

Effisus Stopper M-1 Sealant

Effisus **Stopper M-1 Sealant** is a moisture curing, polyether adhesive/sealant designed for application in damp, dry, or cold climates. Effisus Stopper M-1 Sealant is solvent free and contains no isocyanates. Effisus Stopper M-1 Sealant will not shrink upon curing, will not discolour when exposed to UV light, and can not “out-gas”, or bubble, on damp surfaces as urethane sealants often do. Effisus Stopper M-1 Sealant is capable of joint movement in excess of 35% in both compression and extension. Effisus Stopper M-1 Sealant can be used in many difficult construction site conditions, it cures in wet or dry climate conditions and at temperatures as low as 0°C.



Effisus Stopper M-1 Sealant

Technical data

Essential characteristics	Method	Result
Material	-	Polyether
Colour	-	Grey
Gun grade	-	Zero Slump
Viscosity	Brookfield RVF TF Spindle, 4 RPM, 23°C	1.200,000cp +/-400,000cp
Density	ASTM D1475	1,43 g/cm ³
Tack free time	45 +/- 5% R.H.	35 min +/- 10 min
Elongation at break	ASTM D412	525%
Hardness Shore A	ASTM C661	45
Tensile strength	ASTM D412	2,55 N/mm ²
Shear strength	ASTM D1002	2,69 N/mm ²
Tear strength	ASTM D624	19,44 N/mm
Low temperature flex	ASTM D522	Pass -26°C 0,64cm mandrel
Shrinkage	-	No visible shrinkage after 14 days
Service temperature	-	-40°C to +93.3°C

Typical Peel Values ASTM C794

Vinyl	9,63 N/mm cohesive failure
Glass	9,63 N/mm cohesive failure
Aluminum	9,63 N/mm cohesive failure
Cut concrete (unprimed)	6,30 N/mm cohesive failure



Applicable Performance Standards

ASTM C920, Type S, Grade NS, Class 35. Uses NT, T1, M, G, A & O
ASTM E84, Class A
ASTM D4586
Federal Specification TT-S-00230-C Type II, Class B
Corps of Engineers CRD-C-541, Type II, Class B
Canadian Standards Board CAN 19, 13-M82
SWR Institute Validated (Sealant Waterproofing and Restoration)

Regulatory Compliance

Conforms to OTC Rule for Sealant and Caulks.
Meets requirements of BAAQMD, CARB and SCAQMD.
This product does not contain cancer causing chemicals listed in California Proposition 65. Conforms to USDA requirements for Non-food Contact.

Green Standards

LEED 2.2 for New Construction and Major Renovations: Low Emitting Materials (Section 4.1) 1 Point
NAHB Model Green Home Building Guidelines: 5 Global Impact Points
VOC Content: less than 24 grams / liter ASTM D2369 EPA Method 24 (tested at 115°C).

Compatible substrates*	
Aluminium and Galvanized Metal	Block and Brick
Concrete and Stone	Wood
Engineered Plastics	EIFS (Exterior Insulation Finish System)
Vinyl	EPS Foam (Expanded polystyrene)
Glass	Fiberglass FRP (Fiber reinforced polymer)
EPDM	Asphalt Shingles
Modified Bitumen	Stainless Steel
PVC (peel-out-test)	-

*
Test and evaluate to ensure adequate adhesion.



Advantages

Solvent free, 100% solids, will not shrink.
Non-slump, applies vertically and overhead.
20 minute skin over.
No outgassing on damp surfaces.
Very good color stability, will not suntan.
Paintable within 24 hours (See limitations).
Gun grade, no special tools or mixing required.
Can be applied at temperatures as low as 0°C.
ISO 9001:2015 certified.

