

SilCool* XE13-C1862PT

Description

XE13-C1862PT is a one-component, heat curable silicone adhesive designed for thermally conductive applications. The product cures quickly with heat and adheres well to a variety of substrates without the use of a primer.

Key Features and Typical Benefits

- Excellent thermal conductivity
- Low viscosity
- Higher elongation than conventional products
- Ready to use: one component
- Heat accelerated cure
- Excellent adhesive properties: Primerless adhesion to many types of substrates
- Non corrosive to metals

Typical Physical Properties

(JIS K 6249)

<u>Property</u>	<u>Unit</u>	<u>Value</u>
UNCURED PROPERTIES		
Appearance		Gray, flowable paste
Viscosity (23 °C)	Pa·s	50
CURED PROPERTIES (1h at 150 °C)		
Density (23 °C)	g/cm ³	2.87
Hardness (Type A)		64
Tensile strength	MPa	1.4

Elongation	%	80
<u>Property</u>	<u>Unit</u>	<u>Value</u>
Adhesive strength ⁽¹⁾	MPa	0.9
Linear expansion ⁽²⁾	1/K	1.3×10 ⁻⁴
Thermal Conductivity ⁽³⁾	W/m·K	2.5
Thermal resistance ⁽⁴⁾	mm ² K/W	25
Glass transition point	°C	-120
Volume resistivity	Ω·cm	5.0×10 ¹⁴

Typical Physical Properties, continued

<u>Property</u>	<u>Unit</u>	<u>Value</u>
Dielectric strength	kV/mm	20
Ionic Impurities ⁽⁵⁾ ppm	Na ⁺	<5
	K ⁺	<5
	Cl ⁻	<5
Water adsorption ⁽²⁾	%	<0.6

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

(1) Aluminum lap shear (2) In-house test method (3) Hot wire

(4) Laser flash analysis on a Si-Si sandwiched material (5) Ion chromatography analysis

Potential Applications

- Sealing and bonding for thermally conductive applications
- Heat generating elements, Regulators, Rectifier, Thyristor, etc.

Processing Recommendations

- 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.

- All parts should be as clean and dry as possible prior to application
- Wear eye protection and protective gloves as required when handling this product.
- Maintain adequate ventilation in the work area at all times.

Packaging

- 333ml cartridge available in cases of 10

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 at cool temperature (0~10 °C) to prevent a viscosity increase. When returning to room temperature, allow the contents to return to room temperature before opening the container to avoid condensation.
- 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.

Contact Information

For product prices, availability, or order placement, contact our customer service at [Momentive.com/Customerservice/](https://www.momentive.com/Customerservice/)

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.

*SilCool is a trademark of Momentive Performance Materials Inc.

Momentive and the Momentive logo are trademarks of Momentive Performance Materials Inc.