

# ADHESIVE



## FLX 110 Acetoxy RTV 100% Silicone Rubber

Meets MIL- A-46106A Type I

### TYPICAL PROPERTIES

#### Uncured

Color .....	clear
Specific Gravity at 77°F (25°C) .....	1.04
Extrusion Rate (1/8" orifice, 90 psi), gms/min .....	.350
Flow Rate (sag or slump on 1/8" X 4" bead), in. ....	NIL
Tack-Free Time at 77°F (25°C) and 50% RH, min. ....	10-20
Cure Time at 77°F (25°C) and 50% RH (1/8" thick), hrs .....	.24

#### Cured – Physical

ASTM D 676 Durometer Hardness, Shore A, points .....	30
ASTM D 412 Tensile Strength, psi (MPa) .....	350
ASTM D 412 Elongation, % .....	500
ASTM D 746 Brittle Point, degrees .....	-100°F (-73°C)
ASTM D 2137A Volume Coefficient of Thermal Expansion, 32°F to 212°F (0°C 100°C) .....	9.3 X 10 <sup>-4</sup>
Thermal Conductivity, cal/(cm) (degree C), (sec) .....	0.45 X 10 <sup>-3</sup>
BTU per (ft) (degrees F) (hr) .....	0.11

#### Cured †– Electrical

ASTM D 257 Volume Resistivity, ohm-cm .....	1.5 X 10 <sup>15</sup>
ASTM D 149 Dielectric Strength, **volts/mil .....	.550
ASTM D 150 Dielectric Constant,	
at 60 Hz .....	2.8
at 100 Hz .....	2.8
at 100 kHz .....	2.8
ASTM D 150 Dissipation Factor,	
at 60 Hz .....	0.0015
at 100 Hz .....	0.0015
at 100 kHz .....	0.0015

\*Information on this data sheet is subject to change without notice and should not be used for writing specifications.

### DESCRIPTION

**FLX 110 RTV 100% Silicone Rubber** adhesive/sealant is a paste-like, one component material which cures to a tough, rubbery solid seal 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.

**RTV 100% Silicone Rubber** has good resistance to weathering, vibration, moisture, ozone and extreme temperatures. It may be applied in subzero weather without loss of extrusion or physical property characteristics. Fully cured **RTV 100% Silicone Rubber** 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°F (260°C), the sealant remains rubbery.

**RTV 100% Silicone Rubber** is available in a variety of colors including clear, white, black, aluminum, almond and bronze.

### USES

- Sealing windows in oven doors and flues on gas appliances, flanged pipe joints and access doors
- Adhering auto and appliance trim, including metal, fabric and fabric-backed plastics
- Sealing trailers, truck cabs
- Filleting and caulking joints in sheet metal stacks, ductwork, and equipment housings
- Bonding gaskets in heating and refrigeration units
- Sealing of marine cabins and windows
- Anti-abrasion coating
- Bonding signs and sign letters
- Attaching screwless brackets or nameplates and tacking plastic materials to metal
- Formed-in-place gasket for gearboxes, compressors, pumps

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## HOW TO USE

### **Applying the Material: Tack-Free Time**

RTV 100% Silicone Sealant is supplied ready-to-use. Under pressure it flows readily from its container. The pastelike 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 about 24 hours at room temperature and 20 percent relative humidity. Less moisture content reduces it slightly. In 24 hours, sections up to 1/8" thick cure to a rubber with a Shore A durometer hardness rating of about 25 points. After 3 days at room temperature, this durometer hardness levels off to about 30 points. In applications where 100% 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 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. **RTV 100% Silicone Rubber** has a typical peel strength of 20 pounds per inch. 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. Apply **RTV 100% Silicone Rubber** 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.
3. Let the unit stand undisturbed at room temperature to cure.

### **Sealing**

Using **RTV 100% Silicone Rubber** 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.

## SPECIFICATIONS

### **RTV 100% Silicone Rubber meets performance requirements for the following:**

FDA/USDA requirements for use in establishments operating under Federal Meat and Poultry Inspection Program. When cured and washed, ingredients remaining or which could migrate to food are listed on FDA Regulation No. 21 CFR177.2600. Meets Federal Specifications TTS-00230C, ASTM C-920, MIL-A-46106A, Amend. 2, type 1 and NSF Standard 51.

**UL Recognized:** **RTV 100% Silicone Rubber** is recognized for service to 302°F (150°C) where elongation is not essential.

### **CAUTION**

DIRECT CONTACT OF UNCURED SEALANT IRRITATES EYES AND MAY IRRITATE SKIN. OVEREXPOSURE TO VAPOR MAY IRRITATE EYES, NOSE, AND THROAT. Avoid eye and skin contact. Use with adequate ventilation. Do not handle contact lenses with sealant on hands. IN CASE OF EYE CONTACT, flush eyes with water for 15 minutes. Obtain medical attention. IN CASE OF SKIN CONTACT, remove from skin and flush with water. Sealant releases acetic acid (vinegar-like odor) during cure. KEEP OUT OF THE REACH OF CHILDREN.

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## SHIPPING LIMITATIONS

None.

## STORAGE AND SHELF LIFE

When stored in original unopened container at or below 90°F (32°C), 100% RTV Silicone Sealant has a shelf life of 12 months from date of shipment. Containers should always be kept sealed when not in use. After a container has been opened and the entire contents have not been used, extrude 3/8" of material past nozzle opening. When ready to use pull out cured plug. Sealant is ready to use.

## USERS PLEASE READ

The information and data contained herein is believed to be accurate and reliable; however, it is the user's responsibility to determine suitability of use. Since the supplier cannot know all the uses, or the conditions of use to which these products may be exposed, no warranties concerning the fitness or suitability for a particular use or purpose are made. It is the user's responsibility to thoroughly test any proposed use of our products and independently conclude satisfactory performance in the application. Likewise, if the application, product specifications or manner in which our products are used requires government approval or clearance, it is the sole responsibility of the user to obtain sure authorization. The supplier warrants only that its products will meet its specifications. There is no warranty of merchantability or fitness for use, nor any other express or implied warranty. The users exclusive remedy and the supplier's sole liability is limited to refund of the purchase price or replacement of any product shown to be otherwise than as warranted. The supplier will not be liable for incidental or consequential damages of any kind. Suggestions of uses should not be taken as inducements to infringe any patents.