

Chem-Calk® 916

ONE-COMPONENT; POLYURETHANE SEALANT

PRODUCT NAME

Bostik® Chem-Calk® 916—One Component Polyurethane Elastomeric Sealant, Gun Grade.

MANUFACTURER

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PRODUCT DESCRIPTION

Chem-Calk® 916 sealant is a one-component construction grade urethane sealant capable of dynamic joint movement totaling 50% of original joint geometry ($\pm 25\%$). The sealant cures to a tough, flexible rubber when exposed to moisture present in the atmosphere.

Composition:

Chem-Calk® 916 urethane sealant is free of TDI. It has the consistency of toothpaste, its physical properties will remain relatively stable over time and in varying weather conditions. Its physical properties are relatively unchanged over a wide temperature range, -20°F to 150°F (-29°C to 66°C).

Basic Uses:

Chem-Calk® 916 is suitable for most building materials including masonry, ceramics, wood, steel, aluminum and selected plastics. Recommended applications include expansion and control joints and perimeter joints around doors and windows. In many cases, no primer is required.

Chem-Calk® 916 urethane sealant may be factory-applied to seal shop finished products or field-applied to seal erected building components in both new and remedial applications.

Some substrates have variable surface characteristics depending on their source. The unpredictability of such surface characteristics makes it desir-

TABLE 1: CHEM-CALK 916 TYPICAL PROPERTIES*		
(After 14 day cure at 77°F and 50% RH)		
Property	Value	Test Method/Note
Tool/Work Life	60 minutes	Bostik Test Method
Tack Free Time	4 hours	ASTM C 679
Cure Time @ 77°F	2-4 days	Varies With Relative Humidity
Flow, Sag or Slump	0.15 inch	ASTM C 639
Hardness (Shore A)	38	ASTM D 2240
Modulus @25%	52 psi	ASTM D 412
@50%	69 psi	ASTM D 412
@100%	79 psi	ASTM D 412
Tensile Strength	143 psi	ASTM D 412
Adhesion in Peel	>25 piw	ASTM C 794
Elongation	564%	ASTM D 412
Ozone Resistance	Good	
Joint Movement Capability	$\pm 25\%$	ASTM C 719
UV Resistance	Good	ASTM C 793

* Values above are not intended to be used in specification preparation.

able to have a Prestested Adhesion to Substrates Test (PATS Program) on appropriate samples.

Application Limitations:

- Chem-Calk® 916 sealant is sensitive to UV light. When subjected to UV light, it can superficially change color and not retain its brilliant white characteristics. The change is limited to the surface layer and typically does not compromise its sealing properties. In areas where color retention is critical, please refer to Chem-Calk® CERT White or Chem-Calk® 2000.
- Chem-Calk® 916 sealant is not recommended for use in sealing horizontal decks, patios, driveways or terrace joints where abrasion or physical abuse is encountered.
- Chem-Calk® 916 sealant is not recommended for use in sealing submerged dynamic joints, particularly where porous surfaces permit water infiltration to bond surfaces.
- Chem-Calk® 916 sealant is not recommended for exterior or in-

- terior structural sealing below the waterline in marine applications.
- Chem-Calk® 916 sealant requires atmospheric moisture to cure properly. It should not be used in totally confined or air-free spaces.
- Chem-Calk® 916 sealant should be applied to substrates that are 25°F minimum. This 25°F (-4°C) minimum temperature should be maintained for 24 hours after application so cold-slip will not occur. The sealant should be at 40°F or higher at application.
- Chem-Calk® 916 sealant should not be applied with wet tooling techniques; using solvents, water or detergent/soap solutions is not recommended.
- Chem-Calk® 916 sealant should not be applied to surfaces with special protective or cosmetic coatings without prior consultation of the manufacturer. Such surfaces include, but are not limited to mirrors, reflective glass or surfaces coated with Teflon®, polyethylene or polypropylene.

- i) Chem-Calk® 916 sealant should not be applied to unpredictable absorptive surfaces such as marble, limestone or granite unless a standard of appearance has been agreed on as a result of testing for stain and/or discoloration.
- j) In general, Chem-Calk® 916 and other one-component urethanes are not designed as glazing sealants in which the adhesive bond to glass is exposed to sunlight. The user or specifier should establish that any application of Chem-Calk® 916 in glazing will not expose the glass bond to appreciable amounts of ultraviolet radiation.
- k) Chem-Calk® 916 when cured is paintable with latex-type paints. However, due to the formulation variables of paints, a test area is recommended to determine the esthetic compatibility.

Food Status:

Chem-Calk® 916 has no food status. (See Chem-Calk® 1200 silicone sealant or Chem-Calk® 900 polyurethane sealant.)

Packaging:

Chem-Calk® 916 urethane sealant is available in 10.3 fl. oz. (304 ml) cartridges, 24 to a case; 5 gallon (19 litre) pails and; 52 gallon (196.8 litre) drums.

