

# ALPHA<sup>®</sup> HITECH SM42-1311

## Surface Mount Adhesive

### DESCRIPTION


**ALPHA HiTech SM42-1311** is a one component, fast curable surface mount adhesive designed for dispensing application.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

### FEATURES AND BENEFITS

- Excellent thermal resistance
- Excellent adhesion
- Excellent workability
- Non – Sagging
- Complies with RoHS Directive EU/2015/863
- Halogen Free

### APPLICATION GUIDELINES

Storage	Thawing	Application	Curing
<p>1. Store at 1 to 10 °C to guarantee product stability</p> <p>2. Upright Position, tip facing the bottom</p> 	<ol style="list-style-type: none"> <li>1. Remove the syringe from the refrigerator</li> <li>2. Set aside at room temperature for 2 hours.</li> <li>3. Do not open the cap before the product is sufficiently thawed.</li> <li>4. To prevent contamination of unused product, do not return any material to its original container.</li> </ol>	<p><b>ALPHA HiTech SM42-1311</b> is designed for use on high-speed dispensing application at room temperature condition.</p>	<p>For full property development, cure at 120°C and hold for a minimum of 120 seconds or 150 °C and hold for a minimum of 80 seconds (convection oven).</p>

**TECHNICAL DATA**

Category	Tentative Specification
<b>Typical Uncured Material Properties</b>	
Product Name	<b>SM42-1311</b>
Chemistry	Epoxy
Appearance	Red Paste
Viscosity (Malcom PC-10A, 30rpm @25 °C, Poise)	350 to 550
Specific Gravity	1.1 to 1.3
Thixotropic Index	≥ 5.0
Pot Life @25 °C, days	14
Shelf Life @1 to 10 °C, months	6
Shelf Life @25 °C, days	14
Available Packaging	20cc, 30cc syringes
<b>Typical Cured Materials Properties</b>	
Glass Transition (Tg), °C via TMA	≥ 90
CTE ( $\alpha_1$ ), <Tg, ppm via TMA	60 ± 10
CTE ( $\alpha_2$ ), >Tg, ppm via TMA	190 ± 20
Corrosion, 96-hr @40 °C, 95%RH	None
Moisture Absorption, 24-hr @H <sub>2</sub> O/25 °C, wt%	≤ 1.0
Insulation Resistance, 96-hr @85 °C, 85%RH	≥1 X 10 <sup>12</sup>
Hardness (Shore D)	80 to 90

**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  
 Assembly@MacDermidAlpha.com  
[www.macdermidalpha.com](http://www.macdermidalpha.com)**

<p><b>North America</b>                  109 Corporate Blvd.                  South Plainfield, NJ 07080, USA                  800.367.5460</p>	<p><b>Europe</b>                  Unit 2, Genesis Business Park                  Albert Drive                  Woking, Surrey, GU21 5RW, UK                  01483.758400</p>	<p><b>Asia</b>                  8/F., Paul Y. Centre                  51 Hung To Road                  Kwun Tong, Kowloon, Hong Kong                  852.3190.3100</p>
---	---	---

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

DISCLAIMER: All statements, technical information and recommendations contained herein are based on tests we believe to be reliable, but the accuracy or completeness thereof is not guaranteed. No statement or recommendation shall constitute a representation unless set forth in an agreement signed by officers of seller and manufacturer. NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY IS MADE. The following warranty is made in lieu of such warranties and all other warranties, express, implied, or statutory. Products are warranted to be free from defects in material and workmanship at the time sold. The sole obligation of seller and manufacturer under this warranty shall be to replace any noncompliant product at the time sold. Under no circumstances shall manufacturer or seller be liable for any loss, damage or expense, direct, indirect, incidental or consequential, arising out of the inability to use the product. Notwithstanding the foregoing, if products are supplied in response to a customer request that specifies operating parameters beyond those stated above, or if products are used under conditions exceeding said parameters, the customer by acceptance or use thereof assumes all risk of product failure and of all direct, indirect, incidental and consequential damages that may result from use of the products under such conditions, and agrees to exonerate, indemnify, defend and hold harmless MacDermid, Incorporated and its affiliates therefrom. No suggestion for product use nor anything contained herein shall be construed as a recommendation to use any product in a manner that infringes any patent or other intellectual property rights, and seller and manufacturer assume no responsibility or liability for any such infringement.

© 2019 MacDermid, Inc. and its group of companies. All rights reserved. “(R)” and “TM” are registered trademarks or trademarks of MacDermid, Inc. and its group of companies in the United States and/or other countries.