

#### Product Description

Vulkem® 116 is a textured, single-component, moisture-curing, gun-grade polyurethane sealant.

#### Basic Uses

Vulkem 116 is an excellent general-purpose sealant designed for use on poured and precast concrete, masonry work, window and door perimeters, and similar types of construction joints. Vulkem 116 is approved for exterior use only.

#### Features and Benefits

- Vulkem 116 has a 30-year history of delivering superior primerless adhesion to porous substrates, which makes it the choice for sealing expansion joints in commercial construction applications.
- Vulkem 116 is suitable for certain water immersion applications.
- Vulkem 116 is rated for +/-25% movement capability.
- The cure of the sealant can be accelerated with the addition of the Vulkem Catalyst 45/116.
- Vulkem 116 is durable, flexible, and offers excellent performance in dynamic joints.

#### Availability

Immediately available from your local Tremco Field Representative, Tremco Distributor or Tremco Warehouse.

#### Coverage Rates

308 linear feet of joint per gallon for a 1/4" x 1/4" (6 mm x 6 mm) joint. For specific coverage rates that include joint size, and usage efficiencies, visit our website usage calculator at [www.tremcosealants.com](http://www.tremcosealants.com).

#### Packaging

10.1-oz. (300-mL) cartridges, 20-oz. (600-mL) sausages, 2- and 5-gal (7.6- and 18.9-L) pails, and 55-gal (208-L) drums. All colors are not available in every package size. Contact Tremco Customer Service for more information.

#### Colors

Almond, Aluminum, Aluminum Stone, Anodized Aluminum, , Beige, Black, Bronze, Buff, Dark Bronze, Gray, Ivory, Limestone, Natural Clay, Redwood Tan, Stone, White.

#### Storage

Store Vulkem 116 in original, undamaged packaging in a clean, dry, protected location with temperatures between 40 to 110 °F (5 to 43 °C).

#### Applicable Standards

Vulkem 116 meets or exceeds the requirements of the following specifications:

- ASTM C920 Type S, Grade NS, Class 25, Use T, NT, M, A, I class II, and O
- U.S. Federal Specification TT-S-00230C, Class A, Type II
- CAN/CGSB-19.13-M87
- USDA regulation for indirect food contact
- Canadian Food Inspection Agency
- City of Los Angeles (COLA) approval standards

#### Limitations

- Do not apply Vulkem 116 over damp, green or contaminated surfaces.
- Vulkem 116 is approved for exterior use only. Do not use this product inside an occupied building even if there are no occupants present during use.

- Always utilize the sealant's SDS found on our website at [www.tremcosealants.com](http://www.tremcosealants.com) for information on proper ventilation, Personal Protective Equipment (PPE) and other health concerns.
- Do not use in chlorinated, potable, heavy or waste water.
- Although this product is paintable, this does not imply adhesion to and compatibility with all paints. Please refer to Tremco Technical Bulletin No. S-09-05 for more information.

#### Substrate Preparation

Surfaces must be sound and clean. All release agents, existing waterproofing, dust, loose mortar, paints, other finishes or field applied coating must be removed. This can be accomplished with a thorough wire brushing, grinding, sandblasting, or solvent washing, depending on the contamination.

Tremco recommends that surface temperatures be 40 °F (5 °C) or above at the time the sealant is applied. If sealant must be applied in temperatures below 40 °F, please refer to the Tremco Technical Bulletin for Applying Sealants in Cold Conditions (No. S-08-44 rev 1) that can be found on our website at [www.tremcosealants.com](http://www.tremcosealants.com)

#### Priming

Vulkem 116 typically adheres to common construction substrates without primers; however, Tremco always recommends that mock-up or field adhesion test be performed on the actual materials being used on the job to verify the need for a primer, proper cleaning and prep requirements. The field adhesion test can be found in appendix X1 of ASTM C 1193, Standard Guide for Use of Joint Sealants.

Where deemed necessary, use Vulkem Primer® #191 Low VOC QD for porous substrates and TREMprime® Non-Porous Primer for metals and plastics.

#### Application

Vulkem 116 is easy to apply with conventional caulking equipment. Ensure that the backer rod is friction-fitted properly and any primers have been applied.

Fill the joint completely with a proper width-to-depth ratio, and then tool to ensure intimate contact of sealant with joint walls.

Dry tooling is always preferred, although xylene can be used in limited amounts to slick the spatula if needed.

For a cleaner finish, mask the sides of the joint with tape prior to filling.

#### Joint Design

Vulkem 116 may be used in any vertical or horizontal joint designed in accordance with accepted architectural/engineering practices. Joint width should be 4 times anticipated movement, but not less than 1/4" (6 mm).

