

TSE322SK

Description

TSE322SK is a one-component heat curable silicone adhesive which cures rapidly at elevated temperatures, and adheres to a variety of substrates without the use of primers. TSE322SK has high elongation which helps absorb stress.

Key Features and Typical Benefits

- One component product - no mixing required
- Fast cure at elevated temperature
- Primerless adhesion to many types of substrates
- High elongation
- Non-corrosive to metals and sensitive substrates
- Excellent dielectric properties

Typical Physical Properties

(JIS

K 6249)

<u>Property</u>	<u>Unit</u>	<u>Value</u>
Uncured Properties		
Appearance		Semi-flowable, white
Viscosity (23 °C)	Pa·s	220
Cured Properties (cured 1 hour at 150 °C)		
Density (23 °C)	g/cm ³	1.24
Hardness (Type A)		25
Elongation	%	440
Tensile Strength	MPa	3.2
Adhesion Strength ⁽¹⁾	MPa	1.8
Dielectric Strength	kV/mm	2.6
Dielectric Constant (60Hz)		2.9
Dissipation Factor (60Hz)		0.003
Volume Resistivity	Ω·cm	5.0 x 10 ¹⁵

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

(1)PPS Lap Shear

Adhesion Performance

Suitable substrates (Cured condition: 1h @150°C)

Metal: Aluminum, Copper, Brass, Ni plated steel, Stainless Steel

Plastics: PPS, PBT, PET, Epoxy resin, Polyester

Rubber: Heat cured Silicone Rubber

Inorganics: Glass, Ceramics

Unsuitable substrates

Plastics: PP, PE, Fluorocarbon resin, Polyacetal

Rubber: RTV Silicone Rubber, Sulfur vulcanized rubber, Fluorocarbon Rubber

<Other cured condition>

Substrates	Cured condition		
	130°C 0.5h	100°C 1h	80°C 2h
Aluminum	○	○	○
Copper	○	○	○
Brass	○	○	○
Stainless steel	○	○	○
Iron	○	○	○
PPS	○	○	×
PBT	○	○	○
PET	○	○	○
Polycarbonate	○	○	○
Phenolic resin	○	○	○
Polyester Glass	○	○	○
Epoxy resin Glass	○	○	○
Noryl	○	○	○
ABS resin	○	○	○
6-Nylon	○	○	○
66-Nylon	○	○	○
Rigid polyvinyl chloride	○	○	○
Glass	○	○	○

○: Adhere completely (Cohesive failure), ×: Does not adhere

Note: Test data. Actual results may vary.

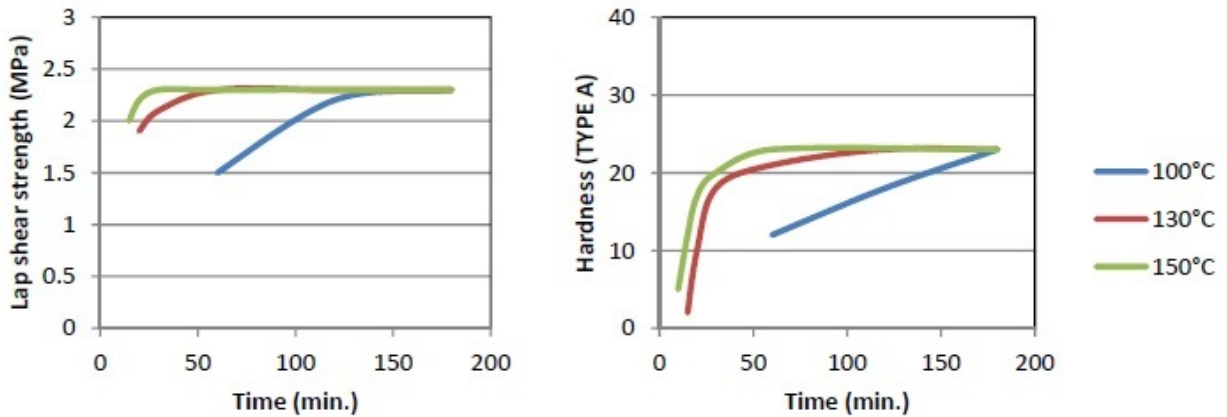
Cure Performance

Cure time (min.)		10	15	20	30	60	120	180
Aluminum lap shear strength MPa (Cohesion factor %)	100°C	NC	NC	NC	NC	1.5 (100)	2.2 (100)	2.3 (100)
	130°C	NC	NC	1.9 (100)	2.1 (100)	2.3 (100)	2.3 (100)	2.3 (100)
	150°C	NC	2 (100)	2.2 (100)	2.3 (100)	2.3 (100)	2.3 (100)	2.3 (100)
Hardness TYPE A	100°C	NC	NC	NC	NC	12	18	23
	130°C	NC	2	10	18	21	23	23
	150°C	5	12	17	20	23	23	23

NC : Non-cure

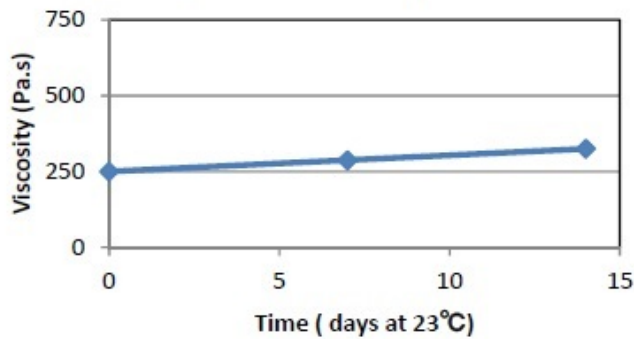
Note: Test data. Actual results may vary.