Technical Characteristics

Basic Uses

Expansion joints

Pre-cast Concrete

Block and Masonry

Window and door frames

Siding

Parapets

Cove joints

Transportation

Weather sealing

Limitations

Horizontal applications will require tooling.
In areas where prolonged chemical exposure is anticipated, contact Effisus Technical Department for recommendations.
Allow treated wood to "cure" for six months prior to application per APA guidelines.
Do not use in areas subject to continuous immersion.
Do not store in elevated temperatures.
Allow asphalt to cure a minimum of six months before applying Effisus Stopper M-1 Sealant.
Remove all coatings and sealers before application.
Please contact customer service for application guidelines with temperatures below 0°C.
Test and evaluate all paints before applications. Polyurethane and oil based paints may dry slowly.
Does not bond to Kynar 500 PVDF coated metals.

Application Guidelines

Application Instructions

Remove all dirt, oil, loose paint, frost and other contamination from all working surfaces with Effisus Cleaner. DO NOT USE petroleum solvents such as mineral spirits or xylene. Maintain Effisus Stopper M-1 Sealant at room temperature before applying to ensure easy gunning and levelling. Test and evaluate to ensure adequate adhesion. Carefully gun the sealant with a smooth, continuous bead. If tooling is needed, do so within fifteen minutes of application.

Metal

Prepare all metal to ensure maximum adhesion. Remove all rust, scale and residue by wire brushing to a bright metal sheen. Remove films, loose or inappropriate coatings and oils with the Effisus Cleaner. *

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Effisus recommends that coated substrates be tested for adhesion prior to starting a project. Please contact Technical Services for specific application guidelines and recommendations.

Concrete

Prior to application remove any residual contamination by mechanical abrasion, sand blasting or power washing. On green concrete, remove all release agents, friable and loose concrete. Dry all visible and standing water prior to applying Effisus Stopper M-1 Sealant. Install an appropriate backer rod to avoid three-point bonding.

Wood

Wood should be clean, sound and dry prior to sealant application. Allow treated wood to weather for six months prior to application. Remove all coatings and paint (or test for compatibility) to ensure proper bonding. Do not use on fire retardant lumber.

Priming

In most instances, Effisus Stopper M-1 Sealant will not require a primer. However, certain applications or substrates may require a primer to ensure a long lasting bond and weather proof seal. It is the applicator's responsibility to determine the need for a primer. Effisus recommends a primer be used for any application where prolonged immersion is anticipated.

Joint Preparation

Joint surfaces should be clean, dry and free from all contamination including: dirt, oils, grease, tar, wax, rust and any other substance that may inhibit the sealant's performance.

The logo for Effisus, featuring the word "effisus" in a lowercase, sans-serif font. The letters are dark blue, and the "i" has a dot.

Joint Design

Joints shall be designed with a depth to width ratio of 1:2 (joint depth one-half the width). Control the depth of the sealant by using a polyethylene backer rod that is 25% larger than the joint opening at standard temperature. To prevent three-point adhesion use a backer rod or bond breaker tape to ensure proper joint movement and a long lasting weatherproof seal. Where the joint configuration will not permit a backer rod, Effisus recommends that an alternative bond breaker be used.

Note:

Use a primer on high moving joints or dissimilar substrates which require increased adhesion properties.

Joint Width (mm)	Joint Depth (mm)
6-13	6
13-19	6-10
19-25	10-13
25-50	13

Clean-Up

Wet sealant can be removed using a solvent such as Effisus Cleaner. Cured Effisus Stopper M-1 Sealant can be removed by abrading or scraping the substrate.

Others

Packaging

300ml cartridges

Storage

Store original, unopened containers in a cool, dry area. Protect unopened containers from water, heat and direct sunlight. Elevated temperatures will reduce shelf life. Effisus Stopper M-1 Sealant will not freeze.

Shelf Life

One year from date of manufacture when stored at 21°C with 50% relative humidity. High temperature and high relative humidity may significantly reduce shelf life.

Caution

Avoid prolonged contact with skin. Uncured adhesive irritates eyes. In case of contact with eyes, immediately flush with water. Call a doctor. Please refer to the SDS for First Aid information.
KEEP OUT OF REACH OF CHILDREN.

