Vulkem® 45SSL

One-Part, Semi-Self-Leveling Sealant

Product Description

Vulkem 45SSL is a one-part, moisture-curing, low-modulus polyurethane sealant. It provides exceptional wear and tear resistance required in high traffic areas.

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 and can be applied to damp and green concrete. The technology in Vulkem 45SSL provides the sealant with greater UV resistance and will not out gas.

Uses

Vulkem 45SSL 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 in. rise for every 16 in. run).

Colors

Black, Buff, Gray, Limestone, White.

Packaging

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

Coverage Rate

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

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

Joint Design

Vulkem 45SSL 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 in. (6mm).

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.

TYPICAL PHYSICAL PROPERTIES

(Results of recent testing at 72˚F (22˚C) after 21 days cure time.)

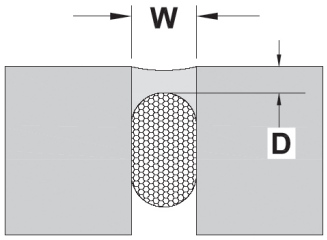
Property	Test Method	Typical Value
Rheological Properties	ASTM C639	Semi-self-leveling, levels moderately* Holds up to 6% Slope
Weight Loss	ASTM C1246	3%
Hardness Properties, scale "A"	ASTM C661	40-45
Skin Time (tooling time)		1.5-2 hours
Tack-Free Time	ASTM C679	<5 hours
Stain & Color Change	ASTM C510	No stain, No color change
Adhesion to Concrete	ASTM C794	Before water: 31 pli After water: 28 pli Green: >15 pli Damp: >15pli
Accelerated Weathering	ASTM C793	Pass
Movement Capability	ASTM C719 **	+100% / -50%
Tensile Strength	ASTM D412	250-300 psi
Elongation	ASTM D412	600-750%
Tear Strength	ASTM D412	35 pli (156N)

There is no method specific in ASTM C920 that defines the rheology of a semi-self-leveling sealant.

****** Modified ASTM C719***

Sealant Dimensions

W = Sealant width, D = Sealant depth,



EXPANSION JOINTS - The minimum width and depth of any sealant application should be 1/4 in. x 1/4 in. (6mm x 6mm).

The depth (D) of sealant may be equal to the width (W) of joints that are less than 1/2 in. wide. For joints ranging from 1/2 in. to 1 in. (13mm to 25mm) wide, the sealant depth should be approximately one-half of the joint width.

The maximum depth (D) of any sealant application should 1/2 in. (13mm). For joints that are wider than 1in. (25mm) contact your local Tremco Sales Representative or Tremco Technical Services.

Surface Preparations

Surfaces must be sound and clean. All release agents, existing waterproofing, dust, loose mortar, laitance, paints, or other finishes 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 Guide for Applying Sealants in Cold Weather that can be found on our website at www.tremcosealants.com.

Priming

Where deemed necessary, use Vulkem Primer #191 Low-VOC for porous surfaces, and TREMprime Non-Porous Primer for metals. Vulkem 45SSL 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.

Application

Vulkem 45SSL is easy to apply with conventional caulking equipment. Ensure that the backer rod is friction fitted properly to provide the proper width-to-depth ratio and any primers have been applied. Fill the joint completely from the backer rod up, and allow the sealant to self-level to a smooth, even finish. For a cleaner finish, mask the sides of the joint with tape prior to filling.

Cure Time

At 75° F (23.9° C), 50% R.H. a skin forms within 5 hours. Curing continues at a rate of approximately 1/16 in. (1.6mm) 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 45SSL. Please refer to the Technical Bulletin on Vulkem 45SSL Activator that can be found on our website at www.tremcosealants.com.

Damp/Green Concrete

Vulkem 45SSL can be applied to green concrete 24 hours 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.

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.

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.

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 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.

Tested system numbers FF-D-1062 and FW-D-1058

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