Vulkem® 45SSL

Semi-Self-Leveling, Single-Component, Polyurethane Sealant

Product Description

Vulkem® 45SSL is a semi-self-leveling, single-component, moisture-curing, low-modulus, polyurethane sealant.

Basic Uses

Vulkem 45SSL is formulated for use in expansion joints in sidewalks, swimming pool decks, plazas, floors and any other horizontal surfaces with slopes up to 6% (e.g. 1' rise for every 16' run).

Features and Benefits

- Vulkem 45SSL is a traffic rated, pourable, semi-self-leveling sealant with exceptional primerless adhesion and movement capability.
- Vulkem 45SSL is suitable for continuous immersion in non-chlorinated water.
- The Vulkem 45SSL technology provides the sealant with greater UV resistance and will not out gas.
- Vulkem 45SSL provides exceptional wear and tear resistance required in high traffic areas.
- Formulated with an innovative polymer technology, similar to TREMproof® 250GC and Dymonic® 100, Vulkem 45SSL is highly versatile and has a unique capability to adhere to damp or green concrete.

Availability

Vulkem 45SSL is immediately available from your local Tremco Sales Representative, distributor, or warehouse.

Coverage Rates

308' 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

Packaging

1-qt (890-mL) cartridges
2-gal (7.6-L) pails
5-gal (18.9-L) pails
55-gal (208-L) drums

Colors

Black, Buff, Gray, Limestone, White.

Shelf Life

1 year when stored at 40 to 100 °F (5 to 38 °C)

Storage

Store Vulkem 45SSL in original, undamaged packaging in a clean, dry, protected location with temperatures between 40 to 110 ˚F (5 to 43 ˚C).

Applicable Standards

Vulkem 45SSL meets or exceeds the requirements of the following specifications:

- ASTM C920, Type S, Grade P, Class 35, Use T, M, A, O and I (Class 2)
- CAN/CGSB 19.13-M87, MC-1-25-B-N
- ASTM E 1966/UL 2079

Fire Rated Systems

FF-D-1062, and FW-D-1058

Limitations

- Use with adequate ventilation.
- Always utilize the accompanying MSDS for information on Personal Protective Equipment (PPE) and Health Hazards.
- Vulkem 45SSL is not recommended for use in chlorinated, potable, heavy or waste water.
- Although Vulkem 45SSL 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

Priming

Vulkem 45SSL typically adheres to common construction substrates 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, proper cleaning and prep requirements. 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 on porous substrates and TREMprime® Non-Porous Primer for metals or plastics.

Application

Vulkem 45SSL is easy to apply with conventional caulking equipment. Ensure that the backer rod is properly friction-fitted 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 substrates.

Dry tooling is always preferred, although compatible wetting agents can be used in limited amounts to slick the spatula if needed after an initial pass.

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

Joint Design

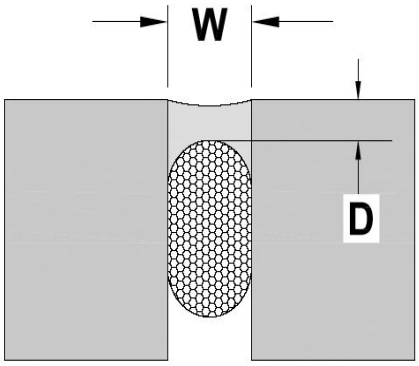
Vulkem 45SSL may be used in horizontal joints designed in accordance with accepted architectural/engineering practices. Joint width should be 4 times anticipated movement but not less than 1/4" (6 mm).

Joint Backing

Polyethylene backer rod is recommended as joint backing to control sealant depth and ensure intimate contact of sealant with joint substrate 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 the 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 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 Tremco Technical Services or your local Tremco Sales Representative.

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) 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 45SSL. Please refer to the Technical Bulletin on Vulkem 45SSL Activator that can be found on our website at: www.tremcosealants.com

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 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		4 Standard Colors
Solids		98%
Specific Gravity		1.32
Application		Semi self leveling sealant, applied with typical caulking equipment
Rheological Properties	ASTM C639	Type I Single component, flowable
Hardness, durometer scale “A”	ASTM C661	40 +/-5
Weight Loss	ASTM C1246	Pass
Skin Time	ASTM C679	2 hr
Tack Free Time	73.4°F (23°C) 50% RH	5 hr
Stain and Color Change	ASTM C510	Pass
Adhesion to Concrete	ASTM C794	31 pli (before water)
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
Effects of Accelerated Aging	ASTM C793	Pass
Movement Capability	ASTM C719	+/-35%
Movement Capability	ASTM C719* Modified	+100/-50%
Tensile Strength	ASTM D412	250 to 300 psi
% Elongation	ASTM D412	600 to 750%
Tear Strength	ASTM D412	35 psi
Service Temperature		-40 to (-40 to 37°C)
Application Temperature		40 to 100°F (4 to 37 °C)

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