



723 Wheatland Street
 Phoenixville, PA 19460-3394
 610-935-1170 Fax: 610-935-7123
 www.polymericystems.com

PSI-270/RC 270 MULTI-COMPONENT POLYURETHANE RESERVOIR SEALANT (Self-Leveling and Gun Grade)

PRODUCT NAME

PSI-270/RC270 Multi-Component Polyurethane Reservoir Sealant (Self-Leveling and Gun Grade)

MANUFACTURER

Polymeric Systems, Inc.
 723 Wheatland Street
 Phoenixville, PA 19460-3394
 Phone: In USA - 800.228.5548
 International & Rotary Phones
 1.610.935.1170
 FAX: 1.610.935.7123
 www.polymericystems.com

PRODUCT DESCRIPTION

PSI-270/RC 270 Multi-Component Polyurethane Reservoir Sealant is a chemically curing sealant that cures at ambient temperature to a low modulus, flexible, water-resistant rubber. PSI-270/RC 270 is based on Courtaulds Aerospace's Permapol® technology and is equivalent to Courtaulds' RC 270 Reservoir Sealant. It is available in gun-grade (designated PSI-270/RC 270) and self-leveling (designated PSI-270SL/RC 270SL) consistencies.

Gun grade PSI-270/RC 270 provides a flexible, durable seal in joints in masonry, concrete, metal, plastics, glass, ceramics, wood, etc., on both vertical and horizontal planes. Ideally suited for sealing vertical and sloping joints exposed to continuous water immersion, it is NSF certified for use in potable water applications.

PSI-270SL/RC 270SL provides a flexible, durable seal for caulking joints in masonry, concrete, metal, plastics, ceramics, wood, etc., on horizontal planes. Developed specifically for dynamically moving joints, it is ideally suited for sealing horizontal joints exposed to continuous water immersion. It is NSF certified for potable water applications.

BASIC USES

The principal application for the PSI-270/RC 270 sealants is sealing and caulking concrete joints subject to structural movement. These sealants have a long history of successful use in continuous, total immersion applications in reservoirs, swim-ming pools and sewage treatment plants.

Gun grade PSI-270/RC 270 can be used as a universal joint sealant for a wide variety of building materials. It is ideal for sealing expansion and control

joints in often unpredictable precast concrete panels and metal curtain walls. PSI-270SL/RC 270SL can be used for sealing interior and exterior expansion, control and perimeter joints in horizontal wearing surfaces.

APPLICATION LIMITATIONS

Not recommended for:

- (1) Structural or butt glazing.
- (2) Joints less than 1/4" in width or depth.
- (3) Certain architectural paints or finishes without prior testing.
- (4) Areas subject to harsh chemicals without prior testing.
- (5) Total immersion applications without specified primer.
- (6) For chlorinated water applications where chlorine content exceeds 5 ppm, consult PSI Customer Service for specific limitations and use.
- (7) Improper joint design.
- (8) Cure retarded when temperature below 60° F; a kicker is highly recommended.

COLORS

White, Off-White, Limestone, Gray, Bronze, Tan and Black. Custom colors are available by special order.

PACKAGING

1-1/2 gallon (5.7 liter) pails.

APPLICABLE STANDARDS

PSI-270/RC 270 meets or exceeds the requirements of Federal Specification TT-S-00227E Type II, Class A; ASTM C 920-95 Type M, Grade NS, Class 25, Use T, G, M, A, and O; CAN/CGSB 19.24-M90; and SWI 2B. Certified to ANSI/NSF Standard 61 by NSF (National Sanitation Foundation) International.

PSI-270SL/RC 270SL meets or exceeds the requirements of Federal Specification TT-S-00227E Type I, Class A; ASTM C 920-95 Type M, Grade P, Class 25, Use T, G, M, A, and O; C A N / C G S B 19.24-M90; and SWI 2B. Certified to ANSI/NSF Standard 61 by NSF International.



INSTALLATION

Joint Design: It is recommended that dimensions be established for each joint in accordance with service conditions. Generally, the width of the joint is determined by calculating the change in joint width associated with thermally induced expansion and contraction of the structure expected from temperature extremes which it will encounter, and

TECHNICAL DATA: Refer to table below for typical properties.*

*For information only - not for specification purposes.

PERFORMANCE PROPERTIES	RESULTS	TEST METHOD
Worklife, hrs.	4 - 6	PSI S203
Time to Full Cure, days @ 75° F	2	PSI S204
Sag/Slump, inches (gun grade only)	0	ASTM C 639
Adhesion-in-Peel, lb/in.		
Concrete, aluminum & steel	20 - 25	ASTM C 794
Tensile Strength, psi		
Self-Leveling	160 ± 20	ASTM D 412
Gun Grade	170 ± 20	ASTM D 412
Ultimate Elongation, %	500 ± 50	ASTM D 412
Hardness, Shore A		
Self-Leveling	28 ± 5	ASTM C 661
Gun Grade	40 ± 3	ASTM C 661
Staining	None	ASTM C 510
Weight Loss, % (max)	< 5	ASTM C 792
& Cracking & Chalking after Heat Aging	None	
Durability (Bond & Cohesion)		
% Movement on glass, aluminum, concrete	±25	ASTM C 719
Service Temperature, cured bead, °F	-40 to 160	PSI S406
VOC Content, lb/gal	0.8	
Specific Gravity	1.40	
Density, lb/gal	11.7	

