

Product Data

Thermally Conductive Silicone Potting TIA208R

TIA208R is a 2-component, thermally conductive material for potting and gap filling. When cured at room temperature or quickly with heat, TIA208R cures to a thermally conductive rubber that adheres well to metal and plastic substrates without the need for primers. The flowability of TIA208R allows it to be potted and conform to complex 3-dimensional shapes and cavities, filling voids and thereby creating a thermal path to remove heat.

KEY FEATURES

- ◆ Primerless adhesion to metals and plastics
- ◆ Good thermal conductivity
- ◆ Easy to use 1:1 mixing ratio
- ◆ Cures and adheres quickly with heat or at room temperature
- ◆ Flame retardant : UL94V-0 (planned)
- ◆ UL RTI : 150°C (planned)

APPLICATIONS

- ◆ Thermal potting for power supplies, drivers in LED light bulbs, ballasts and electronic devices.

TYPICAL PROPERTY DATA

(JIS K 6249)

UNCURED PROPERTIES (23°C,50%RH)		TIA208R(A)	TIA208R(B)
Appearance		Black	Light Gray
Viscosity	Pa·s	4.0	3.8
Mixing ratio by weight		1 : 1	
Viscosity (mixed)	Pa·s	4.2	
Workable Life	min	90	
Flowable Life	min	30	
Cure Condition (Heat Cure)		70°C x 30min	
Cure Condition (Room Temperature Cure)		23°C x 24H	
CURED PROPERTIES (70°C x 30min)			
Appearance		Thermally conductive rubber, Black	
Density	g/cm ³	1.6	
Hardness (Type A)		40	
Thermal Conductivity *1	W/(m·K)	0.7	
Tensile Strength	MPa	1.6	
Lap Shear Adhesion Strength (Al)	MPa	1.5	
Lap Shear Adhesion Strength (PC)	MPa	0.9	

Volume resistivity	MΩ·m	8.0×10 ⁶
Dielectric strength	kV/mm	25
Dielectric constant (60Hz)		3.3
Dissipation factor (60Hz)		0.016
UL Flame Retardancy		V-0 (planned)
UL RTI Rating		150 (planned)

*1: Hot wire method

Typical property data values should not be used as specifications.

GENERAL INSTRUCTIONS FOR USE

- ◆ Parts A and B should each be thoroughly stirred before mixing together, as filler sedimentation may occur during storage. Stirring should be repeated for any material left standing for a period exceeding 3 weeks.
- ◆ Deaerate the mixture at 10~20mmHg for about 2 minutes to remove air entrapped during mixing. The time required to de-gas the mixture may vary depending upon the volume of material.
- ◆ Materials such as water, sulfur, nitrogen compounds, organic metallic salts, phosphorus compounds, etc. contained in the surface of the substrate can inhibit curing. It is recommended that a preliminary test be performed to determine the compatibility.

HANDLING AND SAFETY

- ◆ 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 location (recommended storage temperature <30°C) out of direct sunlight.
- ◆ Keep out of the reach of children.
- ◆

PACKAGING

- ◆ TIA208R(A) : 1.5kg can in cases of 10, 25kg pail
- ◆ TIA208R(B) : 1.5kg can in cases of 10, 25kg pail

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