

Product Data

Thermally Conductive Silicone Rubber with adhesion function

TIA219R

TIA219R is a two-component, heat curable silicone rubber designed for thermally conductive applications. TIA219R cures with heat to form an elastic, thermally conductive rubber and adheres well to various types of materials such as metals, plastics, glass and ceramics without the use of primers. TIA219R quickly cures with exposure to heat to a soft rubber that helps relieve stress on critical electronic components.

KEY FEATURES

- Soft, elastomeric rubber properties
- Convenient 1:1 mix ratio by weight
- Outstanding stress relief
- Heat accelerated or room temperature cure
- Excellent thermal conductivity
- Resistance to temperature extremes
- Primerless adhesion to many types of substrates
- Non corrosive to metal
- Low volatile
- UL 94V-0 (equivalent)

TYPICAL PROPERTIES

UNCURED PROPERTIES		TIA219R (Part A)	TIA219R (Part B)
Appearance		Gray	White
Mix ratio by weight		1 : 1	
Viscosity Part A	Pa·s	9.0	
Viscosity Part B	Pa·s	7.0	
Viscosity after mixing	Pa·s	8.0	
Work Life @ 23°C	Hours	3	
Cure Time @ RT	Hours	24	
Cure Time @ 70°C	Hours	0.5	
Cure Time @ 120°C	Hours	0.3	

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CURED PROPERTIES (30 minutes @ 70°C)		
Appearance		Gray
Density (23°C)	g/cm ³	2.70
Hardness (Type E)		50
Tensile strength	MPa	0.8
Elongation	%	100
Adhesion strength*1	MPa	0.6
Thermal conductivity*2	W/m·K	1.9
Volume resistivity	MΩ·m	4.8x10 ⁶
Dielectric strength	kV/mm	18
Volatiles (D3-10)	ppm	200

*1 Aluminum Lap Shear, *2 Bulk sample measurement (hot wire method)

Typical properties / data values - should not be used as specification.

HANDLING AND SAFETY

- 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.
- Wear eye protection when handling uncured rubber as it can irritate eyes. In case of eye contact, immediately flush eyes well with water and contact a physician.
- Maintain adequate ventilation in the work place at all times.

STORAGE

- Store in a cool, dry place out of direct sunlight & keep out of the reach of children

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