

Planning documents
Waterproofing system under mastic asphalt (OS 10)

Triflex AWS





Waterproofing system under mastic asphalt (OS 10)

Triflex AWS

Applications



Triflex AWS is a fully reinforced waterproofing system, which is used underneath mastic asphalt. This heat-resistant system, made from fast-curing polymethyl methacrylate resins (PMMA), allows swift completion and seals all joints and details seamlessly.

Liquid-applied waterproofing used in conjunction with mastic asphalt in new buildings and refurbishments offer an alternative combination to standard technology, with the benefits of innovative waterproofing technology for both details and full surfaces.

Triflex has more than 40 years experience of using durable waterproofing and coating systems in the world of building refurbishment. Triflex AWS is a system solution that has been specially developed for waterproofing with asphalt, which meets all requirements in terms of resistance to heat, alkali and hydrolysis.

Innovative material mix

A key feature of Triflex AWS is the speed with which it can be processed, thus saving time and costs. Primers on mineral substrates can be recoated after just 45 minutes. Hot mastic asphalt can be applied to the subsequent waterproofing layer after just 3 hours. Triflex ProDetail, the waterproofing resin for details, is factory prepared as a thixotropic formulation in order to prevent the resin from sliding off vertical surfaces.

The liquid application of the waterproofing resin guarantees reliable protection down to the smallest detail. In this way, connections can be sealed homogeneously even in extremely confined spaces. The full-surface adhesion strength of the substrate prevents any underflow of rainwater. The polyester fleece-reinforced system forms a seamless and joint-free surface, which is also highly resilient with dynamic crack bridging.



Advantages at a glance

Waterproof down to the smallest detail

The cured resin forms a seamless and joint-free waterproofing. Even complicated details, such as double T sections and rounded kerbs, can be easily waterproofed using liquid processing technology.

Short processing times

The liquid-applied Triflex AWS system has particularly rapid curing times. Waterproofing resin and primer can be recoated after just 45 minutes. The wearing layer of mastic asphalt can be applied after just 3 hours.

Technically and optically clean connections

Triflex AWS does not require mechanical flashing strips at connection areas. Finishes and a variety of surface options allow the system to be enhanced with a range of colours.

Easy to maintain

Triflex AWS has excellent mechanical and chemical stability. The system is hydrolysis- and alkali-resistant. It also fully bonds to the substrate preventing the underflow of rainwater.

Certified safety

Triflex AWS has been awarded a Class OS 10 General Building Supervisory Authority Test Certificate (abP) with a protective layer of mastic asphalt MA 11 S acc. to Building Regulations List A Part 2, No. 2.24 and VV TB, Section C 3.12 and has fire classification C_{fl}-s1 (flame-retardant) as per DIN EN 13501-1. The system implemented in Triflex ProDetail has been awarded European Technical Approval (ETA) and meets the requirements of the Construction Products Directive of the EU (CE marking). The material has passed a heat resistance test through mastic asphalt up to +250 °C. Its root resistance is also certified acc. to FLL test methods. Furthermore, the Triflex ProDetail waterproofing system has a General Building Supervisory Authority Test Certificate (abP) in accordance with Building Regulations List A Part 2, No. 1.12 and VV TB, Section C 3.28 "Liquid-applied waterproofing of building structures".

Triflex AWS



And this is how it's done...



1. Old coverings are removed.



2. The primer can be recoated after just 45 minutes.



3. Triflex ProDetail is applied to any intersections and details, ...



4. ... the fleece reinforcement is cut to shape and ...



5. ... another generous layer of Triflex ProDetail is applied.



6. This is followed by the surface waterproofing ...



7. ... which is applied wet-on-wet with Triflex ProPark and Triflex Special Fleece.



8. For a better bond, an additional wear layer is applied with Triflex ProPark and sprinkled with quartz sand.



9. Just 3 hours later, hot mastic asphalt of up to 250 °C can be applied.



10. Fast and reliably waterproofed!



Compatible system components

All the Triflex products mentioned in this system are lab-scale and application coordinated as a result of years of experience. This standard of quality ensures optimum results during both application and use.



Waterproofing system under mastic asphalt (OS 10)

