

General Purpose RTV Silicone Potting Compound

Technical Bulletin # 3095

Product Description

INSULCAST RTVS 12 is a multi-purpose compound designed for use as an encapsulant, sealant, potting and mold making material. **RTVS 12** exhibits excellent electrical properties, low temperature flexibility and high temperature stability.

Properties Uncured

| | Part A | |
|----------------------------------|--------------------------|-------------|
| COLOR, VISUAL: | Pink | |
| VISCOSITY @ 25°C, cps: | 15000 | ASTM D 1084 |
| SPECIFIC GRAVITY: | 1.33 | |
| MIX RATIO (by wt.): | 0.1 to 0.5 % CAT 2 (DBT) | |
| MIXED VISCOSITY, cps: | Varies with % of CAT-2 | |
| SHELF LIFE @ 25°C, months: | 6 | |
| POT LIFE (100 gr.) @ 25°C, mins: | 15 to 120 | |

Properties Cured

PHYSICAL

| | | |
|--|---------------------|-------------|
| HARDNESS, DUROMETER (Shore A): | 47 | ASTM D 2240 |
| TENSILE STRENGTH, psi: | 450 | ASTM D 412 |
| TENSILE ELONGATION, %: | 175 | ASTM D 412 |
| COMPRESSIVE STRENGTH, psi: | | |
| SHRINKAGE, % | 0.2-0.6 | |
| TEAR STRENGTH, Die B lb/in : | 25 | ASTM D 624 |
| COEFFICIENT OF THERMAL EXPANSION, °C: | 21×10^{-5} | |
| THERMAL CONDUCTIVITY, BTU-in/(ft ²)(hr)(°F): | 2.16 | |
| THERMAL CONDUCTIVITY, W/m °K: | 0.311 | |
| HEAT DISTORTION POINT, °C: | | |
| SERVICE TEMPERATURE, °C: | -55 to + 204 | |

Electrical

| | | |
|---------------------------------|----------------------|------------|
| DIELECTRIC STRENGTH, volts/mil: | 500 | ASTM D 149 |
| DIELECTRIC CONSTANT, 1 KHz: | 3.4 | ASTM D 150 |
| DISSIPATION FACTOR, 1 KHz: | 0.02 | ASTM D 150 |
| VOLUME RESISTIVITY, ohm-cm: | 1.0×10^{15} | ASTM D 257 |

Use Instructions

1. Weigh out the required amount of RTVS 12.
2. Measure the required amount of catalyst. See **RTVS Catalyst Selector Guide**.
3. Mix thoroughly, scraping both the bottom and sides of the mixing container.
4. Evacuate mixture @29 in Hg for 3-4 minutes to insure a void-free casting.

Cure Schedule**USING 0.3% CAT 2 (DBT):**

Overnight at room temperature (24 hours at 25°C).

Storage Requirements

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 12** 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.

Date 05/2010**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.