

## SilCool™ TIA0220

### Description

One-component silicone adhesive that cures on exposure to atmospheric moisture at room temperatures to form a thermally conductive silicone rubber. The product offers corrosion-free adhesion to metals, including copper, plastics, ceramics, glass, etc. without the use of primers.

### Key Features and Benefits

- High thermal conductivity
- Low volatility: reduced low molecular siloxane content
- Non-corrosive to metals (including copper)
- One-component, fast alkoxysilane cure
- Wide operating temperature range: -40 °C ~ +150 °C

### Typical Physical Properties

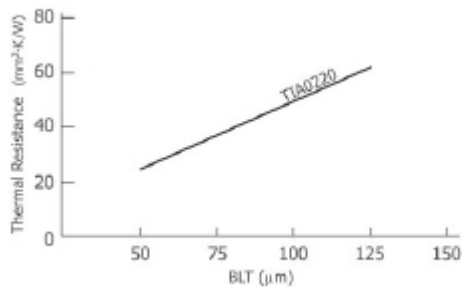
(JIS K 6249)

<u>Property</u>	<u>Unit</u>	<u>Value</u>
<b>Uncured Properties</b>		
Appearance, Color		Semi-flowable, gray paste
Viscosity	Pa·s	300
Tack free time (23 °C )	min	10
<b>Cured Properties (7d at 23°C, 50%RH)</b>		
Thermal Conductivity	W/m·K	2.2
Thermal Resistance (BLT)	mm <sup>2</sup> ·K/W	25 (50µm)

Density	g/m <sup>3</sup>	2.87
Hardness (Type A)		88
Tensile Strength	MPa	5.2
Elongation	%	40
Adhesive Strength	MPa	4.2
Volume Resistivity	MΩ·m	1.0 x 10 <sup>7</sup>
Dielectric strength	kV/mm	20
Low Volatile Siloxane (D <sub>3</sub> - D <sub>10</sub> )	wt%	0.002

Typical property data values should not be used as or to develop product specifications.

#### **Thermal Resistance and BLT**



#### **General Considerations for Use**

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.

#### **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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