

Product Data

Non-Corrosive Silicone Adhesive Sealant TSE385

TSE385 is a one-component silicone adhesive, which cures at room temperature with moisture in the air. This product bonds to many substrates, such as metals, plastics, ceramics and glass without the use of a primer. This is an alcohol type product, which is non-corrosive to metals, including sensitive metals such as copper.

KEY FEATURES

- ◆ Non-corrosive to metals: meets MIL-A-46146B corrosion test
- ◆ Excellent adhesion and no cracks to polycarbonate without primer
- ◆ Low odor
- ◆ Primerless adhesion to many substrates
- ◆ Excellent high and low temperature resistance: from -55°C to 200°C approximately
- ◆ Excellent weatherability, ozone, and chemical resistance
- ◆ Excellent electrical insulation properties
- ◆ Simple and easy-to-use one-component system

APPLICATIONS

- ◆ Non-corrosive adhesives for Electric/Electronics parts assembly applications in Telecommunication, Auto-electronics, Home Appliances, Audio-TV Industries.
- ◆ A waterproof sealant for electrical, electronic and communication equipment
- ◆ General purpose adhesion for metals, glass, plastic, etc

TYPICAL PROPERTY DATA

(JIS K 6249)

UNCURED PROPERTIES		
Appearance		White paste
Tack free Time (23°C)	min	90
Corrosion (MIL-A-46146B)		None
CURED PROPERTIES (7days @ 23°C, 50%RH)		
Appearance		White elastic rubber
Density (23°C)	g/cm ³	1.10
Hardness (Type A)		35
Tensile strength	MPa {kgf/cm ² }	2.9 {30}
Elongation	%	390
Adhesive strength ^{*1}	MPa {kgf/cm ² }	2.0 {20}
Thermal conductivity ^{*2}	W/(m·K) {cal/(cm·s·°C)}	0.17 {4.2×10 ⁻⁴ }
Volume resistivity	MΩ·m {Ω·cm}	5.0×10 ⁷ {5.0×10 ¹⁵ }
Dielectric strength	kV/mm	22

Dielectric constant	(60Hz)	3.0
	(1kHz)	3.0
Dissipation factor	(60Hz)	0.001
	(1kHz)	0.0007
Arc resistance ^{*3}	s	101

*1: Aluminum lap shear

*2: In-house test method

*3: ASTM D 495

Typical product date values should not be used as specifications.

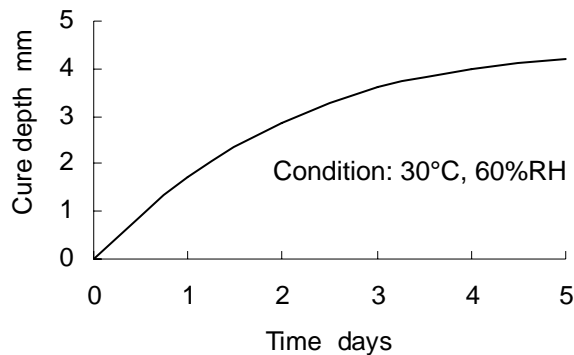
HEAT RESISTANCE

(JIS K 6249)

PROPERTIES		150°C, 7days	150°C, 30days
Hardness change		+5	+8
Tensile strength change	%	-23	-13
Elongation change	%	-10	-18

Note: Maximum continuous use temperature is 150°C

CURING PROPERTY



ADHESION PERFORMANCE

TSE385 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 substrates shows the quality of adherence of TSE385 used both with ME121, ME123, YP9341 and no primer.

SUBSTRATE	NO PRIMER	ME121	ME123	YP9341
Metals				
Copper	○	○		
Steel	○	○		
Soft steel	○	○		
Brass	○	○		
Stainless steel	○	○		
Aluminum	○	○		

Corrosion-resistant aluminum	○	○		
Galvanized sheet iron	○	○		
Tin plate	○	○		
Plastics				
Acrylic resin	○	○		
Phenolic resin	○	○		
Epoxy resin	○	○		
Polycarbonate	○	○*		
Soft polyvinyl chloride	△	△	○	
Rigid polyvinyl chloride	○	○	○	
Polyester film	○	○	○	
Unsaturated polyester	○	○		
Polyimide	○	○		
Nylon 66	○		○	○
PBT	△		○	×
PPS	△		○	○
ABS resin	○	○		
Polypropylene	×	×	×	×
Polyethylene	×	×	×	×
Fluoride resin	×	×	×	
Silicone varnish laminate	○	○		
Silicone varnish coated glass cloth	○	○		
Rubbers				
Chloroprene (CR)	△		○	
Nitril (NBR)	○		○	
Styrene butadiene (SBR)	△		○	
Ethylene propylene (EP)	△		○	
Silicone rubber	○		○	
Inorganic materials				
Glass	○	○		
Ceramic	○	○		
Woods				
Cedar	○	○		
Cypress	○	○		
Lauan	○	○		

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

*: Not recommended due to possible cracks

HANDLING AND SAFETY

- ◆ Substrate surface should be thoroughly cleaned with a suitable solvent such as alcohol, xylene, methyl ethyl ketone, etc.
- ◆ Wear eye protection and protective gloves as required while handling the product.
- ◆ Maintain adequate ventilation in the work place at all time

STORAGE

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

PACKAGING

- ◆ 100g tube available in case of 20
- ◆ 333ml cartridge available in case of 50 (5 boxes of 10 cartridge)

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FOR INDUSTRIAL USE ONLY

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