



SilCool* TSE3281

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Description

TSE3281-G is a one-component, heat curable silicone adhesive designed for thermally conductive applications. This product cures quickly with heat and adheres well to a variety of substrates without the use of a primer.

Key Features and Benefits

- Excellent thermal conductivity
- 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

UNCURED PROPERTIES		
Appearance		Flowable paste, Gray
Viscosity (23°C)	Pa•s {P}	60 {600}
CURED PROPERTIES (1h @ 150°C)		
Appearance		Elastic rubber
Density (23°C)	g/cm ³	2.70
Hardness (Type A)		84
Tensile Strength	MPa {kgf/cm ² }	4.5 {46}
Elongation	%	50
Adhesive Strength ^{*1}	MPa {kgf/cm ² }	2.5 {25}
Linear Expansion ^{*2}	1/K	1.4x10 ⁻⁴
Thermal Conductivity ^{*2}	W/m•K	1.7
Thermal Resistance	(BLT: 50µm)	35
Volume Resistivity	Ω •cm	4.8x10 ¹⁴
Dielectric Strength	kV/mm	15

Dielectric Constant (60Hz)	5.2
Dissipation Factor (60Hz)	0.002

*1 Aluminum lap shear*2 Hot wire method*3 Laser flash method
 Typical property data values should not be used as specifications.

Potential Applications

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

Cure Time vs. Temperature

Actual cure time will depend on the type and efficiency of the oven used, and the shape and heat capacity of the parts and containers. A sample test should be conducted to determine the appropriate cure time. Typical cure times and temperatures are as follows.

Temperature °C	Cure Time(h)
120	4
125	2
150	1

Patent Status

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute a 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.
- All parts should be as clean and dry as possible prior to application.
- Wear eye protection and protective gloves as required when working with this product.
- Maintain adequate ventilation in the work place at all times.

- Store in a refrigerator (0-10°C) to prevent 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 Material Safety Data Sheet (MSDS) and label for product safety information, safe handling instructions, personal protective equipment if necessary, and any special storage conditions required for safety. MSDS are available at www.momentive.com or, upon request, from any Momentive Performance Materials (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.

Packaging

- 1kg can available in case of 10
- 25kg pail available

Adhesion Capability

*Suitable substrates*Metals: Aluminum, Copper, Ni plated steel, Stainless SteelPlastics: PPS, PBT, Epoxy resin, Polyester, Phenolic resinRubber: Heat cured Silicone RubberInorganics: Glass, Ceramics

*Unsuitable substrates*Plastics: PP, PE, Fluorocarbon resinRubbers: RTV Silicone Rubber, Sulfur vulcanized rubber,Fluorocarbon Rubber

Contact Information

For product prices, availability, or order placement, contact our customer service by visiting momentive.com/ContactSilicones.

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

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