

Product Data

General Purpose Flowable Silicone Adhesive Sealant TSE388

TSE388 is a one-component, oxime cure, flowable type of silicone adhesive sealant, which cures at room temperature with moisture in the air. TSE388 has a pourable consistency and excellent adhesion to metals, plastics, ceramics, glass, etc 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
- ◆ Excellent weatherability, ozone, and chemical resistance
- ◆ Excellent electrical insulation properties
- ◆ Simple and easy-to-use, one-component system

APPLICATIONS

- ◆ A waterproof sealant, as well as potting, for electrical and communication equipment
- ◆ Air-tight sealants for meters to keep out water and dust
- ◆ Sealing and potting to equipments which require cold and heat resistance
- ◆ Coating for electronic and integrated circuits and semiconductors
- ◆ General adhesion for metals, glass, plastic, wood, etc

TYPICAL PROPERTY DATA

(JIS K 6249)

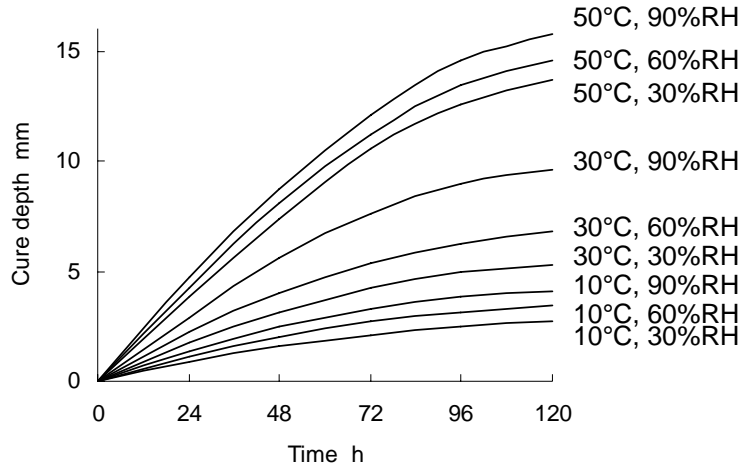
UNCURED PROPERTIES		
Appearance		Flowable liquid
Viscosity (23°C)	Pa·s {P}	10 {100}
Tack-free time (23°C)	min	60
CURED PROPERTIES (7days @ 23°C / 50%RH)		
Appearance		Elastic rubber
Density (23°C)	g/cm^3	1.04
Hardness (Type A)		16
Tensile strength	MPa {kgf/cm ² }	1.5 {15}
Elongation, %		330
Adhesive strength ^{*1}	MPa {kgf/cm ² }	1.3 {13}
Thermal conductivity ^{*2}	W/(m·K) {cal/(cm·s·°C)}	0.18 {4.4×10 ⁻⁴ }
Volume resistivity	$\Omega\cdot\text{cm}$	1.0×10 ¹⁵

Dielectric strength	kV/mm	20
Dielectric constant (60Hz)		2.8
Dissipation factor (60Hz)		0.008

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

Typical property data values should not be used as specifications.

CURING PROPERTIES



ADHESION PERFORMANCE

TSE388 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 TSE388 used with ME121, ME123, YP9341, 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

- ◆ Wear eye protection and protective gloves as required while handling the product.
- ◆ Substrate surface should be thoroughly cleaned with a suitable solvent such as Alcohol, Xylene, Methyl ethyl ketone, etc.
- ◆ This product releases methyl ethyl ketoxime vapors as a by-product of cure. 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 the children.

PACKAGING AND COLORS

COLOR SUFFIX	COLOR	PACKAGING
-G	Gray	333ml cartridge available in case of 10
-W	White	100g tube available in case of 20 333ml cartridge available in case of 10

Issued Dec. 1999/3rd revised Feb. 2006, TSE388 E

FOR INDUSTRIAL USE ONLY

It is the responsibility of the user to determine the suitability of any Momentive Performance Materials Japan product for any intended application. NEVER USE ANY MOMENTIVE PERFORMANCE MATERIALS JAPAN PRODUCT FOR IMPLANTATION OR INJECTION INTO THE HUMAN BODY. Specifications are available by contacting Momentive Performance Materials Japan. Typical property data values should not be used as specifications. Inasmuch as Momentive Performance Materials Japan LLC has no control over the use to which others may put the material, it does not guarantee that the same results as those described herein will be obtained. Each user of the material should make his own tests to determine the suitability of the material for his own particular use. Statements concerning possible or suggested uses of the materials described herein are not to be construed as constituting a license under any Momentive Performance Materials Japan patent covering use or as recommendations for use of such materials in the infringement of any patent. Material Safety Data Sheets are available upon request from Momentive Performance Materials Japan. The contents of this catalog are subject to change without notice. No part of this data may be reproduced without the prior approval of Momentive Performance Materials Japan.



Momentive Performance Materials Japan LLC

<http://www.momentive.com>

Technical Answer Center (Japan): Phone: +81-276-20-6182 FAX: +81-276-31-6259
Tokyo Head Office: Phone: +81-3-5544-3111 FAX: +81-3-5544-3122