multiplying this figure by a factor of 4. For example, if the calculated total movement of the joint under temperature extremes is $\frac{1}{4}$ ", the joint should be designed no less than $\frac{1}{4}$ " x 4, or 1" wide. Joint filler material should be of the preformed, non-extruding type made from cellular neoprene sponge rubber, or polyurethane of firm texture. Bituminous fiber-type joint filler must not be used. All non-extruding and resilient-type preformed expansion joint fillers shall conform to the requirements and tests set forth in ASTM D1752 for Type I, except as otherwise specified herein.

Surface Preparation: All surfaces must be clean, dry and free of loose aggregate, laitance, paint, corrosion, oil, grease, tar, asphalt, mastic compounds, wax, waterproofing agents, and release agents. Joints must be protected from contamination by bituminous or resinous materials sometimes sprayed on new concrete to aid in curing. After the joints have been cleaned, care should be taken to avoid contamination during the priming and sealing operation.

Primer: PSI-270/RC 270 has excellent adhesion to most common substrates such as glass, ceramic, aluminum, steel, PVC, concrete and wood. However, some materials may require priming in order to gain optimum adhesion. PSI-590 Primer is recommended for non-porous surfaces such as plastics and rubber. For porous surfaces, PSI-591 Primer is recommended as a one-part primer. For areas that will be frequently wet or damp, a two-part primer, PSI Primer #67, is recommended as the primer of choice.

Primer should be applied only to a clean, dry surface prior to installation of backer rod, bond breaker tape and sealant. Primer must be kept within confines of the joint to preclude possible staining. Primer must dry the recommended time before sealant is applied. Following application of the sealant, the installation should be allowed to stand for a minimum of 5 days to allow cure and adhesion to develop. The primer contains flammable solvents. Avoid ignition sources when applying. Be sure to thoroughly read both the primer data sheet and MSDS before using the primer.

Back-Up Material: The Backer rod controls the depth of sealant and allows PSI-270/RC 270 to flow evenly and uniformly over the entire length of the joint. Joint backing must be polyethylene or other closed-cell material. Care should be taken not to puncture the backer rod. Diameter of the rod stock should be at least one grade larger than the joint width at the time of installation to ensure compression when inserted. Where room does not exist for the rod, a bond-

breaker tape should be inserted to prevent three-sided bonding.

Cleaning: Immediately remove all excess sealant and smears adjacent to joints with xylol or toluol as work progresses. For equipment clean up, use solvent equivalent to xylol or toluol. Consult manufacturer's MSDS for safety precautions when handling flammable solvents.

Mixing: Add Part A (Accelerator) to Part B (Base) in the Part B pail and mix with a slow speed $\frac{1}{2}$ " drill and a flat mixing paddle at 80 to 150 rpm until the mixture is completely blended. Then add Part C (Color Pack) and mix until uniform. Use a spatula to ensure that all material is removed from containers. Minimum mixing time is 6 minutes. Avoid entrapping air bubbles during mixing by keeping the paddle below the surface level. Sufficient room is provided in the 2 gallon container for 1-1/2 gallons of product to be mixed. Scrape down the sides of the containers and mixing blade periodically during the mixing operation. Do not attempt to use partial units. THE ENTIRE CONTENTS OF THE COLOR PACK MUST BE ADDED. THE COLOR PACK CONTAINS AN ACCELERATOR ESSENTIAL TO THE CHEMICAL CURE. Kicker (accelerator) is available to accelerate the cure for many reasons including cold temperatures. For further information, see Cold Weather Caulking Data Sheet.

SHELF LIFE

Six months when stored at temperatures below 80° F in original, unopened containers.

HEALTH PRECAUTIONS

Avoid ingestion and contact with the skin, especially open breaks in the skin. In case of skin contact, immediately wipe off excess material and scrub skin with soap and water. For additional health and safety information, consult a Material Safety Data Sheet

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, specification assistance, performance data 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 materi-

als 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 or 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 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

PSI sealants are available throughout the United States. Call PSI at 800.CAULK.IT (800.228.5548) or 1.610.935.1170 for your nearest source.

WARRANTY

All recommendations, statements and technical data contained herein are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. User shall rely on his own information and tests to determine suitability of the product for the intended use, and user assumes all risk and liability resulting from this use of the product.

Manufacturer's sole responsibility shall be to replace that portion of the product of the manufacturer that proves to be defective. Manufacturer shall not be liable to the buyer or any third party for injury, loss or damage directly or indirectly resulting from use of, or inability to use, the product.

Recommendations or statements other than those contained in a written agreement signed by an officer of the manufacturer shall not be binding upon the manufacturer.