Colors:

Chem-Calk® 916 is available in the following standard colors:

White	Stone
Black	Aluminum-Stone
Limestone	Bronze
Almond	

Applicable Standards:

Chem-Calk® 916 sealant meets or exceeds the test requirements of TT-S-00230C (COM-NBS) for one-component sealants as Class A, Non-Sag; ASTM C920 Standard Specifications for Elastomeric Joint Sealant as Type S, Grade NS, Class 25, Use NT, A and M; CAN/CGSB-19.13-M87.

TECHNICAL DATA

Chem-Calk® 916 urethane sealant is resistant to normal weathering conditions such as rain, sunlight, snow, sleet, ultraviolet radiation, ozone, atmospheric contamination and pollution.

Joints formed with this sealant can be expected to extend and compress a total of 50% of the installation width with no more than 25% movement in a single direction without effecting the seal or adhesive bond.

INSTALLATION

Joint Design:

More joint movement can be accommodated in a thin bead of sealant than in a thick bead. Chem-Calk® 916 urethane sealant should be no thicker than 1/2" (12.7mm) and no thinner than 1/4" (6.4 mm). In joints between 1/2" and 1", the ratio of sealant width to depth should be approximately 2:1. Sealant depth in joints between 1/4" and 1/2" should be 1/4" deep. Joints with dynamic movement should not be designed in widths less than 1/4".

Priming:

Chem-Calk® 916 urethane weatherproofing sealant generally does not require priming for masonry, anodized aluminum, galvanized steel and many common building materials. If sealant is to be applied to a material with specially treated surfaces or of particularly unusual surface characteristics, consult Bostik for primer recommendations. **Prior to any use, however, it is always recommended that a bead of sealant be applied on the surface to test adhesion. See Pretested Adhesion to Substrates Program.**

Method of Application:

Install back-up material or joint filler, spacer shims and tapes as specified. Apply Chem-Calk® 916 urethane sealant in a continuous operation using a positive pressure adequate to properly fill and seal the joint. Tool the sealant with adequate pressure to spread the sealant against the back-up material and onto the joint surfaces. A tool with a concave profile is recommended to keep the sealant within the joint.

Excess sealant should be dry-wiped from all surfaces while still uncured, following with a commercial solvent such as xylol, toluol or methyl ethyl ketone. Should sealant accidentally begin to cure on adjacent porous surfaces, the excess sealant should be allowed to progress through the initial cure or set-up. It should be removed promptly by abrasion or other mechanical means.

CURED SEALANT IS USUALLY VERY DIFFICULT TO REMOVE WITHOUT ALTERING OR DAMAGING THE SURFACE TO WHICH THE SEALANT HAS BEEN MISAPPLIED.

Precaution:

On contact, uncured sealant causes irritation. Avoid contact with eyes and skin. Contact lens wearers take appropriate precautions. IN CASE OF CONTACT, FLUSH EYES WITH WATER. CALL A PHYSICIAN. Remove from skin with dry cloth or paper towel. KEEP OUT OF REACH OF CHILDREN. Chem-Calk® 916 is manufactured for industrial use only. Use in accordance with Material Safety Data Sheet.

AVAILABILITY

Chem-Calk® 916 urethane sealant is available throughout the United States through distributors. For the name of your nearest distributor contact Bostik at 888-603-8558. For technical service, call 800-523-2678.

Shelf Life:

When stored at or below 80°F (27°C), Chem-Calk® 916 urethane weatherproofing sealant has a shelf life of six months from date of shipment from Bostik Findley's warehouse facilities.

WARRANTY

Limited Warranty:

All statements, technical information and recommendations set forth herein are based on tests which Bostik believes to be reliable. However, Bostik Findley, Inc. does not guarantee their accuracy or completeness. The buyer should conduct its own tests of this product before use to determine proper preparation technique and suitability for proposed application. Any sale of this product shall be on terms and conditions set forth on Bostik Findley's order acknowledgment. Bostik Findley warrants that the product conforms with Bostik written specifications, and is free from defects. BOSTIK FINDLEY, INC. DISCLAIMS ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE BUYER'S SOLE REMEDY FOR NONCOMPLIANCE WITH THIS WARRANTY SHALL BE

FOR THE REPLACEMENT OF THE PRODUCT OR REFUND OF THE BUYER'S PURCHASE PRICE. IN NO CASE WILL BOSTIK FINDLEY, INC. BE LIABLE FOR DIRECT, CONSEQUENTIAL, ECONOMIC, OR OTHER DAMAGES.

MAINTENANCE

No maintenance should be needed. If sealant becomes damaged, replace damaged portion. Clean surfaces in damaged area, and repair with fresh Chem-Calk® 916.

TECHNICAL SERVICES

Pretested Adhesion to Substrates (PATS) Program:

The program is intended to eliminate potential field problems by pretesting Bostik's construction sealants with samples of building materials on which the sealant will be applied. The tests will aid in determining the proper surfaces preparation method, effective solvents for cleaning and whether priming is necessary to achieve optimum adhesion. Following this procedure will remove many of the unknown variables that affect field success. Test samples or coupons 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. Contact your local Bostik Findley representative or Bostik Findley Technical Service.

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