Vulkem® 445SSL

Field-Tintable, Semi-Self-Leveling, Multi-Component, Polyurethane Sealant

Product Description

Vulkem® 445SSL is field-tintable, semi-self-leveling, multi-component, moisture-curing, polyurethane sealant that includes a tintable base and a choice of 70 standard colors.

Basic Uses

Vulkem 445SSL is formulated for use in expansion joints in sidewalks, swimming pool decks, plazas, floors and any other horizontal surface with slopes up to 6% (e.g. 1' rise for every 16' run).

Features and Benefits

- Vulkem 445SSL is a traffic rated, pourable, semi-self-leveling sealant with exceptional primerless adhesion and movement capability.
- Vulkem 445SSL is suitable for continuous immersion in non-chlorinated water and can be applied to damp and green concrete.
- The Vulkem 445SSL technology provides the sealant with greater UV resistance and will not out gas.
- Vulkem 445SSL provides exceptional wear and tear resistance required in high traffic areas.

Availability

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

Coverage Rates

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

Packaging

1.5-gal (5.7-L) kits that require a separate color pak (pigment) to be added.

Colors

Vulkem 445SSL is available as a neutral base that can be tinted to your choice of 70 standard colors or can be custom matched to virtually any color upon request.

Storage

Store Vulkem 445SSL in original, undamaged packaging in a clean, dry, protected location with temperatures between 40 to 110 ˚F (5 to 43 ˚C).

Applicable Standards

Vulkem 445SSL meets or exceeds the requirements of the following specifications:

- ASTM C920, Type M, Grade P, Class 35, Use T, M, A, O and I (Class 2)
- CAN/CGSB 19.13-M87, MC-1-25-B-N

Limitations

- Do not apply over contaminated surfaces.
- Do not use in immersed conditions that contain chlorinated water.
- Use with adequate ventilation.
- Always utilize the accompanying MSDS for information on Personal Protective Equipment (PPE) and Health Hazards.
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- Although Vulkem 445SSL 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

Damp/Green Concrete

Vulkem 445SSL can be applied to green concrete 24 hr after the forms have been removed. All concrete sealers or curing agents need to be removed by grinding before applying sealant. The concrete can be damp during application, but do not apply sealant where there is standing water in or close to the joints. It is recommended to catalyze with water when applying sealant on damp surfaces.

Priming

Vulkem 445SSL typically adheres to concrete and stone without primers; however, Tremco always recommends that a mock-up or field adhesion test be performed on the actual materials being used on the job to verify the need for a primer. A description of the field adhesion test can be found in appendix X1 of ASTM C1193, Standard Guide for Use of Joint Sealants.

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

Application

Mix the color pak in accordance with the mixing instructions noted in the Technical Bulletin on Vulkem 445SSL that can be found on our website at www.tremcosealants.com.

Continue mixing until there are no color striations within the sealant.

Apply with conventional caulking equipment, filling in the joint completely, and tool.

Tremco recommends installing a mock-up to determine acceptability of color, texture and adhesion.

Joint Design

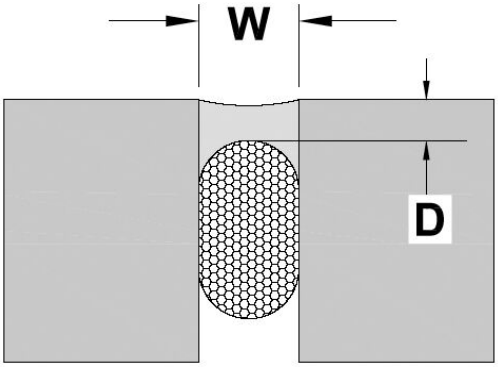
Vulkem 445SSL may be used in any horizontal joint designed in accordance with accepted architectural/engineering practices. Joint width should be 4 times anticipated movement, but not less than 1/4" (6 mm).

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. Backer rod needs to be properly friction-fitted for use with self-leveling sealants to prevent leak out of sealant during cure. 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



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" 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 your local Tremco Sales Representative or Tremco Technical Services.

Cure Time

At 75 °F (23.9 °C), 50% RH a skin forms within 5 hr. Curing continues at a rate of approximately 1/16" (1.6 mm) depth per day. The cure time will increase as the temperature and/or humidity decrease. A good rule of thumb is one additional day of cure for every 10 °F decrease in temperature. Cure time can be increased by adding water when using pails of Vulkem 445SSL. Please refer to the Technical Bulletin on Vulkem 445SSL Optional Catalyst that can be found on our website at www.tremcosealants.com.

Clean Up

Excess sealant 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 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		Two component semi-self-leveling urethane sealant
Color		Vulkem 445SSL is available as a neutral base that can be tinted to your choice of 70 standard colors.
Solids		98%
Specific Gravity		1.32
Application		Semi-self-leveling sealant, applied with typical caulking equipment
Rheological Properties	ASTM C639	Semi-self-leveling, levels moderately. Holds up to 6% slope.
Hardness, durometer scale “A”	ASTM C661	40 to 45
Weight Loss	ASTM C1246	3%
Skin Time	ASTM C679	1.5 to 2 hr
Tack Free Time	73.4°F (23°C) 50% RH	<5 hr
Stain and Color Change	ASTM C510	No stain, No color change
Adhesion to Concrete	ASTM C794	Before water: 31 pli
Adhesion to Concrete After Immersion	ASTM C794	28 pli
Adhesion to Green Concrete	ASTM C794	>15 pli
Adhesion to Damp Concrete	ASTM C794	>15 pli
Accelerated Weathering	ASTM C793	Pass
Movement Capability	ASTM C719	+100% / -50%
Tensile Strength	ASTM D412	250 to 300 psi
% Elongation	ASTM D412	600 to 750%
Tear Strength	ASTM D412	35 pli (156N)

Tremco Commercial Sealants & Waterproofing

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