Lap Shear and Hardness



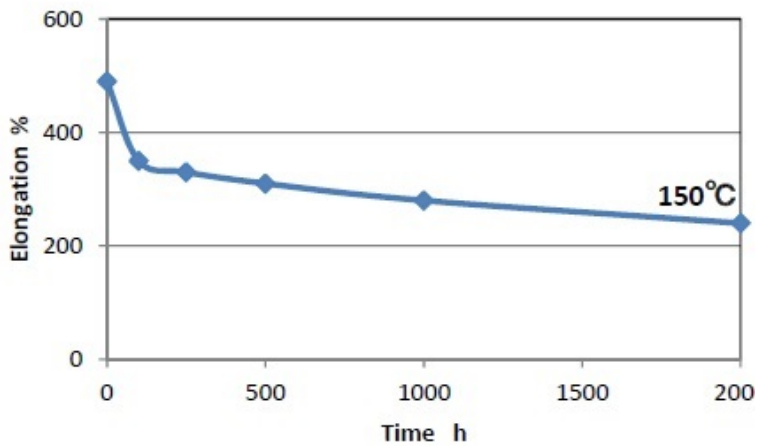
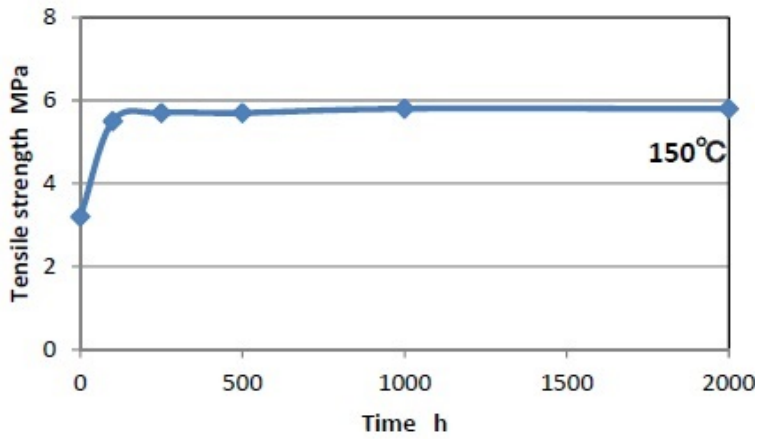
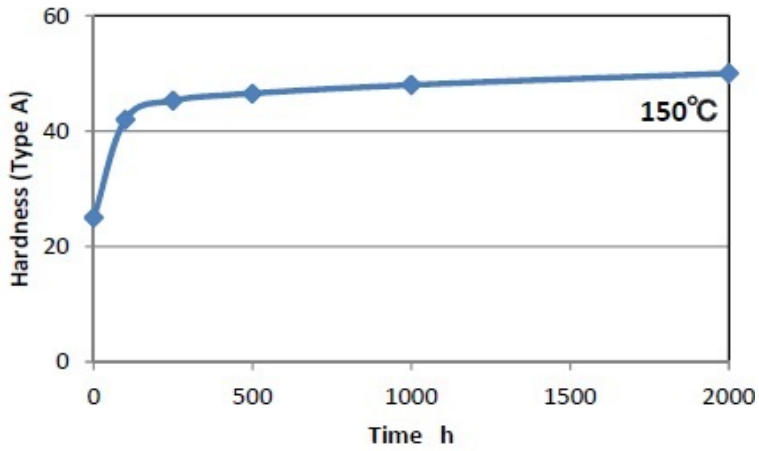
Note: Test results. Actual results may vary.

Viscosity Change at Room Temperature



Note: Test results. Actual results may vary.

Heat Resistance



Note: Test results. Actual results may vary.

Processing Recommendations Compatibility

TSE322SK silicone adhesive will cure in contact with most clean, dry surfaces. However, certain materials, such as butyl and chlorinated rubber, sulfur-containing materials, amines, and certain metal soap cured RTV silicone rubber compounds can cause cure inhibition. Cure inhibition is characterized by a gummy appearance at the interface between the adhesive and the substrate to be bonded. It is recommended that a sample patch test be performed with TSE322SK to determine substrate compatibility.

Surface Preparation

The adhesive performance of any polymer system is highly dependent upon proper surface preparation. In order to maximize the adhesion of TSE322SK and minimize the potential for cure inhibition, all parts should be as clean and dry as possible prior to the application of the adhesive.

Packaging

- 1 kg can in cases of 10
- 333 ml cartridge

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.

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Limitations

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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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