

Effisus Stopper System

Effisus **Stopper** is an innovative and reliable system solution for sealing flat or slopped roof as well as facade penetrations of any size or configuration. Being applicable in virtually all base materials (asphaltic membranes, PVC, TPO, EPDM or metal) it offers complete versatility and will remain functional under sub-zero or high temperatures, direct UV exposure and will accommodate large/ repetitive movements.

For vertical penetrations, the use of Effisus Stopper 1-P self-levelling sealant is recommended as the primary filler, with Effisus Stopper M-1 applied as the bonding. For horizontal penetrations, only Effisus Stopper M-1 shall be used. For further information, refer to the installation manual.



ACCESSORIES · Effisus Multishapper · Effisus Stopper M-1 · Effisus Stopper 1-P

Effisus Multishapper



Effisus Multishapper is a stretchable, flexible and conformable L shaped curb, based on polymer rubber with an interior aluminium reinforcement, that can be easily shaped without requirements for special tools, to obtain a curb with any geometry desired. Final curb is closed easily in one step (no tools) with a metal locking clip and is intended to be filled with liquid or semi-liquid materials. Resistant to ice, stagnant water and ozone stable.

Effisus Multishapper is usually used in combination with Effisus Stopper M-1 and Effisus Stopper 1-P sealants for sealing roof penetrations of any size or geometry, without requirements for mechanical fixing, torch, or metal flashing. It can be used on any surface such as PVC, TPO or EPDM, granulated modified bitumen, asphalt membranes, concrete and metal. With a proper installation, the system forms a durable and waterproof rubber seal around penetrations of any size. The final solution is environmentally friendly as sealants do not contain VOC's.

Technical data

| Essential characteristics | Result |
|---------------------------|--|
| Composition | Rubber polymer with an aluminium reinforcement |
| Thickness | 2.1mm (-0.1/+0.3mm) |
| Dimensions | Standard: L shape 50+25mm x 1m ^(*) |
| Colours | Grey RAL 7037 ^(**) |
| Density | 1710 kg/m ³ = 3.9kg/m ² |
| Temperature resistance | -40°C to +90°C |
| UV and Ozone resistance | Resistant |
| Weather/ageing resistance | Resistant |
| Solubility | Non soluble in water |
| Fire reaction | EN 13501-1 – Class E |
| Health security | No remarks |

^(*)
Other dimensions available upon request.

^(**)
Other colours available upon request (may depend on quantities).

effisus

Others

Basic Use

Effisus Multishapper is usually used in combination with Effisus Stopper M-1 and Effisus Stopper 1-P sealants for sealing roof penetrations of any size or geometry. Effisus Multishapper can be used as a general curb. It that can be easily shaped, without requirements for special tools, to obtain a curb with any geometry desired. Final curb is closed easily in one step (no tools) with a metal locking clip. After adhered to a bottom substrate it is intended to be filled with liquid or semi-liquid materials.

Composition

Based on polymer rubber with an interior aluminium reinforcement.

Others (cont.)

Packaging

Supplied in kits for 1, 3 or 5 linear meters with metal clips and installation manual.

| Reference | Designation | Quantity | Unit |
|-----------|---|----------|------|
| 200801 | Kit Effisus Multishapper - 1lm | 1 | kit |
| | Composed by: | | |
| | Effisus Multisphapper Membrane L (50x25mm) x 1lm - Grey | 1 | un |
| | Effisus Multishapper Clip 50x25mm | 3 | un |
| | Effisus Multishapper - Step-by-step installation manual | 1 | un |
| 200802 | Kit Effisus Multishapper - 3lm | 1 | kit |
| | Composed by: | | |
| | Effisus Multisphapper Membrane L (50x25mm) x 1lm - Grey | 3 | un |
| | Effisus Multishapper Clip 50x25mm | 9 | un |
| | Effisus Multishapper - Step-by-step installation manual | 1 | un |
| 200803 | Kit Effisus Multishapper - 5lm | 1 | kit |
| | Composed by: | | |
| | Effisus Multisphapper Membrane L (50x25mm) x 1lm - Grey | 5 | un |
| | Effisus Multishapper Clip 50x25mm | 15 | un |
| | Effisus Multishapper - Step-by-step installation manual | 1 | un |

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.

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 |

effisus

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.

The logo for Effisus, featuring the word "effisus" in a lowercase, sans-serif font. The letters are dark blue, and the 'e' and 'i' have a slight dot above them.

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. *

*

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. The logo is positioned in the bottom right corner of the page.

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.



