



TECHNICAL BULLETIN #3077 – RTVS 27 LOW VISCOSITY RTV SILICONE. POTTING/CASTING COMPOUND

Revised: 11/2019

PRODUCT DESCRIPTION

RTVS 27 is a low viscosity UL 94V-0 Flame Retardant, general purpose, reversion resistant RTV Silicone. With the ability to cure rapidly at elevated temperature, **RTVS 27** combines the virtues of low temperature flexibility, excellent electrical properties, high temperature resistance and easy removal for component replacement or repair.

PROPERTIES UNCURED

	Part A	Part B	
COLOR, VISUAL	Dark Gray	Buff (Neutral)	-
VISCOSITY, cps	3,000	2,800	ASTM D 1084
SPECIFIC GRAVITY	1.50	1.50	-
MIX RATIO (by weight or volume)	1:1		-
MIXED VISCOSITY, cps	2,900		ASTM D 1084
POT LIFE @ 25°C, hours	1-1.5		-
SHELF LIFE @ 25°C, months	12		-

PROPERTIES CURED

PHYSICAL		
HARDNESS, DUROMETER, Shore A	60	ASTM D 2240
TENSILE STRENGTH, psi	500	ASTM D 412
TENSILE ELONGATION, %	135	ASTM D 412
TEAR STRENGTH, Die B lb/in	18	ASTM D 624
COEFFICIENT OF THERMAL EXPANSION, °C	22.0x10 ⁻⁵	-
THERMAL CONDUCTIVITY, W/m °K	0.31	-
THERMAL CONDUCTIVITY, BTU-in/(ft ²)(hr)(°F)	2.16	-
SERVICE TEMPERATURE, °C	-55 to +204	-

ELECTRICAL

DIELECTRIC STRENGTH, volts/mil	500	ASTM D 149
DIELECTRIC CONSTANT, 1 KHz	3.0	ASTM D 150
DISSIPATION FACTOR, 1 KHz	0.004	ASTM D 150
VOLUME RESISTIVITY, ohm-cm	1.0x10 ¹⁵	ASTM D 257

MIXING INSTRUCTIONS

1. Premix **RTVS 27** Part A and Part B in original containers before withdrawing any material. Some light, but soft settling will occur which readily redisperses.
2. Measure equal portions, either weight or volume, of Part A and Part B.
3. Mix thoroughly, scraping both the bottom and the sides of mixing container.
4. Evacuate the mixture at 29 in. Hg for 3-4 minutes for void-free castings.
5. Pour into unit or mold.

CURE SCHEDULE

Overnight at room temperature (24 hours at 25°C.), **OR**,
 4 hours at 60°C., **OR**,
 1 hour at 90°C., **OR**,
 15 minutes at 120°C.

SPECIAL NOTES

Certain materials may inhibit the cure of **RTVS 27** when placed in contact with the mixed, uncured rubber. Materials such as amines and amine cured epoxies, sulfur containing materials and condensation (tin cured) silicones, are some which may cause inhibition. Even surfaces which have been in contact with such materials may cause it. If in doubt, a patch test should be done.

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.