Product Data

Silicone Potting Rubber

TSE3331

TSE3331 is a two-component, heat curable silicone rubber designed for electric and electronic potting. TSE3331 cures with heat to form elastic, flame retardant rubber and adheres to various types of materials such as metals, plastics, glass and ceramics without the use of primers.

KEY FEATURES

- Convenient 1:1 mix ratio by weight
- Excellent thermal conductivity
- Low viscosity allows for excellent flowability
- Excellent adhesive properties: primerless adhesion to many types of substrates
- Flame retardant: UL94V-0 recognized (File No: E56745)
- Resistance to temperature extremes
- Non-corrosive to metal

APPLICATIONS

- Potting of electronic parts required flame retardancy
- Potting of high voltage parts
- Moistureproof coating of electronic circuit boards

TYPICAL PROPERTY DATA

(JIS K 6249)

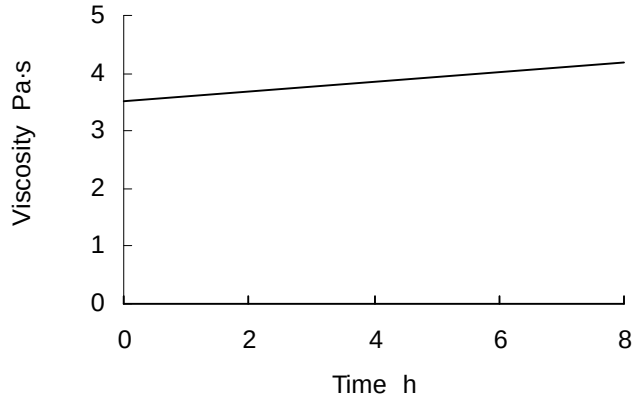
UNCURED PROPERTIES		**(A)**	**(B)**
Appearance		Black	White
Viscosity (23°C)	Pa · s {P}	4.1 {41}	3.5 {35}
Mix ratio by weight		1:1	
Viscosity after mixing (23°C)	Pa·s {P}	3.5 {35}	
Pot life (23°C)	h	8	
CURED PROPERTIES (1h @ 120°C)			
Appearance		Elastic rubber, Black	
Density (23°C)	g/cm^3	1.51	
Hardness (Type A)		60	
Tensile strength	MPa {kgf/cm^2}	2.9 {30}	
Elongation	%	50	
Adhesive strength*1	MPa {kgf/cm^2}	1.3 {13}	
Thermal conductivity*2	W/(m·K) {cal/(cm·s·°C)}	0.63 {1.50×10^{-3}}	
Linear expansion*2	1/K	1.7×10^{-4}	
Water adsorption*3 %	25°C, 24h	0.03	
	25°C, 168h	0.03	

Volume resistivity	MΩ·m {Ω·cm}	2×10^{6} {2×10^{14}}
Dielectric strength	kV/mm	26
Dielectric constant	60Hz	3.4
	1Mz	3.3
Dissipation factor	60Hz	0.017
	1Mz	0.003
Arc resistance*3	s	340

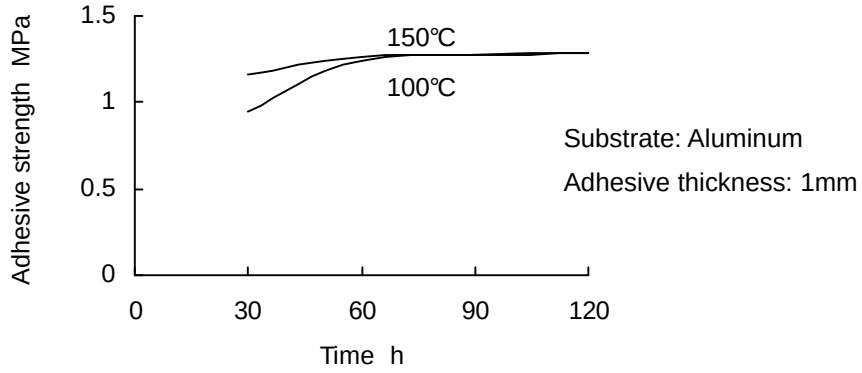
*1: Aluminum Lap Shear *2: In-house test method *3: ASTM D570 *4: ASTM D495

Typical property data values should not be used as specifications. Assistance and specifications are available by contacting GE Toshiba Silicones Commercial Office.

