

SILCOOL™ TIA350R 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

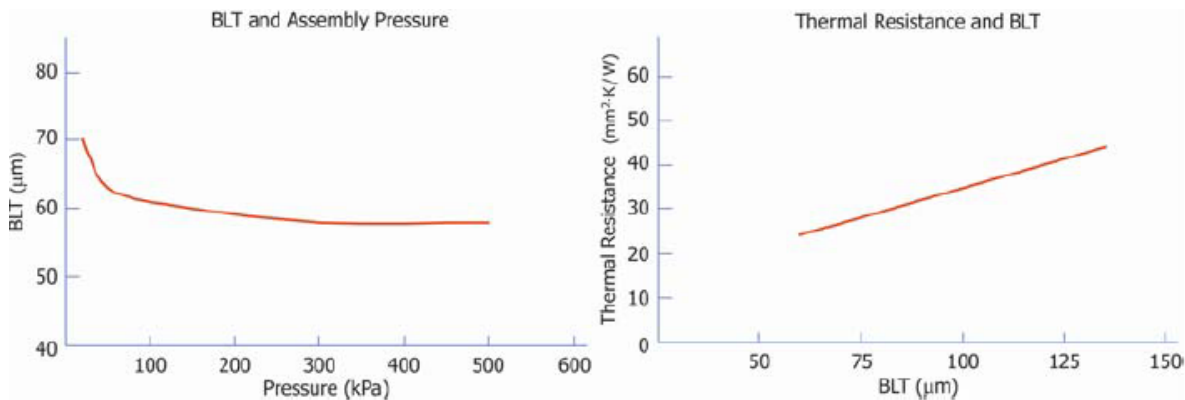
Uncured Properties		
Appearances		Gray paste
Viscosity (23 °C)	Pa*s	67
Cured Properties (30 min at 120°C)		
Density (23°C)	g/cm ³	3.1
Thermal Conductivity ¹	W/m·K	3.5
Thermal Resistance ² (BLT:60 μ m)	mm ² ·K/W	24
Hardness (Type A)		77

Tensile Strength	MPa	1.6
Elongation	%	20
Adhesion Strength ³	MPa	1.0
Volume Resistivity	MΩ·m	4.8x10 ⁶
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 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.

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For literature and technical assistance, visit our website at: www.momentive.com

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