



PSI-601 Acetoxy Silicone Sealant and PSI-601 FG Food Grade Acetoxy Silicone Sealant

Product description

PSI-601 and PSI-601 FG are one-part, RTV silicone sealants that cure by atmospheric moisture to a durable, flexible rubber with excellent adhesion to many surfaces, including glass, metal, wood, ceramic, porcelain, rubber, and some plastics. PSI-601 and PSI-601 FG may be factory or field applied to form a long-lasting seal resistant to the effects of rain, snow, ultraviolet radiation, ozone, sunlight and temperature extremes.

Basic uses

PSI-601 and PSI-601 FG exhibit excellent adhesion to non-porous substrates, making them extremely useful for butt and lap shear joints; glass block and glass partitions; curtain wall joints; non-structural glazing; skylights and mullions; cap, head and toe bead in conventional glazing; solar panels, duct work, vents and air conditioning units, and perimeter caulking of metal and most plastic frames.

Benefits

- Highly flexible over a wide temperature range.
- UV- and ozone-resistant.
- Excellent adhesion and superior durability on most non-porous surfaces.
- Capable of compensating for joint movement of $\pm 25\%$ of the original joint geometry.
- No sag, slump, or run-off.

Application limitations

- Only PSI-601FG is approved for use in food preparation areas.
- Not for use in structural or butt glazing, nor in expansion joints less than 1/4" (6 mm) in width or depth.
- Should not be applied to areas totally confined during cure as atmospheric moisture triggers the sealant's reactive curing mechanism.
- Must be fully cured before exposure to temperatures above 217°F (103°C).
- Not recommended for application to materials that might bleed oils or solvents.

- Releases acetic acid during cure; should not be applied to concrete, marble, limestone, lead or lead-coated surfaces, zinc coated metal (galvanized) or copper.
- Not recommended for applications that will be painted or surfaces with reflective or protective coatings without prior testing.
- Not recommended for submerged joints on porous surfaces or for fuel immersion.

Color

PSI-601 is available in 3 colors: Clear, White and Aluminum.

PSI-601 FG is available in Clear only.


Custom colors are available; minimum order may apply.

Packaging

Available in 10.3 fl. oz. (305 ml) polyethylene cartridges, 12 cartridges per carton. Pail and drum packaging available.

Applicable standards

Both PSI-601 and PSI-601 FG comply with MIL-A-46106 and Southern Coast Air Quality Management District (SCAQMD) Rule 1168 for adhesives and sealants.

 PSI-601 FG complies with FDA 177.2600 and is certified by the National Sanitation Foundation International (NSF) to Standard 51.

Installation

Joint design: The width of the bead should be a minimum of 4 times the calculated movement. A thin bead of sealant will accommodate more movement than a thick bead. PSI-601 and PSI-601 FG should be installed no thicker than 1/2" (12 mm) and no thinner than 1/4" (6 mm). Ideally, the ratio of the joint width to depth should be 2:1 with the depth never exceeding 1/2" (12 mm).

Closed cell polyethylene or polyurethane foam backer rod is recommended to control the depth in deep joint installations. Bond breaker tape is recommended for joints too shallow for backer rod insertion. These materials permit the application

of a thin bead while providing a non-stick surface, precluding a three-sided joint. Glazing rabbets and joints should be designed to allow insertion and retention of these bond-breaking materials during application and curing of the sealant.

Surface preparation: Clean all joints and glazing areas of foreign matter and contaminants such as moisture, frost, dirt, dust, oil, grease, protective coatings, previously applied sealants or glazing compounds.

Priming: PSI-601 and PSI-601 FG adhere strongly to glass and ceramic surfaces and many common metals. For stronger, more uniform bonds, primers are recommended.

To determine if a primer is required, apply a thin bead of sealant to the substrate, let fully cure and then pull up one end of the bead. For primer recommendations, contact PSI's technical services department. Primers contain flammable solvents; consult the primer SDS for handling and safety precautions.

Acetic acid released from PSI-601 and PSI-601 FG during cure may attack the coating on reflective glass. Consult the glass manufacturer for sealant recommendations.

