

## SILCOOL™ TIA208RL Thermally Conductive Silicone Potting

### Product Description

SILCOOL TIA208RL is a two-component, thermally conductive material for potting. The flowability of TIA208RL allows it to be potted and conform to complex 3-dimensional shapes and cavities, filling voids and thereby creating a thermal path to remove heat. TIA208RL can be cured at room temperature or quickly with heat.

### Key Features and Typical Benefits

- Very low viscosity for flow into complex cavities
- Good thermal conductivity
- Easy to use 1:1 mixing ratio
- Cures and adheres quickly with heat or at room temperature
- UL94V-0 certified (E-File E320603)

### Potential Applications

Thermal potting for power supplies, drivers in LED light bulbs, ballasts and electronic devices.

### Typical Physical Properties

Un-Cured Properties (23°C,50%RH)		TIA208RL (A)	TIA208RL (B)
Color		Black	Light Gray
Viscosity	Pa.s	1.7	0.7
Mixing Ratio (by weight or volume)		1:1	
Viscosity (mixed)	Pa.s	1.2	
Flowable Life (23°C)	h	0.5	
Cure Condition (heat cure)		70°C x 30min	
Cure Condition (room temperature)		23°C x 24H	
Cured Properties (70°C x 30min)			
Appearance		Black elastomer	
Density (23°C)	g/cm <sup>3</sup>	1.52	
Thermal Conductivity*1	W/m·K	0.6	
Hardness (shore A)		40	
Adhesion Strength (Al/Al)	MPa	0.6	
Volume Resistivity	Ω·cm	8.0 x 10 <sup>14</sup>	
Dielectric Strength	kV/mm	24	
Dielectric Constant (60Hz)		3.3	
Dissipation Factor (60Hz)		0.016	

\*1 Hot Wire method

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

**General Considerations for Use**

- Parts A and B should each be stirred before mixing as filler sedimentation may occur during storage.
- De-aerate the mixture at 10~20mmHg for about 2 minutes to remove air entrapped during mixing. The time required to de-gas the mixture may vary depending upon the volume of material.
- Materials such as water, sulfur, nitrogen compounds, organic metallic salts, phosphorus compounds, etc. contained in the surface of the substrate can inhibit curing. It is recommended that a preliminary test be performed to determine the compatibility.

While the typical operating temperature for silicone materials ranges from -45 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.

**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.

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