

### Typical Properties (Cured)

#### Physical Properties

Property	Value
Hardness, Shore D	80
Tensile Strength, psi	11,500
Heat Deflection at 66 psi, °F (°C)	342 (172)
Heat Deflection at 264 psi, °F (°C)	307 (153)

#### Electrical Properties - Volume Resistivity, Ω-cm

Property	Value
at 77°F (25°C)	$1.1 \times 10^{16}$
at 212°F (100°C)	$9.0 \times 10^{12}$
at 302°F (150°C)	$1.3 \times 10^9$

### Typical Curing Properties

#### Gel Time

1g on cure plate

Temperature, °F (°C)	Gel Time, seconds
212 (100)	300
250 (121)	124
302 (150)	54

#### Cure Time

Bondline Temp., °F (°C)	Cure Time, minutes
212 (100)	70 to 80
300 (149)	10 to 12
350 (177)	5 to 7
375 (194)	3 to 4

### Typical Cured Performance

Shear Strength, ASTM D1002

Steel lap-shear specimens

Tested at temperature

Cure Time/Temp.	Test Temp. (°F)	Shear Str., psi
10 min. at 212°F	77	560
10 min. at 250°F	77	560
	180	880
6.5 min. at 302°F	77	1620
	180	1050
	300	100
10 min. at 302°F	77	1560
	180	1050
10 min. at 318°F	77	1630
	180	1050
10 min. at 351°F	77	1630
	180	820

### 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® 307** must be stored under refrigeration at a temperature of 35 to 40°F for extended shelf life. 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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