
Product Data

General Purpose Silicone Adhesive Sealant TSE382

TSE382 is a one-component, oxime cure, silicone adhesive sealant which cures at room temperature with moisture in the air. This product bonds to most materials, such as metals, plastics, ceramics and glass without the use of primers.

KEY FEATURES

- ◆ 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 weatherability, ozone, and chemical resistance
- ◆ Excellent electrical insulation properties
- ◆ Simple and easy-to-use one-component system
- ◆ Many color variations: Black, Clear, Gray, and White
- ◆ Recognized by UL (File No. E56745): TSE382-W, TSE382-C; UL746 TI Elec.150°C, Mech. 140°C and UL94HB

APPLICATIONS

- ◆ A waterproof sealant for electrical and communication equipments
- ◆ Air-tight sealants for meters to keep out water and dust
- ◆ Windshield sealants for automobiles and ships
- ◆ Oil leakage preventive sealants for automobile engine parts
- ◆ Sealing and potting to equipments which require cold and heat resistance and flame retardant
- ◆ General adhesion for metals, glass, plastic, wooden, etc

TYPICAL PROPERTY DATA

(JIS K 6249)

UNCURED PROPERTIES	
Appearance	Non-flowable paste
Tack-free time (23°C) min	10
CURED PROPERTIES (7days @ 23°C, 50%RH)	
Appearance	Elastic rubber
Density (23°C) g/cm ³	1.04
Hardness (Type A)	28

Tensile strength	MPa {kgf/cm ² }	1.9 {19}
Elongation	%	380
Adhesive strength ^{*1}	MPa {kgf/cm ² }	1.7 {17}
Thermal conductivity ^{*2}	W/(m·K) {cal/(cm·s·°C)}	0.18 {4.4×10 ⁻⁴ }
Volume resistivity	Ω·cm	1.0×10 ¹⁵
Dielectric strength	kV/mm	23
Dielectric constant (60Hz)		2.9
Dissipation factor (60Hz)		0.004

*1: Aluminum Lap shear

*2: In-house test method

Typical property data values should not be used as specifications.

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 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	△~○	△~○		

Note

○: 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

HANDLING AND SAFETY

- ◆ Substrate surface should be thoroughly cleaned with a suitable solvent such as alcohol, xylene, methyl ethyl ketone (MEK) etc.
- ◆ This product releases methyl ethyl ketoxime vapors as a by-product of cure.
- ◆ 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 AND COLORS

COLOR SUFFIX	COLOR	PACKAGING
-C	Clear	100g tube available in case of 20 333ml cartridge available in case of 10 18kg pail available 200kg drum available
-W	White	100g tube available in case of 20 333ml cartridge available in case of 10 18kg pail available 200kg drum available
-G	Gray	333ml cartridge available in case of 10
-B	Black	333ml cartridge available in case of 10 18kg pail available 200kg drum available

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