

## TSE3260

### Description

**TSE3260** is a one-component, flowable, heat curable silicone adhesive designed for high temperature applications. TSE3260 adheres well to a variety of substrates, such as metals, plastics, ceramics and glass without the use of a primer.

### Key Features and Typical Benefits

- Ready to use - one component
- Excellent high temperature resistance - UL746 TI 190 °C (UL File No. E56745)
- 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>
<b>Uncured Properties</b>		
Appearance		Reddish brown
Viscosity (23 °C)	Pa·s	23
<b>Cured Properties (1 hour at 150 °C)</b>		
Density	g/cm <sup>3</sup>	1.34
Hardness (Type A)		20
Tensile Strength	MPa	1.7
Elongation	%	250
Adhesive Strength	MPa	0.5
Volume Resistivity	Ω·cm	1.0 x 10 <sup>15</sup>
Dielectric Strength	kV/mm	25

Dielectric Constant (60Hz)		3.1
Dissipation Factor (60Hz)		0.01

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

## Potential Applications

- Sealing and bonding for high temperature applications - Heaters, Steam Irons, Micro Wave Ovens etc.

## Processing Recommendations

### Compatibility

TSE3260 silicone adhesive will cure in contact with most clean, dry surfaces. However, certain materials such as water, sulfur, nitrogen compounds, organic metallic salts, phosphorus compounds, etc. contained in the surface of the substrate can inhibit curing. Cure inhibition is characterized by a gummy appearance of TSE3260 silicone adhesive at the interface between the adhesive and the substrate to be bonded. A sample patch test should always be conducted before proceeding to determine compatibility.

### Surface Preparation

The adhesive performance of any polymer system is highly dependent upon proper surface preparation. In order to maximize the adhesion of TSE3260 silicone adhesive and minimize the potential for cure inhibition, all parts should be as clean and dry as possible prior to the application of the adhesive.

### Bonding

TSE3260 silicone adhesive offers outstanding adhesion characteristics to a wide variety of different substrates without the need of a primer. Suitable substrates are: Aluminum, Copper, Ni plated, Stainless Steel, PPS, PBT, Epoxy resin, Polyester, Phenolic resin, Heat Cured Silicone Rubber, Glass, Ceramics

No adhesion will be obtained on: PP, PE, Fluorocarbon resin, RTV Silicone Rubber, Sulfur vulcanized rubbers, Fluorocarbon rubber For difficult-to-bond-to substrates, or where more aggressive chemical adhesion is desired, the adhesion may be enhanced

by using SS4155 silicone primer, available from Momentive Performance Materials. To apply the primer, thoroughly clean the surface and let dry. Then apply a uniform film (0.01-0.02 mm) of SS4155 silicone primer and allow the primer to air-dry for one hour or more.

### **Curing**

TSE3260 silicone adhesive requires the use of elevated temperatures in order to achieve full cure. Typical cure times and temperatures are as follows:

<b>Temperature</b>	<b>Cure Time</b>
120 °C	2 hours
150 °C	1 hour
180 °C	10 minutes

Note: Test results. Actual results may vary.

The actual cure time is affected by such things as cross-sectional thickness of the TSE3260 silicone adhesive, heat capacity of the overall assembly and efficiency and type of oven used (i.e. convection, infrared).

### **Availability**

TSE3260 is available in 1 kg cans and 20 kg pails.

### **General Considerations for Use**

While the typical operating temperature for silicone materials ranges from -45°C to 200°C, the long-term maintenance of its initial properties is dependent upon design related stress considerations, substrate materials, frequency of thermal cycles, and other factors.

### **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**

The shelf life will be indicated by the 'use before date' on the associated documents with a minimum of 4 months when stored in the original unopened containers between

0 and 10 °C.

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.

### 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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