

## Master Bond EP21HTND High Temperature Resistant, Non-Drip Epoxy Compound

Category : Polymer , Adhesive , Thermoset , Epoxy , Epoxy Adhesive

### Material Notes:

**Description:** Master Bond EP21HTND is a two component, room temperature curing epoxy adhesive, sealant and coating with a paste viscosity and non-drip application feature. Its features are easy handling, good physical strength properties and resistance to higher temperatures. The two parts are easy to mix and the ratio is very forgiving either by weight or volume. It cures readily at room temperature or faster at elevated temperatures with the optimum being overnight at room temperature followed by 1-2 hours at 150-200°F. EP21HTND has fine adhesion to a wide variety of substrates such as metals, composites, glass, ceramics, many rubbers and plastics. It has good chemical resistance especially to water, oils, fuels and hydraulic fluid, among others. EP21HTND has desirably low shrinkage upon curing along with impressive electrical insulation properties. The service temperature range is -60°F to +400°F. The color of Part A is clear and Part B is amber. EP21HTND can be used for indirect food contact applications as per the 175.105 FDA specification. EP21HTND is a very versatile system and it can be used in aerospace, electronic, electrical and OEM applications. **Product Advantages:** Paste viscosity, non-drip, forgiving one to one mix ratio Ambient temperature cures or fast elevated temperature cures as required Strength to a wide variety of substrates Marvelous electrical insulation properties; sound physical strength properties Good high temperature resistance Meets FDA 175.105 requirements for indirect food applications **Key Features** Two component, room temperature curing epoxy Excellent adhesion to a wide variety of substrates Meets FDA Section 175.105 for food applications Resists up to +400°F One to one mix ratio Non-drip consistency **Information provided by MasterBond®**

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Master-Bond-EP21HTND-High-Temperature-Resistant-Non-Drip-Epoxy-Compound.php](http://www.lookpolymers.com/polymer_Master-Bond-EP21HTND-High-Temperature-Resistant-Non-Drip-Epoxy-Compound.php)

| Mechanical Properties     | Metric      | English     | Comments              |
|---------------------------|-------------|-------------|-----------------------|
| Hardness, Shore D         | >= 75       | >= 75       |                       |
| Tensile Strength at Break | >= 62.1 MPa | >= 9000 psi |                       |
| Tensile Modulus           | >= 2.41 GPa | >= 350 ksi  |                       |
| Shear Strength            | >= 20.7 MPa | >= 3000 psi | Tensile lap, Al to Al |

| Thermal Properties               | Metric  | English   | Comments |
|----------------------------------|---|---|----------|
| CTE, linear                      | 50.0 - 55.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ | 27.8 - 30.6 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ |          |
| Maximum Service Temperature, Air | 204 $^\circ\text{C}$                                  | 400 $^\circ\text{F}$                                    |          |
| Minimum Service Temperature, Air | -51.1 $^\circ\text{C}$                                | -60.0 $^\circ\text{F}$                                  |          |

| Electrical Properties | Metric             | English            | Comments |
|-----------------------|--------------------|--------------------|----------|
| Volume Resistivity    | >= 1.00e+14 ohm-cm | >= 1.00e+14 ohm-cm |          |
| Dielectric Constant   | 3.9                | 3.9                |          |

| Electrical Properties        | @Frequency 60.0 Hz,<br>Metric<br>Temperature 25.0 °C | @Frequency 60.0 Hz,<br>English<br>Temperature 77.0 °F | Comments                       |
|------------------------------|--|---|--------------------------------|
| <b>Processing Properties</b> | <b>Metric</b>  | <b>English</b>  | <b>Comments</b>                |
| Cure Time                    | 120 - 180 min  | 2.00 - 3.00 hour                                      |                                |
|                              | @Temperature 93.3 °C                                 | @Temperature 200 °F                                   |                                |
|                              | 720 min  | 12.0 hour   | followed by 2 hrs at 150-200°F |
|                              | @Temperature 23.9 °C                                 | @Temperature 75.0 °F                                  |                                |
|                              | 2880 - 4320 min                                      | 48.0 - 72.0 hour                                      |                                |
|                              | @Temperature 23.9 °C                                 | @Temperature 75.0 °F                                  |                                |
| Pot Life                     | 60 - 90 min  | 60 - 90 min   | 100 gram batch                 |
| Shelf Life                   | 12.0 Month   | 12.0 Month  | in original unopened container |
|                              | @Temperature 23.9 °C                                 | @Temperature 75.0 °F                                  |                                |

| Descriptive Properties | Value | Comments            |
|------------------------|-------|---------------------|
| Mixing Ratio (A to B)  | 1:1   | by weight or volume |

## Contact Songhan Plastic Technology Co.,Ltd.

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