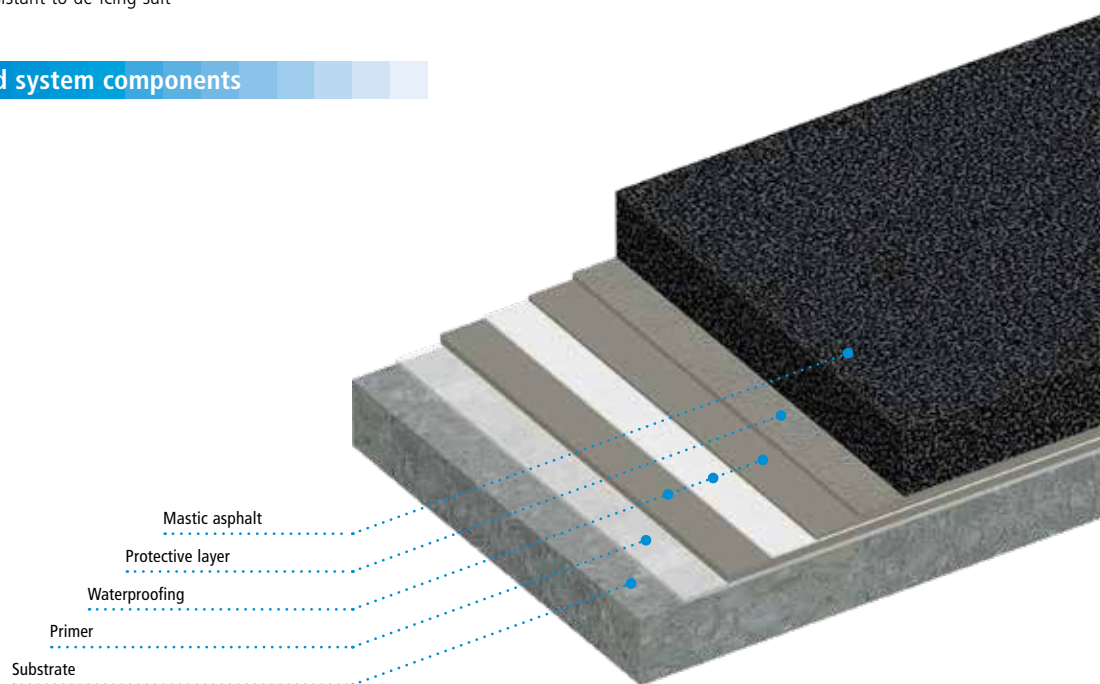
Triflex AWS

System description

Properties

- Fully reinforced waterproofing system with a polymethyl methacrylate (PMMA) base
- Hydrolysis-resistant
- Seamless
- Cold-applied
- Fast-curing
- Flexible in low temperatures
- Full-surface adhesion and impermeable
- Root- and rhizome-resistant (in line with FLL specifications)
- Extremely weather-resistant (UV, IR, etc.)
- Resistant to the thermal demands of the mastic asphalt (up to +250 °C)
- Elastic and crack-bridging
- Vapour-permeable, resistant to de-icing salt
- Resistant to chemicals present in air and rainwater
- Resistant to sparks and radiant heat (DIN 4102)
- Class OS 10 General Building Supervisory Authority Test Certificate (abP) according to Building Regulations List A Part 2, No. 2.24 and VV TB, Section C 3.12, fire classification C_{fl}-s1 as per DIN EN 13501-1
- Additional test according to TL/TP BEL-B 3, which confirms shear and tear strength
- ETA certification with CE marking
- AbP in accordance with Building Regulations List A, Part 2, No. 1.12 and VV TB, Section C 3.28 "Liquid-applied waterproofing of building structures"

System design and system components



System components

Primer

Triflex Primer for sealing the substrate and ensuring substrate adhesion (see substrate pre-treatment table).

Waterproofing

Triflex ProPark/Triflex ProDetail waterproof membrane, fully reinforced with a sturdy Triflex special polyester fleece.

Protective layer

Triflex ProPark/Triflex ProDetail for protection of the waterproofing, with sanding if applicable.

Mastic asphalt

MA 11 S grade topcoat.

Substrate

Substrate suitability should always be checked on a case-by-case basis. The substrate must be clean, dry and free of cement bloom, dust, oil, grease and other adhesion-reducing dirt. The substrate must be pre-treated in accordance with the specifications in the Repair Guideline (Rili SIB). The following volume specifications relate to a roughness depth of $R_r = 0.5$ mm.

Moisture: When carrying out application work, the substrate moisture must not exceed 6 % by weight. Ensure that structural measures are taken to prevent moisture penetration of the coating from underneath.

Dew point: During application, the surface temperature must be at least 3 °C above the dew point temperature. Below this temperature, a separating film of moisture can form on the surface.

Hardness: Mineral substrates must be permitted to fully harden for at least 28 days.

Adhesion: The following minimum tensile adhesion strengths must be met on pre-treated test areas:
Concrete: in the centre, at least 1.5 N/mm², individual value not less than 1.0 N/mm².

Triflex AWS

System description

Substrate pre-treatment

Substrate	Pre-treatment	Primer
Aluminium ⁽¹⁾	Abrade with Triflex Cleaner, roughen surface	No primer ⁽²⁾
Asphalt	Grinding, milling or dust-free shot-blasting executed transversely	Triflex Cryl Primer 222
Bitumen membrane (APP, SBS)	Cleaning, adhesive strength and compatibility test	Triflex Cryl Primer 222
Composite thermal insulation systems ⁽¹⁾		Triflex Pox Primer 116+
Concrete	Grinding, milling or dust-free shot-blasting executed transversely	Triflex Cryl Primer 287
Copper ⁽¹⁾	Abrade with Triflex Cleaner, roughen surface	No primer ⁽²⁾
Epoxy resin coating	Roughen surface, adhesive strength and compatibility test	No primer
Glass ⁽¹⁾	Abrade with Triflex Cleaner, roughen surface, adhesive strength test	Triflex Glass Primer
Lightweight concrete ⁽¹⁾		Triflex Cryl Primer 287
Mortar, resin-modified	Grinding, milling or dust-free shot-blasting executed transversely; adhesive strength and compatibility test	Triflex Pox Primer 116+
Paints	Grinding or milling, completely remove	See substrate
Plaster/masonry ⁽¹⁾		Triflex Cryl Primer 287
PU coating	Roughen surface, adhesive strength and compatibility test	No primer
PVC mouldings, hard ⁽¹⁾	Abrade with Triflex Cleaner, roughen surface	No primer
Screeds	Grinding, milling or dust-free shot-blasting executed transversely	Triflex Cryl Primer 287
Stainless steel ⁽¹⁾	Abrade with Triflex Cleaner, roughen surface	No primer ⁽²⁾
Steel, galvanised ⁽¹⁾	Abrade with Triflex Cleaner, roughen surface	No primer ⁽²⁾
Tiles	Mechanically remove glaze	Triflex Cryl Primer 287
Wood ⁽¹⁾	Remove paints	Triflex Cryl Primer 287
Zinc ⁽¹⁾	Abrade with Triflex Cleaner, roughen surface	No primer ⁽²⁾

⁽¹⁾ Only in areas not subject to high mechanical stress, e.g. details and flashing.

