



# PSI-613 High-Temperature Silicone Adhesive/Sealant

## Product description

PSI-613 is a one-part, RTV adhesive/sealant formulated for extreme high temperature applications. When exposed to atmospheric moisture, PSI-613 cures to a durable, resilient rubber with tenacious adhesion to most common substrates.

## Basic uses

PSI-613's flexibility and high temperature resistance make it ideally suited as an adhesive/sealant for use in small engines, appliances, formed-in-place gaskets, 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" in width or depth.
- Not recommended for application to materials that might bleed oils or solvents.
- Should not be applied to areas that will be totally confined during cure as atmospheric moisture triggers the sealant's reactive curing mechanism.
- Not recommended for application in confined spaces where fine electronic parts are located due to acetic acid evolved 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 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.
- Needs to be fully cured before exposure to temperatures above 212°F (100°C).
- Should not be used in direct contact with flame.

## Color

Red. Other colors available - minimum order 100 gallons.

## Packaging

Available in 10.3 fl. oz. (305 ml) polyethylene cartridges, 12 cartridges per carton. Also available in 2 gallon pails, 5 gallon pails and 55 gallon drums on special order.

## 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 with PSI-690 Primer for best results. 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.

**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 out of the

substrate. Excess sealant should be wiped from the surrounding areas while still uncured and the area subsequently wiped with a commercial solvent such as naphtha or xylol. Consult the manufacturer's MSDS for safety precautions when using flammable solvents.

**Curing characteristics:** PSI-613 has a work life (tooling time) of 5 to 10 minutes. Moisture content of the air at the time of application has a direct influence on work life and cure speed.

### Health precautions

- Application area should be well ventilated.
- Acetic acid released during cure could cause eye or skin irritation. Contact lens wearers should take appropriate precautions.
- In event of eye contact, flush eyes with water and call physician.
- In event of skin contact, remove from skin with dry cloth or paper towel.
- Keep out of reach of children.

For additional health and safety information, consult a Material Safety Data Sheet.

**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).

### 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 field service, 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. They should be sent to the attention of PSI's Technical Director.

**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

### Performance Data\*

Properties	Results	Test Method
<b>Uncured Properties</b>		
Skin-over time	10 to 20 minutes	ASTM C679
Cure time, 1/8" bead	<24 hours	PSI S202
Sag/slump	Nil	ASTM C639
VOC content	0.4 lb/gal	
Specific gravity	1.21	
Density	10.1 lb/gal	
<b>Cured Physical Properties</b>		
Adhesion-in-peel		
glass, primed aluminum & steel	20 lb/in.	ASTM C794
Hardness, Shore A	25	ASTM C661
Tensile strength	250 psi	ASTM D412
Ultimate elongation	400%	ASTM D412
Continuous service temperature	-80 to 500°F (-62 to 204°C)	
Intermittent service temperature	600°F (315°C)	
<b>Cured Construction Properties</b>		
Weight loss	5% max.	ASTM C792
Cracking & chalking after heat aging	None	
Durability (bond & cohesion)		
movement on glass and aluminum	±25%	ASTM C719

\* Typical properties are for information only, not for purposes of specification.

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.

### **Availability and cost**

Polymeric Systems, Inc., is a part of Whitford Worldwide. For more information, please contact Polymeric Systems or Whitford Plastics Ltd. at:

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