



Bostik

smart adhesives

916

TEXTURED POLYURETHANE SEALANT & ADHESIVE

KEY FEATURES

- Permanently flexible
- Tenacious bond to difficult substrates
- Low VOC

DESCRIPTION

916 is a one-component, textured polyurethane 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.

916 has a consistency like 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, -40°F to 150°F (-40°C to 66°C). Where smooth appearance is needed, please use Bostik 915FS™.

APPLICABLE STANDARDS

- ASTM C920, TYPE S, GRADE NS, CLASS 25, USE NT, A AND M.
- US Federal Specification TT-S 00230C (COMB-NBS) for one-component sealants as Class A, non-sag.
- CARB, SCAQMD, and OTC compliant.

BASIC USES

916 is designed for sealing expansion and control joints in pre-cast concrete panels, for sealing various siding applications, and for sealing perimeters of doors, windows, and other wall penetrations. Sealant cures to form a durable, flexible bond with most building materials in any combination including stone, masonry, ceramic, wood, steel, aluminum, Kynar® painted metals, fiber cement board and many other common building materials.

INSTALLATION PROTOCOL

Joint Design: In general, more joint movement can be accommodated in a thin bead of sealant than a thick bead. 916 should be no thicker than $1/2"$ (12.7mm) and no thinner than $1/4"$ (6.4mm). 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 $1"$ should be $1/4"$ deep. Joints with dynamic movement should not be designed in widths less than $1/4"$.

Surface Preparation: Surfaces must be structurally clean, dry (no frost) and structurally sound, free of contaminants, including, but



not limited to, dust, dirt, loose particles, tar, asphalt, rust, mill oil, etc. If substrate is painted or coated, scrape away all loose and weakly bonded paint or coating. Any paint or coating that cannot be removed must be tested to verify adhesion of the sealant or to determine the appropriate surface preparation if needed. (See ASP section on next page for details.)

Backer Rods and Bond Breaker Tapes: Bond breakers including, but not limited to, closed-cell polyethylene backer rods are used to control depth of the sealant bead, provide a firm tooling surface and avoid three-sided adhesion. Where the depth of joint prevents use of backer rods, a polyethylene strip or tape must be used as a bond breaker to prevent 3-sided adhesion. Do not prime or damage the surface of the bond breaker. Refer to instructions given by rod and tape manufacturers for the correct backer rod and tape size related to joint size.

Tooling: 916 comes ready-to-use. Cut spout or tip to desired bead size. Apply moderate pressure to break seal inside the nozzle. Apply by using a professional caulking gun. Use opened cartridges and sausages the same day they are opened. Apply 916 in a continuous operation using positive pressure to the bottom

of the joint to properly fill and seal the joint. When applying, avoid air entrapment and overlapping. Tool the sealant before the skin forms with adequate pressure to spread the sealant against the backup material at the bottom and sides of the joint. A dry tool with a concave profile is recommended for that operation. Do not use water or soapy water for this operation. Avoid smearing and feathering of the sealant to allow full performance of the cured seam. Excess sealant should be dry-wiped or joints should be properly taped.

Cleaning: After dry-wiping uncured sealant from substrates and tools, remaining uncured sealant can be removed by using mineral spirits. Cured sealant is usually very difficult to remove without altering or damaging the surface to which the sealant has been misapplied. Cured sealant can be removed by abrasion or other mechanical means (scrapers, putty knives).

Curing Time: 916 is a moisture cure, polyurethane sealant. On wood, with ambient air at 50% relative humidity and at 73°F, polyurethane sealants will generally skin within four hours and cure 1/16 of an inch per day. Lower temperature and lower relative humidity will significantly increase the skin time and cure time of a polyurethane sealant.

Maintenance: If the sealant becomes damaged, replace the damaged portion by removing the old sealant completely, cleaning the surfaces and reapplying a fresh and appropriate amount of new sealant in accordance with the directions and information contained in this data sheet.

MANDATORY ADHESION TO SUBSTRATES PRETEST - (ASP)

A hand pull test must be run before the job starts and at regular intervals during the job. It must be run on the job site after the sealant is fully cured, usually within 7 to 21 days. (Adhesion may develop fully after at least 14 days.) The hand pull test procedure is as follows:

1. Make a knife cut horizontally from one side of the joint to the other.
2. Make two vertical cuts approximately two inches long, at the sides of the joint, meeting the horizontal cut at the top of the two-inch cuts.
3. Grasp the two-inch piece of sealant firmly between the fingers and pull down at a 90° angle or more, and try to pull the uncut sealant out of the joint.
4. If adhesion is sufficient, the sealant should tear cohesively in itself.
5. Sealant may be replaced by applying more sealant in the same manner as it was originally applied. Care should be taken to ensure that the new sealant is in contact with the original, and that the original sealant surfaces are clean, so that a proper bond between the new and old sealant will be obtained.