#### Joint Backing

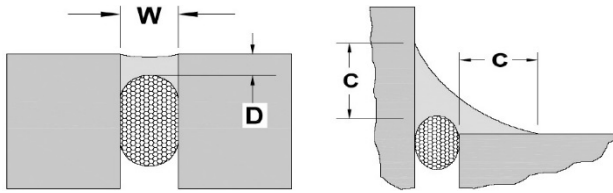
Closed cell or reticulated polyethylene backer rod is recommended as joint backing to control sealant depth and to ensure intimate contact of sealant with joint walls when tooling. Where depth of joint will prevent the use of backer rod, an adhesive backed polyethylene tape (bond breaker tape) should be used to prevent three-sided adhesion. All backing should be dry at time of sealant application.

#### Sealant Dimensions

W = Sealant width, D = Sealant depth, C = Contact area.

## Vulkem® 116

Multi-Purpose, Single-Component, Polyurethane Sealant



**EXPANSION JOINTS** - The minimum width and depth of any sealant application should be 1/4" x 1/4" (6 mm x 6 mm). The depth (D) of sealant may be equal to the width (W) of joints that are less than 1/2" (13 mm) wide. For joints ranging from 1/2" to 1" (13 mm to 25 mm) wide, the sealant depth should be approximately one-half of the joint width. The maximum depth (D) of any sealant application should be 1/2" (13 mm). For joints that are wider than 1" (25 mm) contact Tremco's Technical Service Department, or your local Tremco Sales Representative.

**WINDOW PERIMETER** – For fillet beads, or angle beads around windows and doors, the sealant should exhibit a minimum surface contact area [C] of 1/4" (6 mm) onto each substrate, with provisions for release at the heel of the angle using backer rod or bond breaker tape.

### Cure Time

Vulkem 116 generally cures at a rate of 1/16" (2 mm) per day at 75 °F (24 °C) and 50% RH. It will skin in 5 hr and be tack free in 30 hr. The cure time

will increase as temperatures and/or humidity decrease. A good rule of thumb is one additional day for every 10 °F decrease in temperature.

### Clean Up

Excess sealant and smears adjacent to the joint interface can be carefully removed with xylene or mineral spirits before the sealant cures. Any utensils used for tooling can also be cleaned with xylene or mineral spirits.

### Warranty

Tremco warrants its Products to be free of defects in materials, but makes no warranty as to appearance or color. Since methods of application and on-site conditions are beyond our control and can affect performance, Tremco makes no other warranty, expressed or implied including warranties of MERCHANTABILITY and FITNESS FOR A PARTICULAR PURPOSE with respect to Tremco Products. Tremco's sole obligation shall be, at its option, to replace or refund the purchase price of the quantity of Tremco Products proven to be defective, and Tremco shall not be liable for any loss or damage.

Please refer to our website at [www.tremcosealants.com](http://www.tremcosealants.com) for the most up-to-date Product Data Sheets.

NOTE: All Tremco Safety Data Sheets (SDS) are in alignment with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) requirements.

## TYPICAL PHYSICAL PROPERTIES

| PROPERTY                     | TEST METHOD          | TYPICAL VALUES   |
|------------------------------|----------------------|--|
| Type                         |                      | Single component polyurethane sealant  |
| Color                        |                      | Almond, Aluminum, Black, Bronze, Buff, Gray, Dark Bronze, Ivory, Limestone, Redwood Tan, Beige, Stone, Anodized Aluminum, Aluminum Stone, White, Natural Clay. |
| Solids                       |                      | 94%  |
| Specific Gravity             |                      | 1.1344   |
| Application                  |                      | gun-grade sealant, applied with typical caulking equipment   |
| Extrusion Rate               | ASTM C1183           | 40 to 50 mL/min  |
| Hardness Properties          | ASTM C661            | 40   |
| Weight Loss                  | ASTM C1246           | Pass   |
| Skin Time                    | ASTM C679            | 6 hr   |
| Tack Free Time               | 73.4°F (23°C) 50% RH | 30 hr  |
| Stain and Color Change       | ASTM C510            | No visible color change/No stain   |
| Adhesion to Concrete         | ASTM C794            | 20 to 25 pli (89 to 111 N)   |
| Adhesion to Brick            | ASTM C794            | 19 to 23 pli (85 to 102 N)   |
| Effects of Accelerated Aging | ASTM C793            | Pass   |
| Movement Capability          | ASTM C719            | ±25%   |
| Tensile Strength             | ASTM D412            | 200 to 250 psi   |
| % Elongation                 | ASTM D412            | 200 to 300%  |

### 0819/V116DS-ST

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