

## **Product Data**

# **Flame Retardant Silicone Adhesive Sealant TSE3940**

TSE3940 is a one-component, fast curing silicone adhesive sealant that cures on exposure to atmospheric moisture to form an elastic and flame retardant silicone rubber. TSE3940 has excellent corrosion-free adhesion to metals, including copper, plastics, ceramics, glass, etc without the use of primers.

### **KEY FEATURES**

- ◆ Flame retardant: UL94V-0 recognized (File No: E56745)
- ◆ Non-corrosive to metals: meets MIL-A-46146B corrosion test
- ◆ Fast cure
- ◆ Low odor cure: releases an alcohol vapor during cure
- ◆ Primerless adhesion to many substrates
- ◆ Excellent high and low temperature resistance: from -55°C to 200°C
- ◆ Excellent weatherability, ozone, and chemical resistance
- ◆ Excellent electrical insulation properties
- ◆ Simple and easy-to-use one-component system

### **APPLICATIONS**

- ◆ Flame retardant adhesive for high voltage parts
- ◆ Sealing of electrical and industrial applications required flame retardancy
- ◆ Connection sealing on electronic parts assemblies
- ◆ Waterproof sealant for electrical, electronic and communication equipment.

### **TYPICAL PROPERTY DATA**

(JIS K 6249)

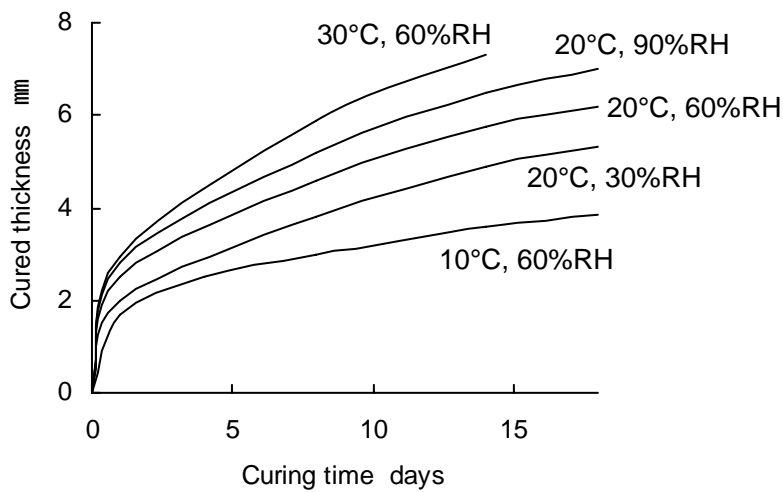
<b>UNCURED PROPERTIES</b>		
Appearance		Non-flowable paste, gray
Tack-free time (23°C)	min	5
<b>CURED PROPERTIES (7days @ 23°C, 50%RH)</b>		
Appearance		Elastic rubber
Density (23°C)	g/cm <sup>3</sup>	1.49
Hardness (Type A)		40
Tensile strength	MPa {kgf/cm <sup>2</sup> }	2.9 {30}
Elongation	%	200

Adhesive strength <sup>*1</sup>	MPa {kgf/cm <sup>2</sup> }	1.6 {16}
Thermal conductivity <sup>*2</sup>	W/(m·K) {cal/(cm·s·°C)}	0.41 {9.7×10 <sup>-4</sup> }
Volume resistivity	MΩ·m {Ω·cm}	6.0×10 <sup>6</sup> {6.0×10 <sup>14</sup> }
Dielectric strength	kV/mm	21
Dielectric constant (60Hz)		4.5
Dissipation factor (60Hz)		0.05

\*1 Aluminum lap shear \*2 In-house test method

Typical property data values should not be used as specifications.

## CURE SPEED



## ADHESION PERFORMANCE

TSE39X series has excellent bonding properties and adheres to many materials without primers. However, for significantly better adhesion on difficult-to-bond substrates, use of a primer is suggested. The following list of materials shows the quality of adherence of TSE39X used with ME121, ME123, YP9341, XP80-A5363 or without a primer.

### Primer selection

SUBSTRATE	NO PRIMER	ME121	ME123	YP9341/ XP80-A5363
<b>Metals</b>				
Copper	○	○		
Steel	○	○		
Mild steel	○	○		
Brass	○	○		

Stainless steel	○	○		
Pure aluminum	○	○		
Corrosion-resistant aluminum	○	○		
Galvanized sheet iron	○	○		
Tin plate	○	○		
<b>Plastics</b>				
Acrylic resin	○		○	
Phenolic resin	○		○	
Epoxy resin	○		○	
Polycarbonate	○ <sup>*1</sup>		○ <sup>*1</sup>	
Soft polyvinyl chloride	○		○	
Rigid polyvinyl chloride	○		○	
Melamine resin	○		○	
Polystyrene	△		○	
Polyacetal	×		○	
PPE	○		○	
Polyester film	○		○	
Unsaturated polyester resin	○		○	
Polyimide	○		○	
Nylon66	○		○	○ <sup>*2</sup>
PBT	○		○	× <sup>*2</sup>
PPS	○		○	○ <sup>*2</sup>
ABS resin	○		○	
Polypropylene	×		×	○ <sup>*3</sup>
Polyethylene	×		×	△ <sup>*3</sup>
Polytetrafluoroethylene	×		×	×
Silicone varnish laminate	○		○	
Silicone varnish coated glass cloth	○		○	
<b>Rubbers</b>				
Chloroprene	△		○	
Nitril	△		○	
Styrene butadiene	△		○	
Ethylene propylene	△		○	
Silicone	○		○	
<b>Others</b>				
Glass	○	○		
Ceramics	○	○		
Wood	○~△	○~△		

Note

○: Excellent (Cohesive failure, 100%)    △: Not sufficient    ×: Poor (Cohesive failure, 0%)

\*1: It shows good adhesion but solvent crack may occur depending on the application. A preliminary adhesion test is recommended to confirm.

\*2: YP9341    \*3: XP80-A5363

## HANDLING AND SAFETY

- ◆ Wear eye protection and protective gloves as required while handling the product.
- ◆ Adequate ventilation must be maintained in the work place at all times.

## STORAGE

- ◆ Store in a cool, dry place out of direct sunlight.
- ◆ Keep out of the reach of children.

## PACKAGING

- ◆ 150g tube available in case of 20
- ◆ 450g cartridge available in case of 50 (5 boxes of 10 cartridge)

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### **FOR INDUSTRIAL USE ONLY**

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