⁽²⁾ Alternative to roughening: abrade with Triflex Cleaner, prime with Triflex Metal Primer. Loose rust and blistering rust must first be removed. Information on other substrates is available on request (technik@triflex.de).

Important note:

Adhesion to the substrate must be checked on a case-by-case basis!

Primer

Triflex Cryl Primer 222

Apply evenly with a Triflex universal roller.

Volume: at least 0.40 kg/m².

Can be recoated after approx. 45 min.

Triflex Cryl Primer 287

Pour on thickly and spread evenly using a cellular rubber spreader.

Then cross-coat using a Triflex Universal Roller.

Volume: at least 0.35 kg/m².

Can be recoated after approx. 45 min.

Triflex Glass Primer

Wipe on GP evenly with a cleaning cloth.

Volume approx. 50 ml/m².

Can be recoated after approx. 15 min. up to max. 3 hrs.

Triflex Metal Primer

Apply a thin coat with a short-pile roller or, alternatively, spray a thin coat with a spray can.

Volume: approx. 80 ml/m².

Can be recoated after approx. 30 to 60 min.

Triflex Pox Primer 116+

Pour on thickly and spread evenly using a cellular rubber spreader.

Then recoat using a Triflex universal roller.

Do not allow puddles to form.

Dress with not too much of the fresh primer.

Volume of Triflex Pox Primer 116+: at least 0.30 kg/m².

Volume of quartz sand 0.3–0.8 mm: at least 0.70 kg/m².

Can be recoated after approx. 12 hrs. to max. 24 hrs.



Triflex AWS

System description

Repairing

In the case of roughness depths R_t 0.5 to 1 mm:

Scratch coat for repairing mineral or bituminous substrates with the addition of up to 10 kg quartz sand 0.2–0.6 mm* per 33 kg of Triflex DeckFloor.
Volume: at least 2.00 kg/m² per mm layer thickness.
Can be recoated after approx. 1 hr.

In the case of roughness depths R_t 1 to 10 mm:

Levelling coat for repairing mineral or bituminous substrates with the addition of up to 20 kg quartz sand 0.7–1.2 mm* per 33 kg of Triflex DeckFloor.
Volume: at least 2.00 kg/m² per mm layer thickness.
Can be recoated after approx. 1 hr.

In the case of roughness depths $R_t > 10$ mm:

Triflex Cryl RS 240

Mortar for repairing mineral substrates.
Volume: at least 2.20 kg/m² per mm layer thickness.
Can be recoated after approx. 45 min.

In the case of unevenness in detail area:

Triflex Cryl Paste

Paste for filling in shrinkage cracks, smaller areas of damage and for levelling out uneven areas and fleece overlaps.
Volume: approx. 1.40 kg/m² per mm layer thickness.
Can be recoated after approx. 1 hr.

Detail waterproofing

Application is wet-on-wet.

1. Triflex ProDetail

Apply evenly with a radiator roller.
Volume: at least 2.00 kg/m².

2. Triflex Special Fleece

Lay strips, removing any air bubbles.
Overlap the fleece strips by at least 5 cm.

3. Triflex ProDetail

Apply until the Triflex Special Fleece is fully saturated.
Volume: at least 1.00 kg/m².

Total volume of Triflex ProDetail: at least 3.00 kg/m².
Can be recoated with a liquid-applied surface waterproofing after approx. 45 min., can be overlaid with mastic asphalt after approx. 3 hrs.
For dimensions, see Triflex AWS system drawings.

Important note:

1. In the case of Variants with only the detailed waterproofing (connections and terminations, penetrations, etc.) with liquid plastic waterproofing, at least 20 cm must always be connected to the waterproofing membrane in the surface.
For dimensions, see Triflex AWS-5207 and AWS-5208 system drawings.
2. To improve bonding between the mastic asphalt and the Triflex waterproofing, an additional protective layer of sanding can be applied. See the following for application:

Protective layer for detail waterproofing:

1. Triflex ProDetail

Apply evenly with a Triflex Universal Roller.
Volume: at least 1.50 kg/m².

2. Quartz sand, size 0.7–1.2 mm

Dress the wet protective layer in excess.
Volume: at least 7.00 kg/m².

Remove any surplus quartz sand after approx. 2 hrs.
Can be overlaid with mastic asphalt after approx. 3 hrs.
For dimensions, see Triflex AWS system drawings.

Important note:

Horizontal details can also be waterproofed with Triflex ProPark.

Joint waterproofing

Construction joint:

1. PE round sealing band

Place in the widened joint as an impregnation stop (if necessary).

2. Triflex Cryl RS 240 / Triflex ProDetail

Level joint flush with surface (if necessary).
The subsequent application is wet-on-wet.

3. Triflex ProDetail

Apply a width of 16 cm with a radiator roller.
Volume: at least 0.30 kg/m.

