

## Dissipator® 319

### Product Description

**Hernon® Dissipator® 319** is a room temperature curing, two component thermal conductive epoxy adhesive for potting applications. **Dissipator® 319** offers low viscosity for potting applications, is recommended for encapsulation of components that require heat dissipation and thermal shock properties. **Dissipator® 319** features good thermal conductivity (1.1 W/mK to 1.4 W/mK)

### Product Benefits

- Thermally conductive
- Electrically insulative
- Thermal shock resistant
- Low CTE

### Typical Properties (Uncured)

| Property              | Part A          | Part B  |
|-----------------------|-----------------|---------|
| Appearance            | Black           | Clear   |
| Viscosity at 25°C, cP | 30,000 – 50,000 | 3-20    |
| Mix Ratio by Weight   | 16              | 1       |
| Specific Gravity      | 2.37            | 0.95    |
| Flash Point           | See SDS         | See SDS |

### Typical Properties (Cured)

#### Physical Properties

| Property   | Value    |
|--|----------|
| Gel Time at 22°C (17g), hours                            | ≤ 4      |
| Hardness, Shore D  | 80 to 95 |
| Glass Transition Temperature, (T <sub>g</sub> ) °C       | 63       |
| Coefficient of thermal expansion, ASTM D696              |          |
| Before T <sub>g</sub> , ppm                              | 20       |
| After T <sub>g</sub> , ppm                               | 100      |
| Coefficient of thermal conductivity, ASTM C 177, W/(m·K) | 1.1-1.4  |
| Dielectric Constant at 1kHz                              | 4.019    |
| Dissipation Factor at 1kHz                               | 0.109    |

### Typical Cured Performance

Shear Strength on grit blasted steel lap-shear specimens tested according to ASTM D1002.

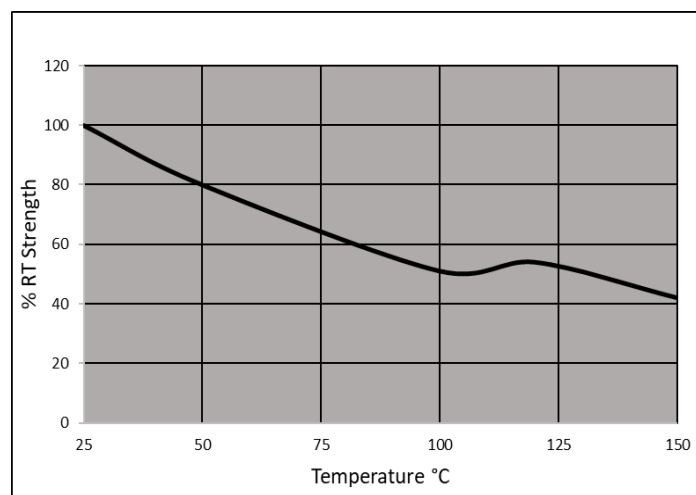
| Cure Time at 22°C | Shear Strength (psi) |
|-------------------|----------------------|
| 24 Hours          | ≥ 1000               |

### Typical Environmental Resistance

Shear Strength on steel lap-shear specimens tested according to ASTM D1002. Cured for 72 hours at 22°C.

### Hot Strength

Tested at temperature



### 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. **Dissipator® 319** is useable on a wide variety of surfaces. Substrates should be clean, dry and free of heavy grease. Acid etching or abrading the surface to be bonded may enhance the adhesive properties.
2. Part A requires pre-mixing before preparing adhesive.

# Hernon® Technical Data Sheet

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3. Mix components thoroughly with the required ratio for the application.

4. Apply adhesive and wait for the adhesive to fixture (approximately 4 hours) before any further handling.

design and manufacture of high-performance adhesives and sealants is registered to the ISO9001 Quality Standard.

### Mixing

**Dissipator® 319** requires the correct ratio for the proper component reaction to occur. Mix the components as follows:

Weight Ratio 16:1 (A:B)

| <u>Amount needed</u> | <u>Part A</u> | <u>Part B</u> |
|----------------------|---------------|---------------|
| 1 Gallon             | 8.97 kg       | 0.56 kg       |
| 5 Gallons            | 44.86 kg      | 2.80 kg       |

### **Handling and Application**

**Mixing:** For hand mixing, combine Part A and Part B in the correct ratio and mix thoroughly. Heat buildup during and after mixing is normal. To reduce the likelihood of exothermic reaction or excessive heat buildup, mix less than 100 grams at a time. Mixing smaller amounts will minimize heat buildup.

**Applying:** Bonding surfaces should be clean, dry, and free of contamination. Extensive surface preparation is not required for **Dissipator® 319** 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) will slow the fixturing time. Temperatures above room temperature will shorten the open time and the fixturing time.

### **Storage**

**Dissipator® 319** 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. 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**

**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