



PSI-613 High-Temperature Silicone Adhesive/Sealant

Product description

PSI-613 is a one-part, room-temperature curing adhesive/sealant formulated for high-temperature applications. When exposed to atmospheric moisture, PSI-613 cures to a durable, resilient rubber with tenacious adhesion to most common substrates, including glass, metal, ceramic, painted surfaces, many plastics, and rubber.

Basic uses

PSI-613's flexibility and high temperature resistance make it ideally suited as an adhesive/sealant for use in small engine and automotive sealing applications; formed-in-place gaskets; appliances; heating elements; HVAC ductwork and flashing; stove and dryer exhausts; around pipes, valves, tanks and vats containing heated liquid; chimney and fireplace inserts.

Benefits

- Specifically formulated to perform at extreme temperatures: continuous -80 to 500°F (-62 to 260°C); intermittent to 600°F (315°C).
- Excellent adhesion and superior durability.

Application limitations

- Should not be used for structural or butt glazing, nor in expansion joints less than 1/4" (6 mm) in width or depth.
- Should not be applied to areas that will be totally confined during cure as atmospheric moisture triggers the sealant's reactive curing mechanism.
- Releases acetic acid during cure; should not be applied to concrete, marble, limestone, lead or lead-coated surfaces, zinc coated metal (galvanized), copper, and fine electronic components.
- Not recommended for applications that will be painted or on surfaces with reflective or protective coatings without prior testing.
- Not recommended for fuel immersion.
- Should not be used in submerged joints on porous surfaces or for joints exposed to water below the waterline in marine applications.
- Should not be used in direct contact with flame.

- Needs to be fully cured before exposure to temperatures above 212°F (100°C).

Color

Red.

Packaging

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

Applicable standards

PSI-613 meets or exceeds the requirements of Federal Specification TT-S-001543A, Class A; Federal Specification TT-S-00230C Class A; ASTM C920-95, Type S, Grade NS, Class 25, use NT, G, A, and O; Canadian Specification CAN/CGSB 19.13-M87.

Installation

Surface preparation: Clean all joints and glazing areas by removing foreign matter and contaminants such as moisture, frost, dirt, dust, oil, grease, protective coatings or previous sealant applications.


Priming: PSI-613 does not need primer on glass and ceramic surfaces. Most metal surfaces should be primed. A bead of PSI-613 applied to the substrate, allowed to fully cure and then tested for adhesion will usually indicate whether a primer is required. For primer recommendations, consult PSI technical services department.

Method of application: Apply using conventional or air-operated guns after the joint has been properly prepared to receive sealant. The sealant should be tooled to insure intimate contact with and subsequent wetting of the substrate. Immediately wipe away excess sealant from the surrounding areas while still uncured and wipe the area with a commercial solvent such as isopropyl alcohol or mineral spirits. Consult the manufacturer's SDS for safety precautions when using flammable solvents.

Curing characteristics: PSI-613 has a work life (tooling time) of 5 to 10 minutes. Normal skin-over time is 10 to 20 minutes. Air temperature and humidity at the time of application has a direct influence on work life and cure speed. Drier,

colder conditions require more cure time.

Shelf life: One year from date of shipment when stored in original, unopened container in a dry place at temperatures below 80° F (27°C).

Health precautions	
	<p>Danger Causes serious eye irritation. May cause cancer.</p> <p><i>Refer to the Safety Data Sheet (SDS) for complete health and safety information.</i></p>

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 the 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 products on sampled 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 origin, manufacturer, designated use, and person originating the request. Appropriate sketches or 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 the sealant to representative material and letting it reach full cure. Make a cut in the cured sealant across the entire depth of the sealant. Make two vertical cuts several inches long, paralleling each other 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
Uncured Properties		
Application temperature	40 to 100°F (10 to 40°C)	
Skin-over time	10 to 20 minutes	ASTM C679
Cure time, 1/8" (3 mm) bead	<24 hours	
Sag/slump	Nil	ASTM C639
VOC content	0.31 lb/gal (37 g/L)	
Specific gravity	1.21	
Density	10.1 lb/gal (1.2 g/cm³)	
Cured Physical Properties		
Adhesion-in-peel on glass, steel and primed aluminum	20 pli (35 N/cm)	ASTM C794
Hardness, Shore A	25	ASTM C661
Tensile strength	250 psi (1.7 MPa)	ASTM D412
Ultimate elongation	400%	ASTM D412
Continuous service temperature	-80 to 500°F (-62 to 260°C)	
Intermittent service temperature	600°F (315°C)	
Cured Construction Properties		
Weight loss	5% max.	ASTM C792
Cracking and chalking after heat aging	None	
Durability (bond and cohesion) movement on glass and aluminum	±25%	ASTM C719

*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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