Method of application: Apply using conventional or air-operated guns after the joint has been properly prepared. Immediately tool sealant to insure intimate contact with and wetting out of the substrate in the entire rabbet area. Sill-area sealant should be struck off at an angle so that water will not pool. Wipe excess sealant from surrounding area while still uncured, then wipe area with a commercial solvent such as isopropyl alcohol or mineral spirits. Consult manufacturer's SDS for safety precautions prior to using solvents.

Curing characteristics: PSI-601 and PSI-601 FG have a work life (tooling time) of 5 to 10 minutes. Ambient air temperature and moisture content at application and during cure has a direct influence on the work life and cure speed. PSI-601 and PSI-601 FG can be applied at outdoor temperatures of -35°F (-37°C), provided that surfaces are clean and frost free. After cure it remains rubbery down to -80°F (-62°C). PSI-601 will retain its properties after extended exposure up to 400°F (204°C). PSI-601 FG will retain its properties after extended exposure up to 350°F (176°C).

Shelf life: One year from date of shipment when stored in original, unopened container in a

dry area at temperatures below 80° F (27°C).

Health precautions

While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), the Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of this product.

Refer to the Safety Data Sheet for complete health and safety information.

Maintenance

If the sealant is damaged and the bond is intact, cut out the damaged area and recaulk. No primer is required. If the bond has been affected, remove the old sealant, clean and prepare the joint in accordance with instructions under "Surface Preparation" and recaulk.

Technical services

PSI provides performance data, specification assistance and use evaluations.

Adhesion testing by PSI: This program is intended to eliminate potential field application problems by pre-testing the adhesion of PSI's construction sealants on samples of building materials submitted by the customer. The tests will aid in determining the proper surface preparation method, effective solvents for cleaning and whether priming is necessary to achieve optimum adhesion. Following this procedure will remove many of the variables that affect field success.

Test samples should be identified as to manufacturer, origin, designed use, building project, person and firm originating the request. Appropriate sketches of drawings showing the intended use can be helpful. Contact your PSI sales representative for more information.

Jobsite testing of substrates: A field test can be performed by applying several feet of the sealant to a representative joint and letting it reach full cure. Make a cut in the cured sealant across the joint the entire depth of the sealant. Make two vertical cuts several inches long, paralleling the sides of the joint as closely as possible and extending down from the cross cut. Grasp the free length of sealant and pull at a 90° angle to determine if a good bond has developed. With good adhesion, the sealant will usually tear cohesively or be difficult to remove from the surface.

Performance Data*		
Properties	Results	Test Methods
<i>All properties are at 70°F (21°C) and 50% RH</i>		
Uncured Properties		
Skin-over time	15 minutes	ASTM C679
Cure time, 1/8" (3 mm) bead	<24 hours	
Sag/slump	Nil	ASTM C639
VOC content	0.76 lb/gl (91 g/L)	
Specific gravity	1.02	
Density	8.6 lb/gl (1.0 g/cm ³)	
<i>All cured properties below are at 7-day cure</i>		
Cured Physical Properties		
Hardness, Shore A	25	ASTM C661
Tensile strength	250 psi (1.7 MPa)	ASTM D412
Elongation	400%	ASTM D412
Service temperature, cured bead		
PSI-601	-80 to +400°F (-62 to +204°C)	
PSI-601 FG	-80 to +350°F (-62 to +176°C)	
Cured Electrical Properties		
Dielectric constant, 60Hz	2.8	ASTM D150
Dielectric strength	550 volts/mil	ASTM D149
Cured Thermal Properties		
Volume coefficient of thermal expansion	9.3 x 10 ⁴ /°F	
Thermal conductivity	0.11 BTU/ft.-°F- hr	
Cured Construction Properties		
Weight loss after heat aging	< 5%	ASTM C792
Cracking and chalking after heat aging	None	
Durability (bond and cohesion)		
movement on glass and aluminum	±25%	ASTM C792
Weathering and UV resistance	Excellent	ASTM C793, ASTM C794
Staining	None	ASTM C510
* Typical properties are for information only, not for purposes of specification. The data above represents product performance in ideal laboratory conditions. Individual users' experience may vary depending on application conditions.		

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