

High Temperature RTV Silicone



DESCRIPTION

PFC700RED one-component, ready-to-use silicone adhesive sealant has a paste-like consistency and cures to silicone rubber on exposure to atmospheric moisture at room temperature. It has a maximum continuous operating temperature of 500°F (260°C) and a maximum intermittent operating temperature of 600°F (315°C). Because this paste-consistency product will flow only with external pressure, it may be applied to horizontal, vertical and overhead surfaces in thicknesses up to 1/4" (6mm). It has sufficient uncured body to adhere small objects while cure is taking place. PFC700RED adhesive sealant utilizes a moisture vapor cure system and releases acetic acid vapors from the sealant surface as a by-product of cure.

MODEL NUMBER

PFC700RED 10.1 oz cartridge

PROMINENT FEATURES

- -75°F to 500°F (-60°C to 260°C) continuous operating temperature range
- One-component
- Thixotropic paste-consistency
- Room temperature cure
- Excellent electrical insulation properties
- Excellent resistance to weather, ozone, UV and chemicals

BASIC USES

The paste-like consistency of PFC700RED adhesive sealant makes it ideally suited for application to vertical and overhead surfaces where use of pourable self-leveling sealants would not be practical. This paste-consistency silicone sealant may be used in thicknesses up to 1/4" (6mm) for bonding and sealing, joining metals and plastics, and electrical insulation.

COVERAGE

A 1/8" X 1/4" bead will yield approximately 50 linear feet of sealant per 10.1 oz cartridge.

CALIFORNIA PROP 65 WARNING: This product may contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. **Wash Hands After Handling.**

SURFACE PREPARATION

PFC700RED adhesive sealant will bond to many clean surfaces. These surfaces typically include many metals, glass, ceramic, silicone rubber and some rigid plastics. This silicone adhesive sealant will also produce fair bonds to organic rubber and to some flexible plastics not containing fugitive plasticizers (which migrate to the surface impairing adhesion). An evaluation should be made to determine bond strength for each specific application. For difficult-to-bond substrates, use of a primer is suggested. GE Silicones primers such as SS4004, SS4044 and SS4179, are recommended for use with this adhesive sealant. If the evaluation of PFC700RED indicates that greater adhesion levels are required, GE Silicones RTV106 sealant should be considered. Complete information with usage instructions for primers and RTV products are contained in separate product data sheets. For optimum adhesion, surfaces should be thoroughly cleaned with a suitable solvent to remove dirt, oil and grease. The surface should be wiped dry before applying the silicone sealant. When solvents are used, proper safety precautions must be observed. All solvents must be considered toxic and must be used only in well ventilated areas. Exposure to high vapor concentration must be avoided. When flammable solvents are used, storage, mixing and use must be in areas away from heat, sparks, open flames or other sources of ignition.

SPECIFICATIONS

PROFLO PFC700RED silicone RTV sealant meets the following specifications:

- FED TT-S-00230C
- FED TT-S-001543A
- ASTM C-920
- UL94 HB
- NSF Standard 51
- FDA - 21 CFR 177.2600



PACKAGING AND DISPENSING

PFC700RED silicone adhesive sealant is supplied ready-to-use in collapsible aluminum squeeze tubes, caulking cartridges, and in bulk containers. Collapsible aluminum tubes may be squeezed by hand or with the aid of mechanical wringers which allow more complete removal of material from the tube. Air-operated dispensing guns may also be used with aluminum tubes and offer the advantages of improved control and faster application for production line use. Adhesive sealants may be dispensed from caulking cartridges using simple mechanical caulking guns or air operated guns. Air-operated guns will allow greater control and application speed. Both tubes and cartridges are easy to use, can be put into production quickly and require minimum capital investment.

