

RTV SILICONE

INDUSTRIAL GRADE - RTV 100% ACETOXY SILICONE SEALANT TECHNICAL DATA SHEET

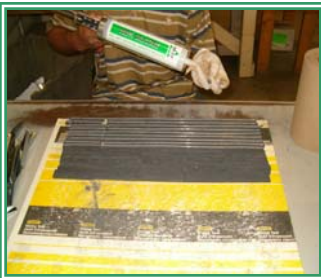
PRODUCT FEATURES

- Great Adhesion
- Non Sag
- Smooth Consistency
- Excellent Weather, Ozone & Chemical Resistance
- Long Life Reliability
- Mildew Resistant
- Low Temperature Flexibility
- High Temperature Performance
- Meets FDA Regulation No. 21 CFR 177.2600
- Meets Federal Spec TT-S-00230C
- NSF Standard 51
- MIL-A-46106A, Amend. 2
- ASTM C-920

Product Description

Industrial Grade 100% Silicone Adhesive Sealant is a paste-like, one component material which cures to a tough rubbery solid when exposed to moisture in the air. Since it will not flow of its own weight, this sealant can be applied overhead or on sidewall joints and surfaces without sagging, slumping or running off. It will adhere to clean metal, glass, most types of wood, silicone resins, vulcanized silicone rubber, ceramic, natural and synthetic fiber, as well as painted and many plastic surfaces.

Industrial Grade 100% Silicone has good resistance to weathering, vibration, moisture, ozone and extreme temperatures. It may be applied in sub-zero weather without loss of extrusion or physical property characteristics. Fully cured **100% Silicone** can be used for extended periods at temperatures up to 450°F (232°C), and for shorter periods as high as 500°F (260°C). Test have shown that even after two months at 450°F (232°C), or up to one week at 500° (260°C), the sealant remains rubbery.



Typical Uncured Properties	Industrial Grade Silicone
Color	Translucent, Clear
Consistency	Soft, Spreadable paste
Specific Gravity	1.04
Application Rate, g/min	410
Tack-Free time, minutes	25
Typical Cured Properties	Industrial Grade Silicone
Mechanical:	
Hardness, Shore A	23
Tensile Strength, kg/cm ² (lb/in ²)	20.6 (300)
Elongation, %	450
Shear Adhesion, kg/cm ² (1b/in ²) ⁽¹⁾	10.8 (150)
Peel Adhesion, kg/cm (1b/in) ⁽²⁾	6.6 (37)
Electrical:	
Dielectric Strength, kv/mm(v/mil)	20 (500)
Dielectric Constant @ 60 Hz	2.9
Dissipation Factor @ 60 Hz	0.0026
Volume Resistivity, ohm-cm	2.5 x 10 ¹⁴ (1)

⁽¹⁾ At 100% cohesive failure

⁽²⁾ To anodized aluminum

Application Procedures

APPLYING THE MATERIAL:

TACK-FREE-TIME

INDUSTRIAL GRADE 100% SILICONE Adhesive Sealant is supplied ready-to-use. Under pressure it flows readily from its container. The paste-like consistency makes it easy to work; a spatula or wooden paddle can be used for tooling the surface.

The cure progresses inward from the surface. At conditions of at least 75°F (24°C) and 50% relative humidity, the sealant forms a tack-free skin within 20 minutes. Tooling is not practical after this skin begins forming and should be completed within 5 to 10 minutes of application, even though this may require alternate periods of applying and tooling. Likewise, if masking tape has been used to mark off the area, it should be removed before the tack-free skin forms.

Cure Time

Cure time is affected by relative humidity, degree of confinement and cross-sectional thickness of the sealant. Sections up to 1/8" thick become rubbery solids in approximately 24 hours at room temperature and 20% relative humidity. Less moisture content reduces it slightly.

In applications where **100% Silicone** RTV silicone sealant may be partly or totally confined during cure, the time required for proper cure is generally lengthened by the degree of confinement. It is possible, with absolute confinement, that the cure will not be completed. The result is the softening of the sealant at elevated temperatures. Metal-to-metal bonds should not overlap more than one inch. Every application involving confinement during cure should be thoroughly tested before commercialization.

Curing time increases with the thickness of the sealant. A 1/2" cross-section, for example, may require 3 or 4 days for complete solidification. However, the cure will have penetrated the outer 1/8" in about 24 hours. After 72 hours at room temperature, sealant adheres to glass, metal and most woods. The odor given off during cure is due to the liberation of acetic acid. This odor disappears as the cure progresses, and is not detectable after the cure is complete.

