



TECHNICAL BULLETIN #3078 – RTVS 27 HTC LOW VISCOSITY THERMALLY CONDUCTIVE POTTING COMPOUND

Revised: 05/2018

PRODUCT DESCRIPTION

RTVS 27 HTC is a low viscosity, UL94V-0 certified, reversion resistant silicone compound. The combination of low viscosity and high thermal conductivity makes the **RTVS 27 HTC** ideal for potting dense component packages requiring heat dissipation.

PROPERTIES UNCURED

| | Part A | Part B | |
|---------------------------------|--------|---------|-------------|
| COLOR, VISUAL | Gray | Neutral | - |
| VISCOSITY, cps | 8,000 | 3,300 | ASTM D 1084 |
| SPECIFIC GRAVITY | 1.98 | 1.96 | - |
| MIX RATIO (by weight or volume) | 1:1 | | - |
| MIXED VISCOSITY, cps | 6,000 | | ASTM D 1084 |
| POT LIFE @ 25°C, hours | 1 | | - |
| SHELF LIFE @ 25°C, months | 6 | | - |

PROPERTIES CURED

| PHYSICAL | | |
|--------------------------------------|-----------------------|-------------|
| HARDNESS, DUROMETER, Shore A | 60 | ASTM D 2240 |
| TENSILE STRENGTH, psi | 500 | ASTM D 412 |
| TENSILE ELONGATION, % | 60 | ASTM D 412 |
| COEFFICIENT OF THERMAL EXPANSION, °C | 17.0x10 ⁻⁵ | - |
| THERMAL CONDUCTIVITY, W/m °K | 1.0 | - |
| FLAMMABILITY UL94V-0 | Passes | - |
| SERVICE TEMPERATURE, °C | -55 to +232 | - |

ELECTRICAL

| | | |
|--------------------------------|--------------------|------------|
| DIELECTRIC STRENGTH, volts/mil | 500 | ASTM D 149 |
| DIELECTRIC CONSTANT, 1 KHz | 4.0 | ASTM D 150 |
| DISSIPATION FACTOR, 1 KHz | 0.0075 | ASTM D 150 |
| VOLUME RESISTIVITY, ohm-cm | 1x10 ¹⁵ | ASTM D 257 |

MIXING INSTRUCTIONS

1. Premix **RTVS 27 HTC** 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,
 2 hours at 60°C, or
 30 min. at 95°C, or
 15 minutes at 120°C

STORAGE REQUIREMENTS

Store at room temperature. This product may settle upon shipment or storage. The product should be re-mixed well prior to use. Store material in a cool dry place.

SPECIAL NOTES

Certain materials may inhibit the cure of **RTVS 27 HTC** 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.