

## SILTRUST™ TSE3663 SILICONE POTTING MATERIAL

### Description

SILTRUST TSE3663 is a two-component condensation cure silicone rubber for electronic potting. It cures at room temperature to form an elastic rubber and adheres to various materials such as metal, plastics, glass and ceramics without the use of primers.

### Key Features and Typical Benefits

- Self bonding, good primerless adhesion to many substrates such as metals, glass and many types of plastics
- Good deep section cure
- Excellent dielectrical properties
- Low viscosity

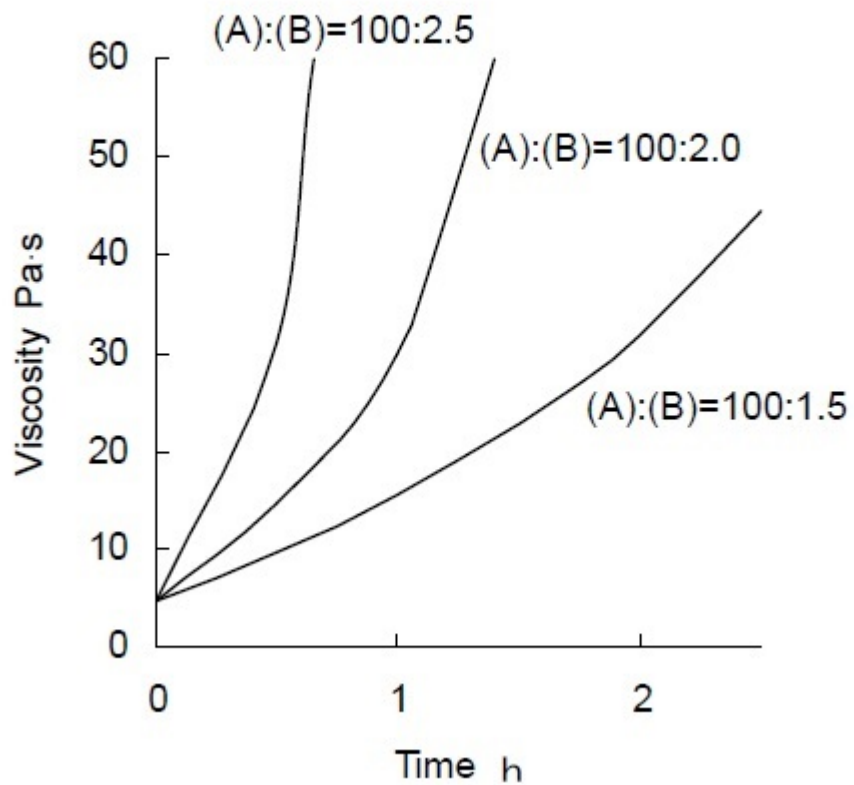
### Typical Physical Properties

<u>Property</u>	<u>Unit</u>	<u>Value</u>	
		<b>TSE3663 (A)</b>	<b>TSE3663 (B)</b>
Colour		white	Pale yellow
Density (23 °C)	g/cm <sup>3</sup>	1,19	1.01
Viscosity (23 °C)	mPa·s	5000	6
Mix Ratio by Weight		100 : 2	
Viscosity After Mixing (23 °C)	mPa·s	4000	
Pot Life (23 °C)	h	0.5	
Cure Time (25 °C)	h	24	
<b>Cured Properties (3 days at 23 °C)</b>			
Density (23 °C)	g/cm <sup>3</sup>	1.20	
Hardness (Type A)		41	
Tensile Strength	MPa	1.4	

Adhesive Strength <sup>(1)</sup>	MPa	0.9
Elongation	%	100
Thermal conductivity	W/m·K	0.27
Volume resistivity	$\Omega \cdot \text{cm}$	$1.0 \times 10^{15}$
Dielectric constant (60 Hz)		31
Dissipation Factor (60 Hz)		0.02
Dielectric strength	kV/mm	24

Typical physical properties are average data and should not be used as or to develop product specifications.<sup>(1)</sup>Aluminum Lap Shear

## CURING AGENT LEVEL VS VISCOSITY CHANGE (25°C)



Note: Test results. Actual results may vary.

### Curing Agent Levels and Physical Properties

Properties		Mix Ratio By Weight (A) : (B)		
		100 : 1.5	100 : 2	100 : 2.5
Density (23 °C)	g/cm <sup>3</sup>	1.19	1.19	1.20
Hardness (Type A)		30	42	47
Tensile Strength	MPa	1.1	1.4	1.8
Elongation	(%)	160	110	120

Note: Test data. Actual results may vary.

## Potential Applications

- Waterproof sealing. Bonding and potting for electrical parts and electronics devices
- Coating of Printed circuit Boards (PCB's)

## Processing Recommendations

### Mixing

Since settling of filler occurs during storage, TSE3663(A) base compound should be thoroughly stirred in the original container before mixing together with TSE3663(B) catalyst.

After mixing the TSE3663(A) select a mixing container 4-5 times larger than the volume of RTV silicone rubber compound to be used. Weigh out the quantities of TSE3663(A) and TSE3663(B) needed.

With clean tools, thoroughly mix the A and B components together, scraping the sides and bottom of the container carefully to produce a homogeneous mixture. When using power mixers, avoid excessive speeds, which could entrap large amounts of air or cause overheating of the mixture, resulting in shorter pot life.

### Deaeration

Air entrapped air during mixing should be removed to eliminate voids in the cured product. Expose the mixed material to a vacuum of about 30 mbar. The material will expand, crest, and recede to about the original level as the bubbles break. Degassing is usually complete about two minutes after frothing ceases. When using the RTV silicone rubber compound for potting, a deairation step may be necessary after pouring

to avoid capturing air in complex assemblies.

### **Availability**

TSE3663(A) component is available in 1kg cans and 18kg pails.

TSE3663(B) component is available in 500g bottles.

### **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)

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