4. Triflex Special Fleece

Insert a 15 cm wide strip, removing any air bubbles.
Overlap the ends of the fleece by at least 5 cm.

5. Triflex ProDetail

Apply until the Triflex Special Fleece is fully saturated.
Volume: at least 0.30 kg/m.

Total volume of Triflex ProDetail: at least 0.60 kg/m.
Can be recoated with a liquid-applied surface waterproofing after approx. 45 min., can be overlaid with mastic asphalt after approx. 3 hrs.
For dimensions, see Triflex AWS system drawings.

* The quartz sand grading curve must be adjusted on site, if necessary.

Triflex AWS

System description

Settlement joint:

Joints subject to normal mechanical stress.

1. Triflex Cryl Paste

Apply a width of approx. 4 cm to both sides of the joint to bond the Triflex Support Strip.

2. Triflex Support Strip

Lay in the joint as a loop.

Can be recoated after approx. 1 hr.

The subsequent application is wet-on-wet.

3. Triflex ProDetail

Apply to both sides of the joint and on the support strip using a radiator roller.

Volume: at least 0.70 kg/m.

4. Triflex Special Fleece

Lay a 35 cm wide strip as the first loop, making sure there are no air bubbles.

Overlap the ends of the fleece by at least 5 cm.

5. Triflex ProDetail

Apply to completely saturate the Triflex Special Fleece and as a preliminary layer for the next fleece loop.

Volume: at least 0.70 kg/m.

6. Triflex Special Fleece

Lay a 35 cm wide strip as the second loop, making sure there are no air bubbles.

Overlap the ends of the fleece by at least 5 cm.

7. Triflex ProDetail

Apply until the Triflex Special Fleece is fully saturated.

Volume: at least 0.70 kg/m.

Can be recoated after approx. 1 hr.

Total volume of Triflex ProDetail: at least 2.10 kg/m.

After application of the surface waterproofing and finish.

8. PE round sealing band

Place in the joint.

9. Triflex FlexFiller

Seal the joint so it is flush with the surface.

Volume: approx. 1.40 kg/m² per mm layer thickness.

Can be recoated with a liquid-applied surface waterproofing after approx.

45 min., can be overlaid with mastic asphalt after approx. 3 hrs.

For dimensions, see Triflex AWS system drawings.

Important note:

1. The construction joint or settlement joint is taped off with adhesive tape for the subsequent layers so that the joint remains permanently taped off. All further layers are only taken to the edge of the joint. Prior to curing the layer, the adhesive tape must be removed and new tape applied for each further layer.
2. **The settlement joints are all maintenance joints. For visual reasons, it may be necessary to renew the joint ingress protection after structural movement.**
3. In the case of Variants with only the detailed joint waterproofing (construction and expansion joints) with liquid plastic waterproofing, at least 20 cm must always be connected to the waterproofing membrane in the surface.

Surface waterproofing

Application is wet-on-wet.

1. Triflex ProPark

Apply evenly with a Triflex Universal Roller.

Volume: at least 2.00 kg/m².

2. Triflex Special Fleece

Lay fleece, removing any air bubbles. Overlap the strips of fleece by at least 5 cm.

3. Triflex ProPark

Apply until the Triflex Special Fleece is fully saturated.

Volume: at least 1.00 kg/m².

Total volume of Triflex ProPark: at least 3.00 kg/m².

Can be recoated after approx. 45 min.

For dimensions, see Triflex AWS system drawings.

Important note:

The surface waterproofing is omitted in the area of the settlement joint.

Protective layer

1. Triflex ProPark

Apply evenly with a Triflex Universal Roller.

Volume: at least 1.50 kg/m².

2. Quartz sand, size 0.7–1.2 mm

Dress the wet protective layer in excess.

Volume: at least 7.00 kg/m².

Remove any surplus quartz sand after approx. 2 hrs.

Can be overlaid with mastic asphalt after approx. 3 hrs.

Important note:

The surface waterproofing is omitted in the area of the settlement joint.

Finishing

The waterproofing system does not require finishing. Details can be finished for aesthetic purposes.

Triflex Cryl Finish 209

Cross-coat evenly using a Triflex Universal Roller.

Volume: at least 0.50 kg/m².

Rainproof after approx. 30 min.

Important note:

The sealing of all vertical junctions, transitions and details must be carried out prior to the surface finishing with thixotropic Triflex Cryl Finish 209. The product is thickened by the in-situ addition of 1 % by weight Triflex Liquid Thixo.



Waterproofing system under mastic asphalt (OS 10)

Triflex AWS

System description

Other covering

Overlaying of a subsequent other covering (e.g. mastic asphalt) can be performed after approx. 3 hrs.

Important note:

The constructive design details depend on the other covering being applied. The Triflex AWS system drawings are only intended to serve as examples.

Work interruptions

If work is interrupted for more than 12 hrs, or if soiled by rain etc., the intersection must be activated with Triflex Cleaner. Airing time at least 20 min. Transitions to subsequent waterproofing must overlap including Triflex Special Fleece by a minimum of 10 cm. This also applies to junctions, transitions and detail solutions with Triflex ProDetail. The finish must be applied within 24 hrs. If this application is delayed for any reason, the surface to be finished must be pre-treated with Triflex Cleaner.