Bonding

1. Thoroughly clean and degrease metal and plastic surfaces, then rinse all surfaces, except plastic, with acetone. Rubber surfaces should be roughened with sandpaper, and then wiped with acetone. Follow the precautions given on solvent container label.
2. For Stronger, more uniform bonds, apply a thin film of A-120 prime coat to all surfaces except rubber and silicone rubber. Allow to air-dry for 30 to 45 minutes at room temperature. (Full instructions are provided with the prime coat) **Caution:** A-120 prime coat is flammable and has no FDA status. Keep away from heat and open flames. Use only with adequate ventilation.
3. Apply **100% Silicone** to the prepared surface in a uniform thickness. Best adhesion is obtained with a 15 to 30 mil glue line. In those cases where the adhesive is used between surfaces, put the second surface in place, using enough pressure to displace the air but not the adhesive.
4. Let the unit stand undisturbed at room temperature to cure.

Sealing

Using **100% Silicone** in sealing applications follows approximately the same step-by-step procedures as outlined for bonding applications. After preparing the surface and priming where required, the sealant is applied by forcing it into the joint or seam to obtain full contact between sealant and surfaces.

FDA STATUS – Industrial Grade Silicone can be used in food contact applications when FDA regulations apply. Contact your Flame Tech Inc. sales representative to refer to publication no. (4319) "Food Contact Applications, Silicone Rubber Compounds" for specific regulations, limitations and conditions of use.

USDA STATUS – Industrial Grade Silicone may be used on equipment which may contact edible products in official establishments operating under the Federal Meat and Poultry Products Inspection Program. Contact your Flame Tech Inc. sales representative to refer to publication no. (4319): "Food Contact Applications, Silicone Rubber Compounds" for specific details.

NSF INTERNATIONAL STATUS

Industrial Grade Silicone meets NSF International Standard No. 51 (Plastic Materials and Components for Use in Food Equipment), as satisfactory for use on food contact surfaces.

Limitations:

Structural silicone glazing

Joints where physical abuse or abrasion is likely to be encountered

Prolonged water immersion

Porous surfaces, such as masonry

Building materials that might bleed oils, plasticizers or solvents – materials such as impregnated wood, oil-based caulks, green or partially vulcanized rubber gaskets or tapes

Totally confined spaces, because the sealant requires atmospheric moisture for cure

Surfaces sensitive to corrosion by acetic acid vapors (a byproduct of sealant cure)

Surfaces that will be painted (paint will not stretch with the extensions of the sealant and may crack and peel); complete all painting prior to using sealant

Bonding to secondary seal of insulating glass units sealed with two-part silicone sealants

This product is neither tested nor represented as suitable for medical or pharmaceutical uses

Shelf Life and Storage:

When stored in the original unopened container at or below 90°F, and above freezing, **100% Silicone** has a shelf life of 12 months from the date of shipment. Containers should always be kept sealed when not in use. Ensure stock is rotated.

Keep away from children!!!

Packaging

Part#:	Description	Pack
STI-RTV 100C	100% Silicone Industrial Grade 10.3 oz tube- Clear	12 tubes / Case
STI-RTV 100W	100% Silicone Industrial Grade 10.3 oz tube- White	12 tubes / Case
STI-RTV 100B	100% Silicone Industrial Grade 10.3 oz tube- Black	12 tubes / Case
STI-RTV 100A	100% Silicone Industrial Grade 10.3 oz tube- Aluminum	12 tubes / Case
STI-RTV 100MR	100% Silicone Industrial Grade 10.3 oz tube- Mildew Resistant Clear	12 tubes / Case

Legal Disclaimer

The information contained herein is offered in good faith based on research and is believed to be accurate. However, because conditions and methods or use of our products are beyond our control, this information shall not be used in substitution for customer's tests to ensure that Flame Tech Inc. products are fully satisfactory for your specific applications. Our sole warranty is that the product will meet its current sales specifications. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted. Flame Tech Inc. specifically disclaims any other express or implied warranty of fitness for a particular purpose or merchantability unless Flame Tech Inc. provides you with a specific, duly signed endorsement of fitness for use. Flame Tech Inc. disclaims liability for any incidental or consequential damages. Suggestions of use should not be taken as inducements to infringe any particular patent.

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