Effisus Stopper 1-P Sealant



Effisus Stopper 1-P Sealant is a moisture curing, pourable sealant designed for use in curbs and warranted Effisus Multishapper seals. Effisus Stopper 1-P Sealant is suitable for application in damp, dry, or cold climates. Effisus Stopper 1-P Sealant is solvent free, contains no isocyanates and will not shrink upon curing. Effisus Stopper 1-P Sealant can not "out-gas" or bubble on damp surfaces as urethane sealants often do. Effisus Stopper 1-P Sealant has resilient "elastomeric" properties and excellent adhesion to most construction materials. Effisus Stopper 1-P Sealant can be used effectively in many difficult construction site conditions and cures in wet or dry climate conditions and at low temperatures (0°C). Effisus Stopper 1-P Sealant's low durometer accommodates greater movement in penetration seals than typical urethane sealants.

Technical data

Cure Time

Effisus Stopper 1-P Sealant is a moisture cure sealant. The rate of cure is dependent on atmospheric conditions. Curing proceeds at a rate of 6,3mm a week at 22°C and 50% Relative Humidity. Lower temperature and humidity will inhibit the rate of cure. Higher temperature and humidity will accelerate the rate of cure. Depths of more than 50mm will cure through in 2 to 3 months. DO NOT install if rain is anticipated within 4 hours.

Colour

Grey

Service Temperature

-40°C to 93°C

Regulatory Compliance

Conforms to OTC Rule for Sealants and Caulks.

Meets requirements of CARB, BAAQMD and SCAQMD.

This product does not contain cancer causing chemicals listed in California Propositions 65.

Conforms to USDA Requirements for Non-food Contact.

effisus

Green Standards

LEED 2.2 for New Construction and Major Renovations: Low Emitting Materials (Section 4.1) 1 Point.

NAHB Model Green Home Buildings Guidelines: 5 Global Impact Points.

VOC Content: less than 19 grams/litre, ASTM D2369, EPA Method 24 (tested at 115°C).

Compatible substrates

Aluminium and Galvanized Metal

Concrete and Stone

Single Ply membranes

Modified Bitumen

EPDM

Asphalt

PVC (peel-out-test)

Technical Characteristics

Advantages

Solvent free, 100% solids will not shrink.

20 minute skin over.

No outgassing on damp surfaces.

Good UV stability, will not suntan.

Paintable within 24 hours (see limitations).

Self leveling, no special tools or mixing required.

Can be applied at temperatures as low as 0°C.

ISO 9001:2015 certified

Limitations

Do not store in elevated temperatures.

Please contact customer service for application guidelines with temperatures below 0°C. Do not install if rain is anticipated within 4 hours.

Do not use on Hypalon membranes.

Smooth APP membranes require a prior installation of a granulated target of APP modified bitumen around the penetration.

Do not use in areas subject to continuous immersion.

Remove all coatings and sealers before application.

In areas where prolonged chemical exposure is anticipated, contact Effisus Technical Department for recommendations.

Do not prime bonding surfaces with asphalt primer.

Test and evaluate all paints before application. Alkyd and oil based paints may dry slowly. Do not use asphalt cement as a "night sealant" around the base of the penetration.

Use Effisus Stopper M-1 Sealant for this purpose.

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

Application Guidelines

Application Instructions

Remove all previously applied caulk, mastic, cement, asphalt and other contaminants from penetrations with Effisus Cleaner. Brush away all gravel or loose granules. DO NOT USE petroleum solvents, such as mineral spirits or xylene. Maintain Effisus Stopper 1-P Sealant at room temperature before applying to ensure easy levelling. Test and evaluate to ensure adequate adhesion. Dry all visible and standing water prior to applying Effisus Stopper 1-P Sealant.

For Effisus Stopper Systems, position the Effisus Multishapper and apply the Effisus Stopper M-1 Sealant following the instructions on the respective Technical Data Sheets and Installation Manual.

NOTE: It is recommended to fill the ENTIRE Effisus Multishapper with Effisus Stopper 1-P Sealant and maintain a 25mm distance between the penetration and inside edge of the Effisus Multishapper to provide an adequate rubber seal.

Clean-Up

Wet adhesive can be removed using a solvent such as Effisus Cleaner. Cured sealant can be removed by abrading or scraping the substrate.

Others

Packaging

1890ml 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 1-P Sealant will not freeze.

Shelf Life

One year from the date of manufacture when stored in normal environments (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 and contact a doctor. Please refer to the SDS for First Aid information.

KEEP OUT OF REACH OF CHILDREN.

Important Notice

Except where prohibited by law, Effisus makes no warranties, expressed or implied, statutory or otherwise, including but not limited to, any implied condition or warranty of merchantability or fitness for a particular purpose. User is responsible for determining whether this Effisus product is fit for a particular purpose and suitable for user's method of application.

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