

Technical Bulletin # 3131

Product Description

RTVS 200 is a self-adhering silicone compound recognized under file E86165 and certified as UL 94V-0. It exhibits superior electrical properties and retains flexibility over a wide temperature range. RTVS 200 was specifically formulated as a potting for junction boxes used on solar panels and certified to the following values:

CTI=0

HWI=0

HAI=1

RTI=105 °C

Incline Plane – material does not track 25.4mm when tested at 2.5KV for 1 hour with system voltage rating in the 601-1000V range

Properties Uncured

	Part A	Part B	
Color, Visual:	Black	Clear	
Color Mixed:		Black	
Viscosity @ 25° C, cps:	5,000	50	ASTM D1084
Mixed Viscosity, cps:		4,000	ASTM D1084
Specific Gravity:	1.37	0.97	
Mixed Specific Gravity:		1.33	
Mix Ratio (By Weight):		100:7	
Mix Ratio (By Volume):		100:10	
Shelf Life @ 25° C, Months:		12	
Pot Life @ 25° C, Minutes:		5-10	
Gel Time @ 25° C, Minutes:		15-20	

Properties Cured : Physical

Hardness, Durometer (Shore A):	50-60	ASTM D 2240
Tensile Strength, psi	380 - 450	ASTM D 412
Tensile Elongation, %	100	ASTM D 412
Tear Strength, Die B lb./in.	25	ASTM D 624
Shrinkage, %	0.2	
Glass Transition Temperature (T _g), °C	-52	
Coefficient of Thermal Expansion, °C	20 x 10 ⁻⁵	
Thermal Conductivity, BTU (in)/(ft ²)(hr)(°F)	4.5	
Thermal Conductivity, W/m-K	0.65	
Useful Temperature Range, °C	-55 to 204	

Electrical

Dielectric Strength, volts/mil:	500	ASTM D 149
Dielectric Constant, 1 khz:	3.8	ASTM D 150
Dissipation Factor, 1 khz:	0.006	ASTM D 150
Volume Resistivity, ohm-cm:	1.0×10^{15}	ASTM D 257

Use Instructions

1. To ensure uniformity, pre-mix **RTVS 200** in its original container prior to use to incorporate any filler that may have settled.
2. Weigh out the required amount of **RTVS 200 Part A**.
3. Measure the required amount of Part B.
4. Mix thoroughly, scraping the sides and bottom of the container.
5. If void free casting is required, evacuate at 29 inches Hg until bubbles collapse and then release vacuum.
6. Pour into unit or cavity.

Cure Schedule

The silicone will cure to a tack free surface in 1 hour and develop full adhesion in 72 hours at 25C.

Allow the material to cure for 5 days at 25C prior to performing moisture testing.

Storage Requirements

The Part B is sensitive to moisture in the air. Keep Part B in a tightly closed container. Purge with dry nitrogen in automatic filling equipment to prevent pre-mature skinning of the Part B. Store material in a cool dry place.

Date 11/2011

IMPORTANT:

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HEALTH CAUTION:

Avoid breathing possible fumes, mists and vapors which can cause severe respiratory damage. Use of NIOSH approved breathing apparatus is required for more than minimal exposure. Always work in areas with adequate ventilation to allow dissipation of polyamine and other chemical fumes, and where applicable, solvent fumes. Use of goggles, protective garments, rubber gloves, protective cream is required. If material gets into eyes, flush thoroughly with clean water for twenty (20) minutes; then seek medical treatment. Avoid skin contact. Material can cause contact dermatitis. Always wash exposed areas immediately, using warm water and soap, followed by rinsing with clean water. Observe all safety precautions. It is important when using solvent based materials or solvents to keep away from open flame or ignition source.

PLEASE REFER TO MATERIAL SAFETY DATA SHEET FOR FURTHER FIRST AID INFORMATION. FOR CHEMICAL EMERGENCY, CALL CHEMTREC (DAY OR NIGHT) 800 424-9300.