

TSE382

Description

TSE382 is a one-component, oxime curing, silicone adhesive sealant, which cures at room temperature with moisture in the air to an elastomeric rubber. This product bonds without the use of a primer to substrates like metals, plastics, ceramics and glass.

Key Features and Typical Benefits

- 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 continuous operation.
- Excellent dielectric properties
- Excellent weatherability; ozone and chemical resistance
- Can be supplied in translucent, black, gray and white
- Recognized by UL (File No. E56745) TSE382-W and TSE382-C; UL746 Ti Elec.150 °C, Mech. 140 °C. TSE382-W and TSE382-C; UL94HB

Typical Physical Properties

(JIS K 6249)

Property	Unit	Value
Typical Uncured Properties		
Appearance		Non-flowable paste
Tack-free Time at 23 °C	minutes	10
Typical cured Properties (7 days at 23 °C, 50% RH)		
Appearance		elastic rubber
Density	g/cm ³	1.04
Hardness (Type A)		28
Tensile strength	MPa	1.9
Elongation	%	380
Thermal Conductivity	W/m.K	0.18
Adhesive strength ⁽¹⁾	MPa	1.7
Volume resistivity	Ω·cm	1.0 x 10 ¹⁵
Dielectric strength	kV/mm	23
Dielectric constant (60 Hz)		2.9
Dissipation Factor (60 Hz)		0.004

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

⁽¹⁾ Aluminum lap shear

Potential Applications

- Waterproof sealant for electrical and communication equipment
- Air-tight sealant for meters to keep out water and dust
- Oil leakage preventive sealant for automotive engine parts
- General adhesive for metals, glass and plastics

Adhesion Performance

TSE382 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 TSE382 when used with ME121, ME123, XP80-A5363 or without a primer.

SUBSTRATE	NO PRIMER	ME121	ME123	YP941/ XP80-A5363
Metals				
Copper	△ ^{*1}	○ ^{*1}		
Steel	○	○		
Mild steel	○	○		
Brass	△ ^{*1}	○ ^{*1}		
Stainless steel	△	○		
Aluminum	○	○		
Corrosion-resistant aluminum	○	○		
Galvanized sheet iron	○	○		
Tin plate	○	○		
Plastics				
Acrylic resin	○	○		
Phenolic resin	○	○		
Epoxy resin	○	○		
Polycarbonate	○ ^{*2}	○ ^{*2}		
Soft polyvinyl chloride	×	×	○	
Rigid polyvinyl chloride	○	○	○	
Polyester film	○	○	○	
Unsaturated polyester resin	○	○	○	
Polyimide	○	○	○	
Nylon 66	○		○	○ ^{*3}
PBT	△		○	×
PPS	△		○	○ ^{*3}
ABS resin	○	○	○	
Polypropylene	×	×	×	○ ^{*4}
Polyethylene	×	×	×	×
Polytetrafluoroethylene	×	×	×	
Silicone varnish laminate	○	○		
Silicone varnish coated glass cloth	○	○		
Rubbers				
Chloroprene	△		○	
Nitril	△		○	
Styrene butadiene	△		○	
Ethylene propylene	△		○	
Silicone	○		○	
Others				
Glass	○	○		
Ceramics	○	○		
Wood	△~○	△~○		

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

*1: Corrosion may occur depending on the application

*2: Do not apply to Polycarbonate due to solvent crack. *3: YP9341 *4: XP80-A5363

Note: Test results. Actual results may vary.

Processing Recommendations

Surface Preparation

TSE382 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

TSE382-C is available in 100 g tubes, 333ml cartridges and 18 kg pails.

TSE382-W is available in 100 and 180-gram tubes, 333ml cartridges and 18 kg pails.

TSE382-B and TSE382-G in 333ml cartridges

Contact Information

For product prices, availability, or order placement, contact our customer service at [Momentive.com/Customerservice/](https://www.momentive.com/Customerservice/)

For literature and technical assistance, visit our website at: www.momentive.com

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