



## TECHNICAL BULLETIN #3086 – RTVS 51 LOW TEMPERATURE FLEXIBILITY RTV SILICONE

Revised: 11/2019

### PRODUCT DESCRIPTION

**RTVS 51** is a low temperature flexible, easily pourable methyl phenyl RTV Silicone sealant/encapsulant. The **RTVS 51** can be used with a wide variety of curing agents, thus varying pot life, cure time, mix ratios and cure conditions **(See RTVS Catalyst Selector Guide)**.

### PROPERTIES UNCURED

COLOR, VISUAL	Buff or White	-
VISCOSITY, cps	12,000	ASTM D 1084
SPECIFIC GRAVITY	1.25	-
MIX RATIO (by weight)	0.1 to 0.5% w/CAT-2 (DBT)	-
POT LIFE @ 25°C	15 -120 min. (varies w/% of CAT 2)	-
SHelf LIFE @ 25°C	6 months	-

**PROPERTIES CURED**

PHYSICAL		
HARDNESS, DUROMETER, Shore A	50	ASTM D 2240
TENSILE STRENGTH, psi	380	ASTM D 412
TENSILE ELONGATION, %	170	ASTM D 412
TEAR STRENGTH, Die B lb/in:	25	ASTM D 624
COEFFICIENT OF THERMAL EXPANSION, °C	22x10 <sup>-5</sup>	-
LINEAR SHRINKAGE	0.2-0.6	-
USEFUL TEMPERATURE, °C	-115 to 232	-
THERMAL CONDUCTIVITY, BTU-ft/(ft <sup>2</sup> )(hr)(°F)	0.18	-
THERMAL CONDUCTIVITY, BTU-in/(ft <sup>2</sup> )(hr)(°F)	2.16	-

**ELECTRICAL**

DIELECTRIC STRENGTH, volts/mil	520	ASTM D 149
DIELECTRIC CONSTANT, 1 KHz	3.6	ASTM D 150
DISSIPATION FACTOR, 1 KHz	0.005	ASTM D 150
VOLUME RESISTIVITY, ohm-cm	2x10 <sup>14</sup>	ASTM D 257

**MIXING INSTRUCTIONS**

1. Weigh out the required amount of **RTVS 51**.
2. Measure the required amount of catalyst.  
**(See RTVS Catalyst Selector Guide).**
3. Mix thoroughly, scraping the sides and bottom of the mixing container.
4. Evacuate at 29 in. Hg for 3-4 minutes to insure a void-free casting.
5. Pour into unit or cavity.

**CURE SCHEDULE (USING 0.3% CAT-2 (DBT))**

Cure time will vary with the selection and amount of catalyst used (i.e. **CAT 2** used at 0.3% will result in a cure time of approximately 16 hours).

**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.**