System components

For information on applications, conditions for use and instructions for mixing, see product information (request if necessary):

Triflex Cleaner	Triflex Glass Primer
Triflex Cryl Finish 209	Triflex Liquid Thixo
Triflex Cryl Primer 222	Triflex Metal Primer
Triflex Cryl Primer 287	Triflex Pox Primer 116+
Triflex Cryl RS 240	Triflex ProDetail
Triflex Cryl Paste	Triflex ProPark
Triflex DeckFloor	Triflex Special Fleece
Triflex FlexFiller	

Quality standard

All Triflex products are manufactured in accordance with the standards defined in ISO 9001. To ensure quality is not compromised, Triflex products are only installed by specialist, fully trained and qualified contractors.

Gradient/Evenness

Before commencing any surfacing work and during the work itself, it is essential to ensure the correct gradient and evenness of the substrate. Any corrections required must be taken into account during this work.

Dimensional tolerances

When carrying out surfacing work, always ensure compliance with the permissible tolerances for building construction (DIN 18202, Table 3, line 4).

Safety tips/Accident prevention

Read the safety data sheets before using the products.

Required volumes/Waiting times

The specified volumes apply only to smooth, even substrates with a maximum roughness depth of $R_T = 0.5$ mm. Special allowances must be made for unevenness, roughness and porosity.

Information regarding airing and waiting times applies to a substrate at an ambient temperature of $+20^\circ\text{C}$.

Application notes

Driving lane coatings are subject to constant loads and stresses in accordance with the level of use. The effects of UV light and weather as well as organic dyes (e.g. foliage) and various chemicals (e.g. disinfectants, acids, etc.) may cause discolouration, yellowing and chalking effects in finishes. Abrasion can scratch the surface. This does not affect the mechanical properties of the cured coating.

General notes

The basis for the use of Triflex products can be found in the system descriptions, system drawings and product information sheets. It is essential to heed these when planning and carrying out the building project. Departures from the technical information of Triflex GmbH & Co. KG applicable at the time of work can compromise the guarantee. Any project-related departures are subject to the written authorisation of Triflex.

All data is based on general regulations, directives and other technical rules. The general regulations applicable in the particular country of use must be respected.

Since the parameters can vary from case to case, the user is required to test the suitability, e.g. of the substrate.

Non-Triflex products must not be used with Triflex systems. Subject to change in the interests of technical advancement or enhancement of Triflex products.

Tender texts

Please visit the Download section of the Triflex website at www.triflex.com to obtain the current standard specifications, which are available in a range of different file formats. Alternatively, visit the website www.ausschreiben.de or www.heinze.de.

CAD drawings

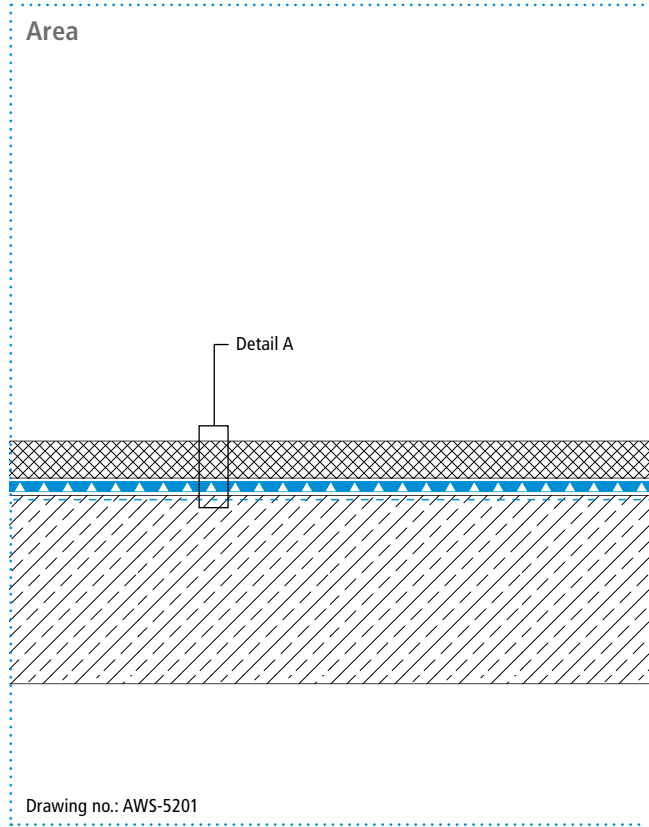
All CAD system drawings can be downloaded free of charge from the Download section of the Triflex website www.triflex.com.

Waterproofing system under mastic asphalt (OS 10)