PACKAGING

10.1 fl. oz. (300 mL) cartridges, 24 cartridges per case
20 fl. oz. (591 mL) sausages, 12 sausages per case

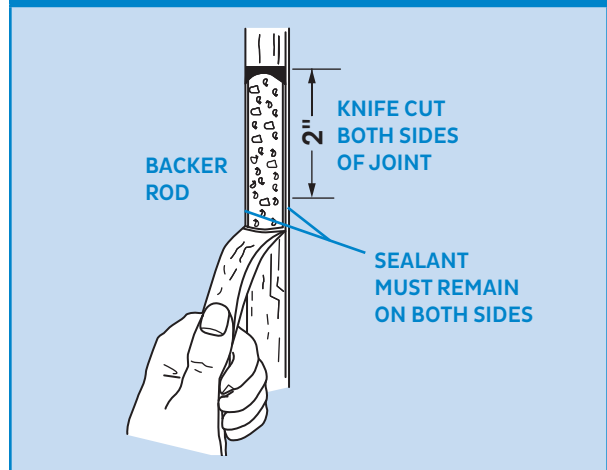
COLORS

White, Stone, and Bronze

AVAILABILITY

Available from authorized Bostik distributors. Go to www.bostik.com/us and check on our distributor locator for the closest distributor in your location or call customer service at 1-800-7/BOSTIK (1-800-726-7845).

MANDATORY ADHESION TO SUBSTRATE (ASP) FIELD TEST



STORAGE/SHELF LIFE

Store in a clean, dry area not affected by freezing or hot temperatures between 50°F (10°C) and 90°F (32°C). Shelf life is one year from date of manufacturing in unopened cartridge.

LIMITATIONS

- Construction substrates have become complex and diverse by nature and origin. Substrate chemistries and structures can interfere with adhesive performances of the sealant. Adhesion to Substrate Pretest (ASP) is therefore **MANDATORY** to assess any adhesion and sealing characteristics – see Adhesion to Substrates Pretest section and see Installation Protocol section. This must be done pre-installation to avoid potential failures. Call Technical Service for more information about surface preparation and possible priming.
- Do not apply over damp, contaminated, loose surfaces (See Installation Protocol and Surface Preparation), old sealants or other foreign substances that may impair the adhesion bond. Avoid air entrapment.
- Dampness and substrates with high moisture content will trigger extensive curing of the sealant within a very short period of time. This may cause an excess of bubbling and foaming within the sealant and at the bottom of the bead. High temperature/humidity can cause the sealant to develop bubbles during the curing process. Sealant installation is not recommended when the dew point of the substrate is close to ambient temperature or a moisture-vapor transmission condition is present increasing the potential for bubbling to form during cure. Porous substrates such as, but not limited to, marble, limestone, and granite might absorb components of the 916 leading to staining of the substrate. **ASP with sufficient aging is mandatory to assess this potential issue.**
- 916 must not be used to seal narrow joints, fillet joints and face nail holes.
- Smearing and feathering 916 over joints is not recommended.
- 916 is not recommended for horizontal joints or traffic-bearing joints where abrasion resistance is required (walkways, driveways, runways, etc.). Please refer to Bostik 955-SL™ for this application.

- 916 is not recommended for continuous immersion in water or any other fluid. When fully cured, avoid exposure, even incidental, to fuels, chlorinated, acid and alkaline solutions. 916 is not recommended for exterior or interior sealing below the waterline; please refer to Bostik 940 Fast Set for marine applications.
- Contact of 916 with asphalts (i.e., back coating of window flashing, etc.) and other filler compounds impregnated with oil, asphalt, tar, etc., may deteriorate the cohesive strength of the substrate and ultimately compromise the seal. Please refer to Bostik PRO-MS 50™ for asphalt compatibility applications.
- Lower relative humidity and temperature will significantly extend the curing time. Confined areas, deep joints and moisture barrier substrates may also affect the full cure time and extend it by many days. Apply sealant in ambient air temperature of 40°F. and rising.
- Until the sealant is fully cured, do not expose the sealant to any mechanical stress. Uncured sealant will not respond properly to cyclic expansion and contraction of the joint specified for the cured sealant only.
- 916 is not recommended for glazing applications. Bond line strength can be affected by UV rays through the clear material (glass, acrylic glass, polycarbonate, etc.).
- Do not paint over the polyurethane sealant until it has fully cured.
- The surface of a 916 seal when exposed to UV rays and sunlight will yellow and will not retain its gloss. This phenomenon can occur within a few weeks after exposure. The change of color is limited to the surface layer of the seal and should not compromise the sealing properties of the 916 if the dimensions of the joint are proper and the sealant is otherwise properly applied. In areas where color retention is critical, please refer to Bostik PRO-MS 50™.

