

SILCOOL™ TIA208R-HF THERMALLY CONDUCTIVE SILICONE RUBBER

Product Description

SILCOOL TIA208R-HF is a 2-component, thermally conductive highly flowable potting material. When cured at room temperature or quickly with heat, it cures to a thermally conductive rubber that adheres well to most metal and plastic substrates without the need for primers. The low viscosity and flowability of SILCOOL TIA208R-HF allows it to conform to complex 3-dimensional shapes and cavities, filling voids and thereby creating a thermal path to remove heat.

Key Features and Typical Benefits

- Primerless adhesion to metals and plastics
- Soft, elastomeric rubber properties
- Convenient 1:1 mix ratio by weight
- Heat accelerated or room temperature cure
- Good thermal conductivity
- Resistance to temperature extremes
- Non-corrosive to metal
- Continuous operating temperature range of -40 ~ 150°C
- UL 94 flame retardancy V-0 (equivalent)

Typical Physical Properties

UNCURED PROPERTIES (23 °C, 50%RH)		TIA208R-HF (Part A)	TIA208R-HF (Part B)
Appearance		Black	Gray
Mix ratio by weight		1 : 1	
Viscosity Part A	mPaxs	2000	
Viscosity Part B	mPaxs	1800	
Viscosity after mixing	mPaxs	2000	
Work Life at 23°C	Minutes	90	
Cure Time at RT	Hours	24	
Cure Time at 70°C	Hours	0.5	
Cure Time at 120°C	Hours	0.3	

CURED PROPERTIES (30 minutes @ 70°C)		
Appearance		Black
Density (23°C)	g/cm3	1.6
Hardness (Shore A)		40
Tensile strength	MPa	1.4
Thermal conductivity	W/mK	0.7
Adhesion Strength (Al/Al)	MPa	1.2
Volume resistivity	MΩ·m	1.0 ×10 ⁶
Dielectric strength	kV/mm	25

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

General Considerations for Use

- Material is kit-matched; only A & B of the same batch should be used to reach above mentioned mechanical properties.
- Stir Parts A and B prior to mixing, as filler sedimentation may occur during storage.
- 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.
- Wear eye protection when handling uncured rubber as it can irritate eyes. In case of eye contact, immediately flush eyes well with water and contact a physician.
- Maintain adequate ventilation in the work place at all times.

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

Store in a cool, dry place out of direct sunlight & keep out of the reach of children.

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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