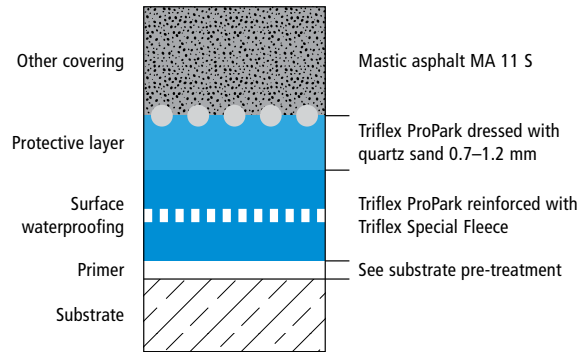
Triflex AWS



System drawings

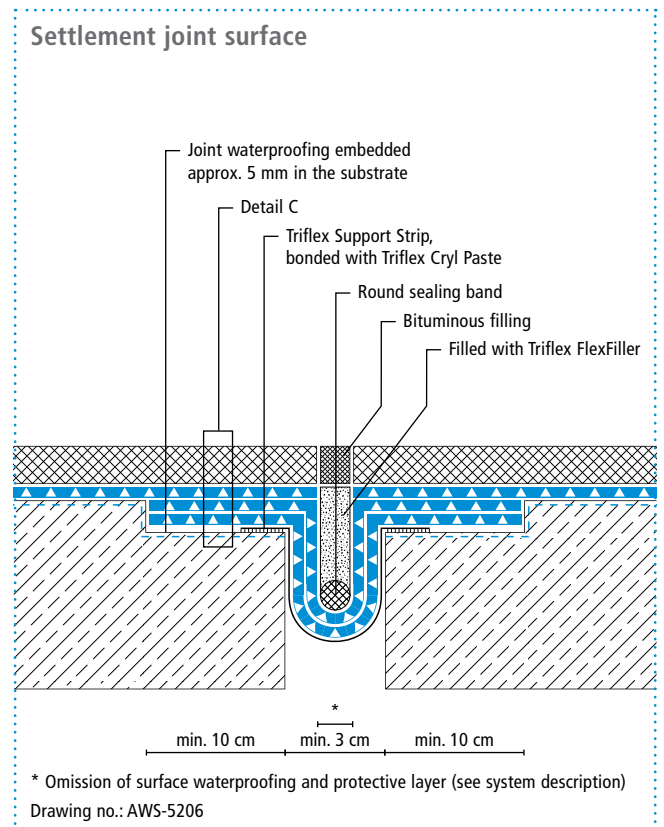
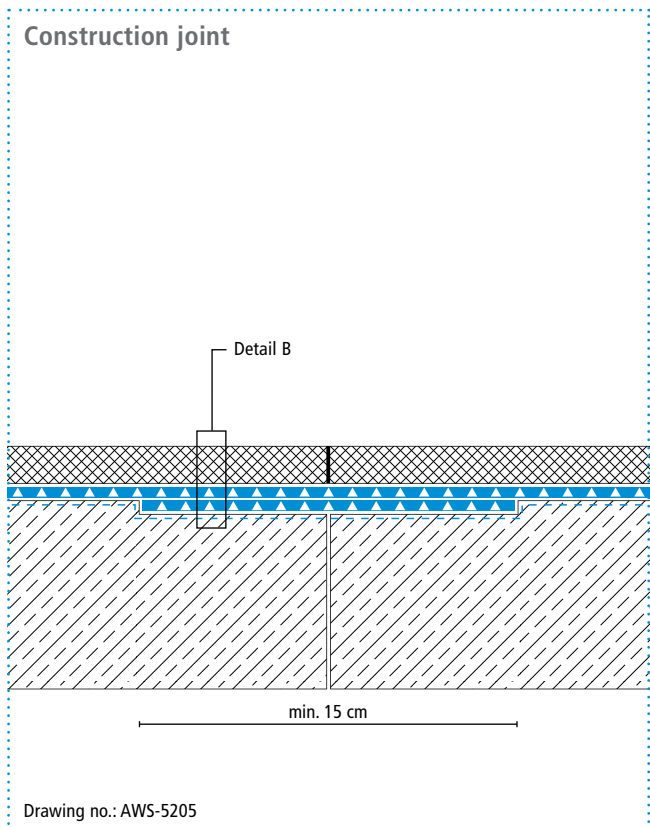
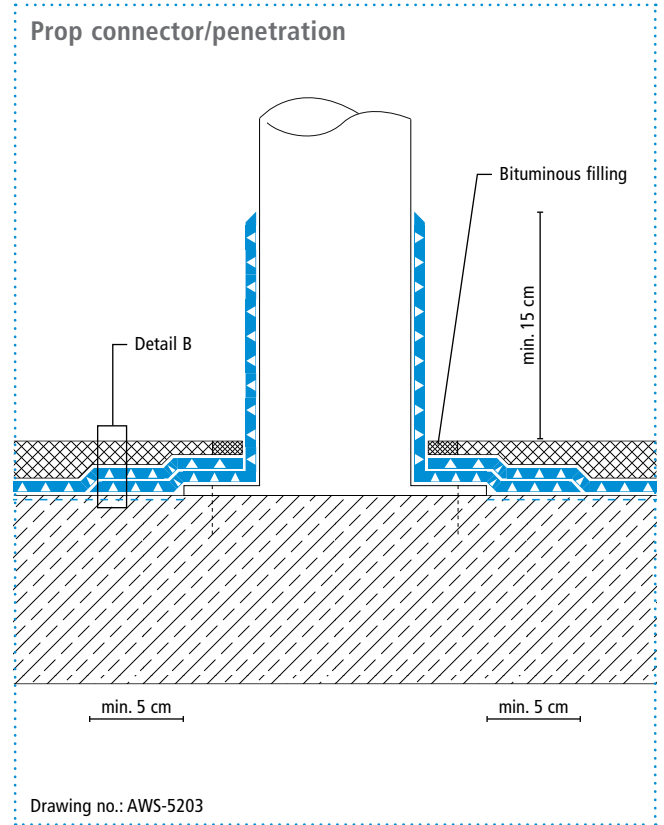
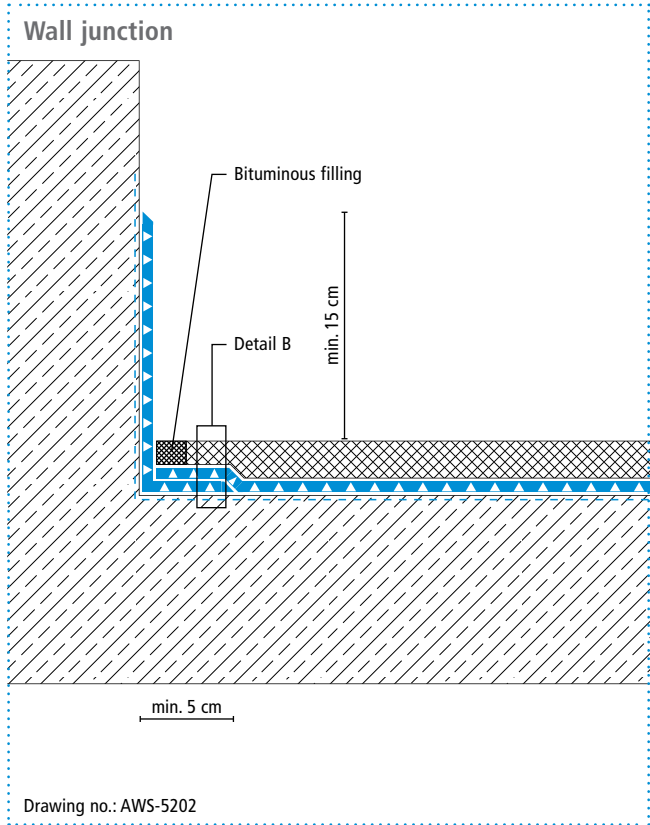


