

# ALPHA<sup>®</sup> HiTech CU13-3150

## Underfill Epoxy

### DESCRIPTION

**ALPHA HiTech CU13-3150** is a one-component low temperature thermal cure capillary underfill. It is designed for low temperature applications requiring enhanced mechanical strength for assembled chip packages onto printed circuit boards.


READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

### FEATURES AND BENEFITS

The balanced set of features and benefits for this material are:

- Low Viscosity
- Fast Cure at Low Temperature
- Excellent Adhesion
- Excellent Drop Shock
- Reworkable
- Halogen Free
- Complies with RoHS Directive 2015/863/EU

**APPLICATION GUIDELINES**

Storage	Thawing	Application	Curing
1. Freeze at < -20 °C to guarantee product stability. 2. Upright Position, tip facing bottom 	1. Remove the syringe from the freezer. 2. Set aside at room temperature for 2 hours. 3. Do not open the cap before the product is sufficiently thawed. 4. Product should not be refrozen after thawed. 5. To prevent contamination of unused product, do not return any material to its original container.	ALPHA HiTech CU13-3150 can be effectively dispensed at room temperature condition.	For full property development, cure at the following conditions in a convection oven. <ul style="list-style-type: none"> <li>• 80 °C for ≥ 30 minutes</li> <li>• 100 °C for ≥ 10 minutes</li> <li>• 110 °C for ≥ 7 minutes</li> <li>• 120 °C for ≥ 5 minutes</li> </ul>

**TECHNICAL DATA**

Category	Specification
<b>Typical Uncured Material Properties</b>	
Appearance	Black
Viscosity (RVDV-II Brookfield #3, 20 rpm @25 °C, cP)	1,000 to 3,000
Specific Gravity	1.1 to 1.2
Flashpoint, °C	>200
Pot Life @ 25 °C, days	3
Shelf Life @ < -20 °C, months	6
Available Packaging	10cc, 30cc syringes
<b>Typical Cured Materials Properties</b>	
Glass Transition (T <sub>g</sub> ), °C via TMA	47 ± 5
CTE (α <sub>1</sub> ), <T <sub>g</sub> , ppm	50 ± 10
CTE (α <sub>2</sub> ), >T <sub>g</sub> , ppm	200 ± 20
Hardness (Shore D)	50 to 60

**SAFETY & WARNING**

It is recommended that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use. **Safety Data Sheets are available at [MacDermidAlpha.com/assembly-solutions/knowledge-base](http://MacDermidAlpha.com/assembly-solutions/knowledge-base).**

**CONTACT INFORMATION**

To confirm this document is the most recent version, please contact  
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Also read carefully warning and safety information on the Safety Data Sheet. This data sheet contains technical information required for safe and economical operation of this product. READ IT THOROUGHLY PRIOR TO PRODUCT USE . Emergency safety directory assistance: US 1 202 464 2554, Europe + 44 1235 239 670, Asia + 65 3158 1074, Brazil 0800 707 7022 and 0800 172 020, Mexico 01800 002 1400 and (55) 5559 1588

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