Bulk containers require a larger initial investment in dispensing equipment, but offer economical packaging for volume production. Bulk dispensing systems are air-operated extrusion pumps coupled to hand or automated dispensing units. Pumps which are specifically designed for pumping one component RTV silicone rubber have TEFLON® seals, packings and TEFLON® lined hoses to prevent moisture permeation and pump cure problems. Specific details on dispensing systems and manufacturers are available in a separate GE RTV Silicone Rubber Equipment Guide (1541). Note: Do not exceed 45 psig when using air-powered caulking guns.



CAUTION!
DO NOT TAKE INTERNALLY.
KEEP OUT OF REACH OF CHILDREN.
KEEP FROM FREEZING.

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PROFLO PFC700RED silicone adhesive sealant may be applied directly to the clean (or primed) substrate. Where broad surfaces are to be mated, the adhesive sealant should be applied in a thin, less than 1/4" (6mm) diameter, bead or ribbon around the edge of the surface to be bonded. The cure process begins with the formation of a skin on the exposed surface of the adhesive sealant and progresses inward through the material. At 77°F (25°C) and 50% relative humidity, these products will form a surface skin which is typically tack-free to the touch in about 30 minutes. Once the tack-free skin has begun to form, further tooling of the silicone adhesive is not advisable. High temperatures and high humidity will accelerate the cure process low temperatures and low humidity will slow the cure rate. As the silicone adhesive sealant cures, acetic acid vapors are released from the adhesive sealant surface. The odor of acetic acid will disappear when the cure is completed. In addition to the effects of temperature and relative humidity, development of maximum physical properties will depend on joint configuration, degree of confinement, sealant thickness and substrate porosity. A 1/8" (3mm) section of silicone adhesive sealant will cure through in approximately 24 hours at 77°F (25°C), and 50% relative humidity. Since cure time increases with thickness, use of PFC700RED silicone adhesive sealant should be limited to thicknesses of 1/4" (6mm) or less. Normally, sufficient strength will develop in 12 to 24 hours to permit handling of parts. Minimum stress should be applied to the silicone sealant until full physical properties are developed.

CLEAN UP AND REMOVAL

Before cure, solvent systems such as naphtha or methyl ethyl ketone (MEK) are most effective. Refer to solvent use warning in the section on surface preparation. After cure, selected chemical strippers which will remove the silicone rubber are available from other manufacturers. Specific product information may be obtained on request.

STORAGE AND WARRANTY PERIOD

The warranty period for PFC700RED adhesive sealant is 12 months from date of shipment if stored in the original unopened container at or below 80°F (27°C). If, when applied as directed, this material peels, cracks or separates, it will

be replaced without charge upon presentation of proof of purchase and this used cartridge. This limited warranty applies only to residential use and damages, including consequential damage and other remedies, are excluded. No other warranties apply, including fitness for particular purpose.

Typical Properties - Supplied	Test method	PFC600
Tooling time	Lab value	15 min.
% solids by weight	Lab value +/- 1%	100
% solids by volume	Lab value	100
Viscosity	Semco - 1/8" orific	450 grams/min.
Specific Gravity (water = 1)		1.04
Physical Form	Observation	Paste
Color	Observation	Red
Odor	Subjective	Acetic acid
Tack free time in minutes	ASTM D2377	30 min.
Paint Over Time		Not Paintable
Full Cure Time		24 hours
Freeze/Thaw Stability	C731	Will Not Freeze
Temperature Application Range		40°F to 120°F
Volatile Organic Content Weight %	Calculated	CARB Chem. Curing (n.a.) < 3.0 wt. %
VOC excl. H2O (G/L)		20.00
Flash Point	Estimated	not applicable
Shelf life		24 month
Typical Properties - Cured		
Joint Movement Capability	N/A	+/-25%
Temperature Service Range (after cure)		-75°F to 500°F
Slump inch.	ASTM D2202	NONE
Durometer hardness	ASTM D2240	22
Paintable		Latex & Oil Based
Cleanup		Water
Typical Properties (Silicone Only) - Cured		
Tensile Strength		255
Elongation		365

ALT CODE (OLD)
PFC700RED (PFL300)



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