System set-up – Detail A



Triflex AWS

System drawings



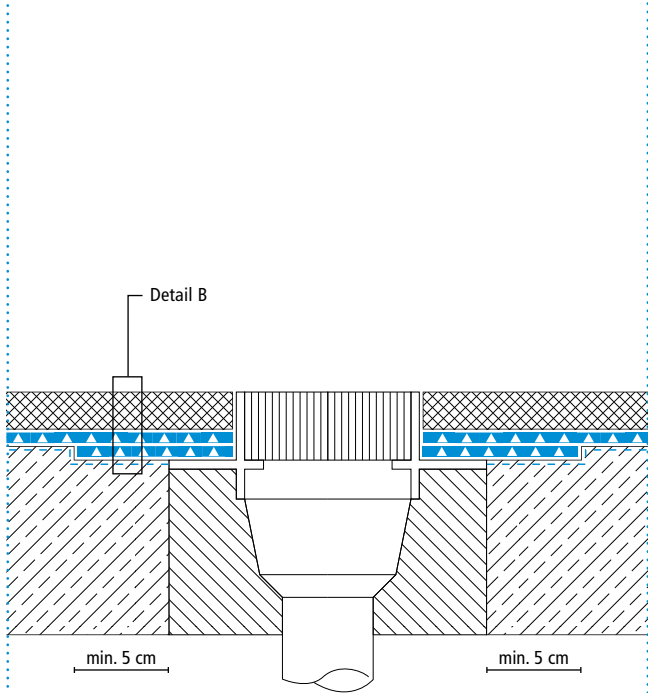
Height differences between fleece overlaps are exaggerated.

