

## SilCool™ TIA350R Adhesive

Thermally Conductive Silicone Adhesive

SilCool TIA350R is a one-component, heat curable silicone adhesive designed for thermally conductive applications. SilCool TIA350R silicone adhesive cures quickly upon exposure to heat, and adheres well to a wide variety of substrates.

### Key Features and Typical Benefits

- Good thermal conductivity
- Low temperature, fast cure
- Easy to use one component formulation
- Electrically insulative.
- Primerless adhesion to many substrates
- Non-corrosive to metals

### Potential Applications

- Thermal Interface Material between dies and heat spreaders.
- Adhesive for use between various heat sources and heat dissipation devices.

### Typical Physical Properties

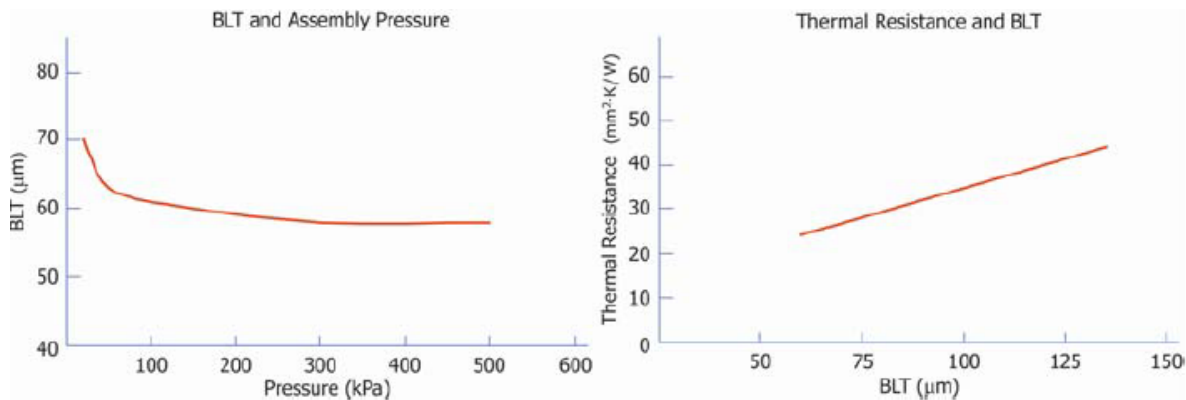
<b>Uncured Properties</b>		
Appearances		Gray paste
Viscosity (23 °C)	Pa·s	67
<b>Cured Properties (30 min at 120°C)</b>		
Density (23°C)	g/cm <sup>3</sup>	3.1
Thermal Conductivity <sup>1</sup>	W/m·K	3.5
Thermal Resistance <sup>2</sup> (BLT:60 μ m)	mm <sup>2</sup> ·K/W	24
Hardness (Type A)		77

Tensile Strength	MPa	1.6
Elongation	%	20
Adhesion Strength <sup>3</sup>	MPa	1.0
Volume Resistivity	MΩ·m	4.8x10 <sup>6</sup>
Dielectric Strength	kV/mm	20

1: Hot Wire Method 2: Laser flash method 3: Al/Al (lap shear)

Typical properties are average data and are not to be used as or to develop specifications.

### Initial Characteristics



Test data. Actuals may vary.

### General Guidelines

- Materials such as water, sulfur, nitrogen compounds, organic metallic salts, phosphorus compounds, etc. contained in the surface of the substrate can inhibit curing. A sample patch should always be conducted before proceeding to determine compatibility.
- All parts should be as clean and dry as possible prior to application.
- Wear eye protection and protective gloves as required when handling this product.
- Maintain adequate ventilation in the work area at all times.

While the typical operating temperature for silicone materials ranges from -45°C to 200°C, the long-term maintenance of its initial properties is dependent upon design related stress considerations, substrate materials, frequency of thermal cycles, and other factors.

### Storage

- Store at cool temperature ( <5°C) to prevent viscosity increase. When returning to room temperature, allow the contents to return to room temperature before opening the container to avoid condensation.
- Keep out of the reach of children.

