

TIA222G Thermally Conductive Silicone

Description

TIA222G thermally conductive silicone is a two-component material used for encapsulating, gap filling, and as a thermal path to heat sinks. The flowability of TIA222G silicone allows it to conform to complex three-dimensional shapes and cavities in potting applications. TIA222G silicone quickly cures to a soft rubber gel with exposure to heat, and will also cure at room temperatures.

Key Features and Typical Benefits

- Good thermal conductivity
- Fast cure with exposure to heat
- Easy to use 1:1 mixing ratio by weight or volume
- Flame Retardant: UL94 V-0 certified (File No. E56745)

Typical Physical Properties

Criteria	Properties	
	Part A	Part B
Color	Dark Gray	Light Gray
Mixing Ratio (by weight or volume)	100:100	
Viscosity (23 °C) (after mixing)	Pa.s	20
Pot Life	h	4
Cure Condition (with heat)	°C / h	70 / 0.5
Cure Condition (room temperature)	h	24
Post-Cure Properties		

Density (23 °C)	g/cm ³	2.81
Thermal Conductivity ⁽¹⁾	W/(m.K)	2.2
Hardness (type E)		45
Volume Resistivity	MΩ.m	4.8x10 ⁶
Dielectric Strength	20kV/mm	20
CTE	ppm/K	140
Low Volatile Siloxane (D ₃ -D ₁₀)	ppm	<200

(1) Hot wire method

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

Potential Applications

- Thermal encapsulating, gap filling, and potting.

General Considerations for Use

- Parts A and B should each be thoroughly stirred before mixing together, as filler sedimentation may occur during storage.
- De-aerate the mixture to remove air entrapped during mixing.
- Materials such as water, sulfur, nitrogen compounds, organic metallic salts, phosphorus compounds, etc. contained in the surface layer of the substrate can inhibit curing. It is recommended that a preliminary test be performed to determine compatibility.

Storage

- Store in a dark, cool place out of direct sunlight.
- TIA222G(B) silicone pail cans:

If after use there is TIA222G(B) material remaining inside the pail can, tie the can's inner bag into a knot to reduce the volume of air to which the TIA222G(B) material is exposed during storage, and securely fasten the lid to the can.

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.

Contact Information

Email

commercial.services@momentive.com

Telephone

Americas	Latin America	EMEAI- Europe, Middle East, Africa & India	ASIA PACIFIC
+1 800 295 2392	Brazil	Europe	China
Toll free*	+55 11 4534 9650	+390510924300	800 820 0202
+704 805 6946	Direct Number	Direct number	Toll free
Direct Number			+86 21 3860 4892

All American countries	Mexico +52 55 2169 7670 Direct Number	India, Middle East & Africa + 91 44 71212207 Direct number	Direct number Japan +81 3 5544 3111 Direct number
		*All Middle Eastern countries, Africa, India,	Korea +82 2 6201 4600

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

DISCLAIMER:

THE MATERIALS, PRODUCTS AND SERVICES OF MOMENTIVE PERFORMANCE MATERIALS INC. AND ITS SUBSIDIARIES AND AFFILIATES (COLLECTIVELY “SUPPLIER”), ARE SOLD SUBJECT TO SUPPLIER’S STANDARD CONDITIONS OF SALE, WHICH ARE INCLUDED IN THE APPLICABLE DISTRIBUTOR OR OTHER SALES AGREEMENT, PRINTED ON THE BACK OF ORDER ACKNOWLEDGMENTS AND INVOICES, AND AVAILABLE UPON REQUEST. ALTHOUGH ANY INFORMATION, RECOMMENDATIONS, OR ADVICE CONTAINED HEREIN IS GIVEN IN GOOD FAITH, SUPPLIER MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, (i) THAT THE RESULTS DESCRIBED HEREIN WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN INCORPORATING ITS PRODUCTS, MATERIALS, SERVICES, RECOMMENDATIONS OR ADVICE. EXCEPT AS PROVIDED IN SUPPLIER’S STANDARD CONDITIONS OF SALE, SUPPLIER AND ITS REPRESENTATIVES SHALL IN NO EVENT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS, PRODUCTS OR SERVICES DESCRIBED HEREIN. Each user bears full responsibility for making its own determination as to the suitability of Supplier’s materials, services, recommendations, or advice for its own particular use. Each user must identify and perform all tests and analyses necessary to assure that its finished parts incorporating Supplier’s products, materials, or services will be safe and suitable for use under end-use conditions. Nothing in this or any other document, nor any oral recommendation or advice, shall be deemed to alter, vary, supersede, or waive any provision of Supplier’s standard Conditions of Sale or this Disclaimer, unless any such modification is specifically agreed to in a writing signed by Supplier. No statement

contained herein concerning a possible or suggested use of any material, product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Supplier covering such use or design, or as a recommendation for the use of such material, product, service or design in the infringement of any patent or other intellectual property right.

The use of the "™" symbol designates registered or unregistered trademarks of Momentive Performance Materials Inc. or its affiliated companies. Momentive and the Momentive logo are trademarks of Momentive Performance Materials Inc.