

## TSE3033

### Description

TSE3033 is a two-component, transparent heat curable silicone rubber designed for electrical and electronic potting. TSE3033 adheres to various types of materials such as metals, plastics, glass and ceramics without the use of primers.

### Key Features and Typical Benefits

- Convenient 1:1 mix ratio by weight
- Low viscosity permits excellent potting
- Transparent appearance
- Primerless adhesion to many substrates - plastics, metals, ceramics and glass
- No reactive by-products; no concerns regarding corrosion
- Excellent resistance to temperatures extremes

### Typical Physical Properties

<u>Property</u>	<u>Unit</u>	<u>Value</u>	
<b>UNCURED PROPERTIES</b>		<b>TSE3033 (A)</b>	<b>TSE3033 (B)</b>
Appearance		Transparent liquid	Transparent liquid
Viscosity (23 °C)	Pa*s {P}	1.1	0.8
Viscosity after Mixing	Pa*s {P}	0.9	
Mixing Ratio by Weight		1:1	
Work Life (23 °C)	h	6	
<b>CURED PROPERTIES (0.5h at 150 °C)</b>			
Appearance		Elastic rubber	
Specific gravity (23 °C)	g/cm <sup>3</sup>	1.01	
Hardness (Type A)		30	
Tensile Strength	MPa	1.0	
Elongation	%	130	
Adhesive strength <sup>(1)</sup>	MPa	0.3	
Volume Resistivity	Ω·cm	2.0 x 10 <sup>15</sup>	
Dielectric Strength	kV/mm	21	
Dielectric Constant (60Hz)		2.8	
Dissipation Factor (60Hz)		0.001	

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

<sup>(1)</sup> Glass lap shear

### Potential Applications

- Potting of electric parts requiring resistance to extreme temperatures
- Potting of high voltage parts
- Moisture proof coating of electronic circuit boards
- Potting of various modules

### Processing Recommendations

#### Caution

Materials such as water, sulphur, 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.

#### Cure Time vs. Temperature

Actual cure time will depend on the type and efficiency of the oven used as well as the shape, thickness 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	Cure Time
80 °C	4 hours
100 °C	2 hours
150 °C	0.5 hours

Note: Test results. Actual results may vary.

#### Adhesion capability

Suitable Substrates:

- Metals: Aluminium, Copper, Ni plate; Stainless Steel
- Plastics: PPS, PBT, Epoxy Resin, Polyester, Phenolic Resin
- Rubbers: Heat-cured Silicone Rubber
- Inorganics: Glass, Ceramics

Not Suitable Substrates:

- Plastics: PP, PE, Fluorocarbon Resin
- Rubbers: Sulphur Vulcanized Rubbers, Fluorocarbon Rubber

#### Availability

**TSE3033 (A)** and **TSE3033 (B)** components are available as 2kg kits.

**TSE3033 (A)** and **TSE3033 (B)** components are available in each 20 kg pails.

#### 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](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.

**Contact Information**

For product prices, availability, or order placement, contact our customer service at [Momentive.com/CustomerService/](http://Momentive.com/CustomerService/)

For literature and technical assistance, visit our website at: [www.momentive.com](http://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.

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