

# SILCOOL™ TIA225GFB-25 LIQUID-DISPENSED THERMAL PAD / GAP FILLER

## Product Description

SILCOOL TIA225GFB-25 gap filler is a 2-component, soft, thermally conductive silicone material that can help to dissipate heat from electronic devices. Its non-slumping pasty consistency can provide physical stability for better optimized processing. TIA225GFB-25 gap filler can be used as liquid-dispensed alternative to pre-fabricated thermal pads, for a broad array of thermal designs in electronic applications.

## Key Features and Typical Benefits

- Good thermal conductivity
- Faster, low-temperature cure
- Retains softness after cure to enhance stress relief during thermal cycling
- Easy to use 1:1 mixing ratio
- Conforms to complex shapes of three-dimensional interface designs
- Repairable
- Flame retardant: UL94V-0 equivalent
- Glass beads for bond line thickness (BLT) control (250 $\mu$ )

## Typical Physical Properties

UNCURED PROPERTIES		TIA225GFB-25 (A)	TIA225GFB-25 (B)
Appearance (Part A & B)		BLACK	GRAY
Viscosity *	Pa·s	200	200
Mix ratio by weight		1 : 1	
Viscosity * after mixing	Pa·s	200	
Thixo Index		1.4	
Work Life @ 23°C	Hours	4	
Cure conditions	Hours		
@ 70°C		0.50	
@ 23°C		24	

CURED PROPERTIES (30 minutes @ 100°C)		
Appearance		BLACK
Density (23°C)	g/cm <sup>3</sup>	2.9
Thermal conductivity *1	W/m·K	2.5
Thermal resistance *2	mm <sup>2</sup> ·K/W	35 (BLT: 50 $\mu$ m)
Hardness (Type E)		50
Hardness (Shore 00)		70
Tensile strength	MPa	0.4
Elongation	%	70
Volume resistivity	M $\Omega$ ·m	1.5 x 10 <sup>6</sup>
Dielectric strength	kV/mm	20
Low volatile (D <sub>4</sub> -D <sub>10</sub> )	ppm	150
Flame retardant	(UL94)	V-0 (equivalent)
Relative temperature index	(RTI)	150°C (equivalent)

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

\*1: Hot wire method / \*2, \*3: In-house test method; \*: Rheometer

## Potential Applications

Thermal interface for electronic components in automotive, consumer, telecommunication, lighting and industrial applications

## General Considerations for Use

Material is kit-matched; only A & B of the same batch should be used to reach above mentioned mechanical properties.

## 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

- 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.
- 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](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.

## Option for Glass Beads

- Material is available with spacers for Bond Line Thickness Control
- Typical Glass Bead: 180 $\mu$  and 250 $\mu$ ; other sizes upon request

## 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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