

SNAPSIL™ TSE3843-W SILICONE ADHESIVE SEALANT

Description

SNAPSIL TSE3843-W is a one-component, oxime curing, silicone adhesive sealant designed for flame retardant applications. SNAPSIL TSE3843-W cures at room temperature with moisture in the air to an elastic rubber. This product bonds without the use of a primer to substrates like metals, plastics, ceramics and glass.

Key Features and Typical Benefits

- Flame retardant: UL94-V-1 recognized (File No. E56745)
- Primerless adhesion to many substrates
- Neutral cure; little risk of corrosion (corrosion to copper and copper alloys)
- Excellent high and low temperature resistance; from -55 °C to 200 °C
- Excellent dielectric properties
- Excellent weatherability; ozone and chemical resistance

Typical Physical Properties (JIS K 6249)

<u>Property</u>	<u>Unit</u>	<u>Value</u>
Typical Uncured Properties		
Appearance		Semi-flowable white paste
Tack-free Time (23 °C)	minutes	60
Viscosity (23 °C)	Pa·s	500
Typical Cured Properties (7 days at 23 °C / 50% RH)		
Appearance		Elastic white rubber
Density	g/cm ³	1.57
Hardness (Type A)		60
Tensile Strength	MPa	3.9
Elongation	%	130
Adhesive Strength ⁽¹⁾	MPa	1.8
Volume Resistivity	Ω·cm	1.0 x 10 ¹⁵
Arc Resistance ⁽²⁾	s	> 360
Dielectric Constant (60 Hz)		3.9

Dielectric Loss (60 Hz)		0.02
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Typical physical properties are average data and should not be used as or to develop product specifications.

(¹)Aluminum lap shear

(²)ASTM D 495

Typical Physical Properties, continued (JIS K 6249)

<u>Property</u>	<u>Unit</u>	<u>Value</u>
Electrical Properties (cured +16 hr water immersion at 23 °C)		
Volume Resistivity	Ω·cm	3.0 x 10 ¹⁵
Dielectric Strength	kV/mm	21
Arc Resistance	s	> 360
Dielectric constant (60 Hz)		4.1
Dielectric Loss (60 Hz)		0.03

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

Potential Applications

- Flame retardant adhesive for high voltage parts
- Sealing of electrical and industrial applications requiring flame retardancy
- Connection sealing on electrical part assemblies
- Waterproof sealant for electrical and communication equipment

Adhesion Performance

SNAPSIL TSE3843-W 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 SNAPSIL TSE3843-W used with ME121, ME123, YP9341 or without a primer.

SUBSTRATE	NO PRIMER	ME121	ME123 or YP9341
Copper	△*	○*	
Steel	○	○	
Brass	△*	○*	
Stainless steel	○	○	
Pure aluminum	○	○	
Tin plate	○	○	
Zinc plate	△	△	
Acrylic resin	○		○
Phenolic resin	○		○
Epoxy resin	○		○
Rigid polyvinyl chloride	○		○
Polyester film	○		○
ABS resin	×		○
Polyethylene	×		×
Polytetrafluoroethylene	×		×
Glass	○	○	
Ceramics	○	○	

Note ○: Excellent (Cohesive failure), △: Not sufficient, ×: Poor (Adhesive failure)

*: Corrosion may occur depending on the application

Do not apply to Polycarbonate due to solvent crack

Note: Test data. Actual results may vary

Processing Recommendations

Surface Preparation

SNAPSIL TSE3843-W will bond to many clean surfaces without the aid of primers. These surfaces typically include many metals, glass, ceramic, silicone rubber and some rigid plastics.

Where adhesion is required, surfaces should be thoroughly cleaned with a suitable solvent such as naphtha, iso propyl alcohol (IPA) or methyl ethyl ketone (MEK) to remove dirt, oil and grease. The surface should be wiped dry before applying the adhesive sealant. When solvents are used, proper safety precautions must be observed.

Availability

SNAPSIL TSE3843-W is available in 150 g and 250 g tubes as well as in 333 ml cartridges.

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

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 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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