

INSULCAST RTVS 200

Junction Box Potting Material



**Specifically
Engineered to
Meet the Demands
Placed on Solar
Panel Junction Box
Potting Material**

RTVS 200 is a self-adhering silicone compound that meets the requirements of Underwriters Laboratories' UL 94V-0 flame classification. 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.



Key Product Benefits

- Primerless Adhesion
- Fast Curing
- Room Temperature Cure
- No Cure Inhibition
- UL 94V-0 Certified
- Low Viscosity
- Convenient 10:1 Mix Ratio
- Superior Dielectric Strength
- Flexible Over Wide Temperature Range
- Low CTE

For samples, technical advice or a distributor near you call:
800.645.7546 or 215.855.8450. www.insulcast.com

INSULCAST[®]
ENCAPSULANTS, POTTING MATERIALS & SILICONE GREASES

RTV SILICONE COMPOUND - PRIMERLESS ADHESION

Technical Bulletin # 3131

Product Description

RTVS 200 is a self-adhering silicone compound that meets the requirements of Underwriters Laboratories' UL 94V-0 flame classification. 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.

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 | |
| Flammability, UL 94V-0 | Passes | |
| 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 |
|---------------------------------|-----|------------|

ITW POLYMER TECHNOLOGIES

130 Commerce Drive • Montgomeryville, PA 18936 • 215-855-8450 • Fax 215-855-4688



ITW Philadelphia Route
Registered to ISO 9001:2000
File No. A3799



ITW Performance Polymers Europe
ISO 9001:2000
Q 05420

| | | |
|-----------------------------|----------------------|------------|
| 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 02/2011

IMPORTANT:

The following supersedes any provision in your company's forms, letters and papers. AMERICAN SAFETY TECHNOLOGIES makes NO WARRANTY, WHETHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE FOR THIS PRODUCT. No statements or recommendations contained in the product literature are to be construed as inducements to infringe any relevant patent, now or thereafter in existence. UNDER NO CIRCUMSTANCES SHALL AMERICAN SAFETY TECHNOLOGIES BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR OTHER DAMAGES FROM ALLEGED NEGLIGENCE, BREACH OF WARRANTY, STRICT LIABILITY OR ANY OTHER THEORY, ARISING OUT OF THE USE OR HANDLING OF THIS PRODUCT. The sole liability of AMERICAN SAFETY TECHNOLOGIES for any claims arising out of the manufacture, use or sale of its products shall be to refund the buyer's purchase price, provided such products have been demonstrated in AMERICAN SAFETY TECHNOLOGIES sole opinion, to justify such refund.

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.