### Patent Status

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute the permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.

**Product Safety, Handling and Storage**

Customers should review the latest Safety Data Sheet (SDS) and label for product safety information, safe handling instructions, personal protective equipment if necessary, emergency service contact information, and any special storage conditions required for safety. Momentive Performance Materials (MPM) maintains an around-the-clock emergency service for its products. SDS are available at [www.momentive.com](http://www.momentive.com) or, upon request, from any MPM representative. For product storage and handling procedures to maintain the product quality within our stated specifications, please review Certificates of Analysis, which are available in the Order Center. Use of other materials in conjunction with MPM products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

**Limitations**

Customers must evaluate Momentive Performance Materials products and make their own determination as to fitness of use in their particular applications.

**Contact Information**

Email

[commercial.services@momentive.com](mailto:commercial.services@momentive.com)

**Telephone**

<b>Americas</b>	<b>Latin America</b>	<b>EMEAI- Europe, Middle East, Africa &amp; India</b>	<b>ASIA PACIFIC</b>
+1 800 295 2392 Toll free* +704 805 6946 Direct Number	<b>Brazil</b> +55 11 4534 9650 Direct Number	<b>Europe</b> +390510924300 Direct number	<b>China</b> 800 820 0202 Toll free +86 21 3860 4892 Direct number
*All American countries	<b>Mexico</b> +52 55 2169 7670 Direct Number	<b>India, Middle East &amp; Africa</b> + 91 44 71212207 Direct number* <b>*All Middle Eastern countries, Africa, India,</b>	<b>Japan</b> +81 3 5544 3111 Direct number <b>Korea</b> +82 2 6201 4600

For literature and technical assistance, visit our website at: [www.momentive.com](http://www.momentive.com)

**DISCLAIMER:**

**THE MATERIALS, PRODUCTS AND SERVICES OF MOMENTIVE PERFORMANCE MATERIALS INC. AND ITS SUBSIDIARIES AND AFFILIATES (COLLECTIVELY “SUPPLIER”), ARE SOLD SUBJECT TO SUPPLIER’S STANDARD CONDITIONS OF SALE, WHICH ARE INCLUDED IN THE APPLICABLE DISTRIBUTOR OR OTHER SALES AGREEMENT, PRINTED ON THE BACK OF ORDER ACKNOWLEDGMENTS AND INVOICES, AND AVAILABLE UPON REQUEST. ALTHOUGH ANY INFORMATION, RECOMMENDATIONS, OR ADVICE CONTAINED HEREIN IS GIVEN IN GOOD FAITH, SUPPLIER MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, (i) THAT THE RESULTS DESCRIBED HEREIN WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN INCORPORATING ITS PRODUCTS, MATERIALS, SERVICES, RECOMMENDATIONS OR ADVICE. EXCEPT AS PROVIDED IN SUPPLIER’S STANDARD CONDITIONS OF SALE, SUPPLIER AND ITS REPRESENTATIVES SHALL IN NO EVENT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS, PRODUCTS OR SERVICES DESCRIBED HEREIN.** Each user bears full responsibility for making its own determination as to the suitability of Supplier’s materials, services, recommendations, or advice for its own particular use. Each user must identify and perform all tests and analyses necessary to assure that its finished parts incorporating Supplier’s products, materials, or services will be safe and suitable for use under end-use conditions. Nothing in this or any other document, nor any oral recommendation or advice, shall be deemed to alter, vary, supersede, or waive any provision of Supplier’s standard Conditions of Sale or this Disclaimer, unless any such modification is specifically agreed to in a writing signed by Supplier. No statement contained herein concerning a possible or suggested use of any material, product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Supplier covering such use or design, or as a recommendation for the use of such material, product, service or design in the infringement of any patent or other intellectual property right.

\*SilCool™是 Momentive Performance Materials Inc. 的商标

The use of the “™” symbol designates registered or unregistered trademarks of Momentive Performance Materials Inc. or its affiliated companies. Momentive and the Momentive logo are trademarks of Momentive Performance Materials Inc.