CAUTION

IRRITANT. MAY BE HARMFUL IF SWALLOWED OR INHALED. CONTAINS POTENTIAL SENSITIZER. MAY CAUSE ALLERGIC SKIN OR LUNG REACTION. MAY IRRITATE EYES, SKIN AND RESPIRATORY TRACT. Do not breathe fumes. Do not get in eyes, on skin or on clothing. Do not swallow. Use only in a well-ventilated area or wear mask. Wash thoroughly after handling. Store container in a cool, dry area with lid tightly sealed. Do not reuse container.

KEEP OUT OF REACH OF CHILDREN

FIRST AID TREATMENT

Contains petroleum resins, diisodecyl phthalate (DIDP), methylene diphenyl isocyanate (MDI), quartz silica. Methanol may form during curing. If in eyes or on skin, rinse with water for at least 15 minutes. If on clothes, remove clothes. If breathed in, move person to fresh air. If swallowed, call a Poison Control Center or doctor immediately. Do not induce vomiting.

SEE SAFETY DATA SHEET

CHEMICAL EMERGENCY: 800-424-9300 (USA), 703-527-3887 (International)

MEDICAL EMERGENCY: 866-767-5089

COVERAGE FOR 10.1 FL. OZ. (300 ML) CARTRIDGE

depth	width							
	1/8"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"
1/8"	99	49	33	24	20	16	14	12
1/4"		24	20	12	10	8	7	6
3/8"			11	8	6	5	5	4
1/2"				6	5	4	3	3

Linear Feet Per 10.1 FL. OZ. Cartridge

COVERAGE FOR 20 FL. OZ. (600 ML) SAUSAGE

depth	width							
	1/8"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"
1/8"	288	145	95	71	58	48	40	36
1/4"		71	58	36	29	23	20	17
3/8"			32	23	17	16	13	11
1/2"				17	14	11	10	8

Linear Feet Per 20 FL. OZ. Sausage

TABLE 1: TYPICAL UNCURED PROPERTIES*

Property	Value	Test Method/Note
Tool/Work Time	90 min.	Bostik Test Method
Skin Time	4 Hours	Bostik Test Method
Curing Time @77°F (25°C)	2-7 days	Varies w/relative humidity
Flow, Sag or Slump	0.3 inch	Bostik Test Method

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

TABLE 2: TYPICAL CURED PROPERTIES* (AFTER 14 DAYS CURE AT 77°F AND 50% RH)

Property	Value	Test Method/Note
Hardness (Shore A)	42	ASTM D 2240
Modulus @ 100% Elongation	65 psi	ASTM D 412
@ 25% Elongation	45 psi	ASTM D 412
Tensile Strength @ Break	133 psi	ASTM D 412
Elongation @ Break	685%	ASTM D 412
Adhesion Peel	>5 piw	TT-S-00230C / ASTM C 794
Joint Movement Capability	+25%	TT-S-00230C / ASTM C 719
UV Resistance	Pass	ASTM C 793

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

LIMITED WARRANTY

It is the buyer's obligation to test the suitability of the product for an intended use prior to using it. The Limited Warranty extends only to the original purchaser and is not transferable or assignable. Any claim for a defective product must be filed within 30 days of discovery of a problem, and must be submitted with written proof of purchase. Limited Warranty found at www.bostik.com/us or call 800.726.7845. TO THE MAXIMUM EXTENT ALLOWED BY LAW, BOSTIK DISCLAIMS ALL OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. UNLESS OTHERWISE STATED IN THE LIMITED WARRANTY, THE SOLE REMEDY FOR BREACH OF WARRANTY IS REPLACEMENT OF THE PRODUCT OR CREDIT OF THE BUYER'S PURCHASE PRICE. BOSTIK DISCLAIMS ANY LIABILITY FOR DIRECT, INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES TO THE MAXIMUM EXTENT ALLOWED BY LAW. DISCLAIMERS OF IMPLIED WARRANTIES MAY NOT BE APPLICABLE TO CERTAIN CLASSES OF BUYERS AND SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

BOSTIK HOTLINE

Smart help
1-800-726-7845

Bostik, Inc.
11320 W. Watertown Plank Road
Wauwatosa, WI 53226
www.bostik.com/us