VISCOSITY CHANGE AFTER MIXING



CURE TEMPERATURE vs. LAP SHEAR ADHESIVE STRENGTH



ADHESION PROPERTIES

SUBSTRATE	NO PRIMER	WITH PRIMER
Aluminum	○	○
Copper	○	○
Stainless steel	○	○
Brass	○	○
Mild steel	△	○
PBT	○	○
ABS	○	○
Epoxy resin	○	○
Phenol resin	○	○
PPS	△	○
Nylon-6	△	○
Polycarbonate	×	○
Acryl resin	×	×
Melamine resin	×	○
Glass	○	○
Ceramics	○	○

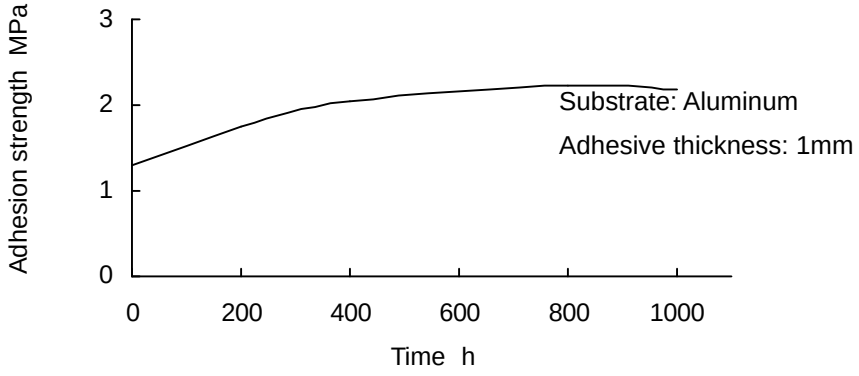
Note Cure condition: 120℃, 1h

Primer: Me153 for plastics and Me151 for others

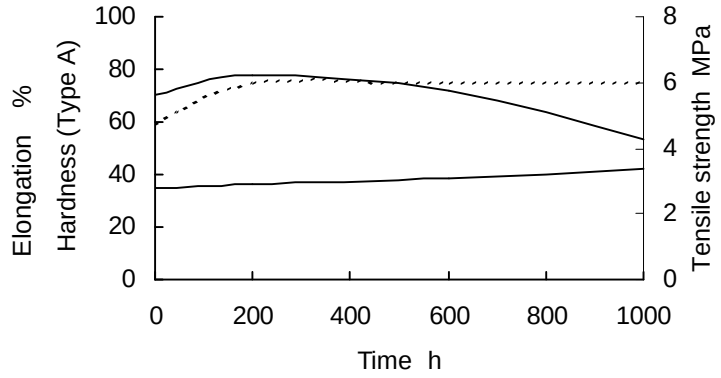
○: Cohesive failure △: Cohesive/Adhesive failure ×: Adhesive failure,

HEAT RESISTANCE

LAP SHEAR ADHESION STRENGTH (200℃)



PHYSICAL PROPERTIES (200℃)



GENERAL INSTRUCTIONS FOR USE

- Materials such as water, sulfur, nitrogen compounds, organic metallic salts, phosphorus compounds, etc. contained in the surface of the substrate can inhibit curing. A sample patch should always be conducted before proceeding to determine compatibility.
- Maintain adequate ventilation in the work place at all times.
- Wear eye protection and protective gloves as required while handling the product.

STORAGE

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

PACKAGING

TSE3331(A)

- 1kg can available in case of 10
- 2kg can available in case of 10
- 6kg can available in case of 2
- 25kg pail available

TSE3331(B)

- 1kg can available in case of 10
- 2kg can available in case of 10
- 6kg can available in case of 2
- 25kg pail available

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FOR INDUSTRIAL USE ONLY

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