

## Technical Data Sheet Tuffbond<sup>®</sup> 305

February 2012

Page 1 of 2

### Product Description

Hernon<sup>®</sup> Tuffbond<sup>®</sup> 305 is a modified epoxy adhesive that provides a very fast room temperature cure. Tuffbond<sup>®</sup> 305 exhibits very good moisture chemical and heat resistance. This very fast cure epoxy adhesive is specially formulated for rapid in-line assembly of loud speakers. Tuffbond<sup>®</sup> 305 is also recommended for bonding metals, wood, ceramics, etc., and can be used for potting and encapsulation of electrical and electronic components.

### Typical Applications

- Bonding voice coil to cone
- Bonding pole piece to magnet
- Bonding alnico magnet to base
- Rapid curing structural and electrical repair kit
- Rapid curing laminates and "gel" coats
- Potting electronic boards
- Encapsulating electrical and electronic components

### Product Benefits

- Fast at room temperature (about 4 minutes)
- Low shrinkage
- 100% reactive, non-solvent system
- Easy mixing ratio of resin and hardener
- No fuming on gelation

### Typical Properties (Uncured)

| Property              | Part A           | Part B           |
|-----------------------|------------------|------------------|
| Base                  | Epoxy            | Amine            |
| Appearance            | Clear            | Yellow           |
| Viscosity at 25°C, cP | 10,000 to 16,000 | 12,000 to 18,000 |
| Mix Ratio by Weight   | 1                | 1                |
| Specific Gravity      | 1.17             | 1.13             |
| Flash Point           | See MSDS         | See MSDS         |

### Typical Properties (Cured)

| Property                             | Value      |
|--------------------------------------|------------|
| Working Life at 22°C (100g), minutes | 4 – 7 mins |
| Durometer Hardness, Shore D          | 80 - 90    |
| Operating Temp., °C                  | -54 to 82  |

### Typical Cured Performance

#### Room Temperature Cure

Shear Strength on Aluminum lap-shear specimens tested according to ASTM D1002.

| Cure Time at 22°C | Shear Strength |
|-------------------|----------------|
| 24 Hours          | ≥ 2400 psi     |
| 30 Days           | 2600 psi       |

#### Chemical/Solvent Resistance

Shear Strength on Aluminum lap-shear specimens tested according to ASTM D1002. Cured for 24 hours at 22°C. Immersed in Chemical/Solvent for 30 days at 22°C.

| Chemical/Solvent       | % Strength Retention |
|------------------------|----------------------|
| 10 % Sodium Chloride   | 83                   |
| Distilled Water        | 81                   |
| 5% Acetic Acid         | 79                   |
| Petrohol 99            | 100                  |
| Hydrocarbon Test Fluid | 94                   |
| Ethylene Glycol        | 100                  |
| Hydraulic Oil          | 99                   |

### 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<sup>®</sup> 305 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.