Triflex AWS



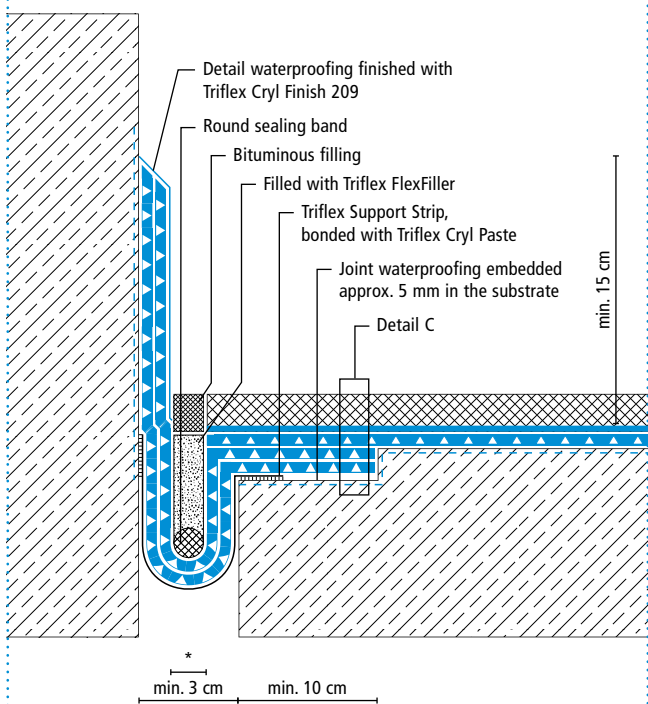
System drawings

Gully/Gutter



Drawing no.: AWS-5204

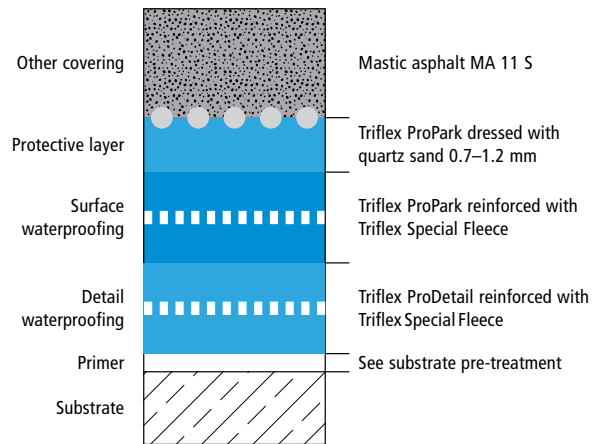
Settlement joint – wall junction



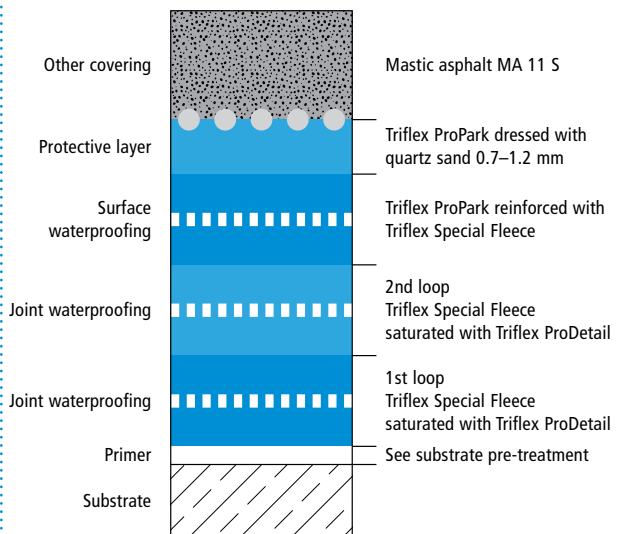
* Omission of surface waterproofing and protective layer (see system description)

Drawing no.: AWS-5207

System set-up – Detail B



System set-up – Detail C



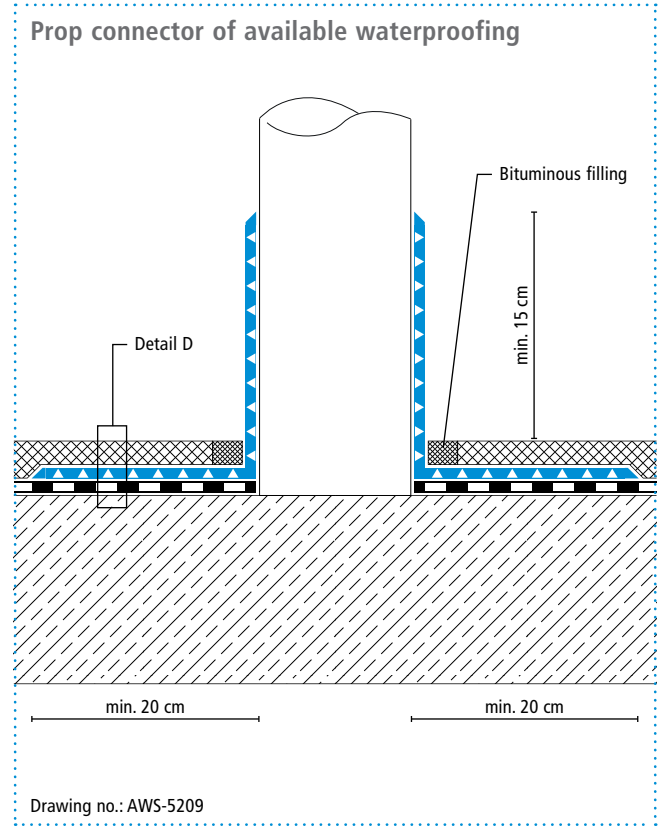
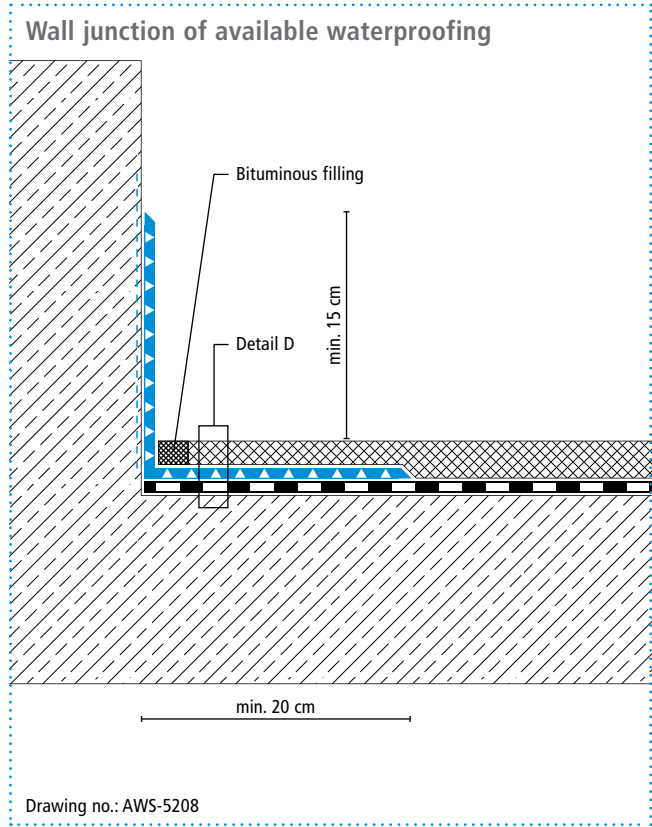
Height differences between fleece overlaps are exaggerated.



Waterproofing system under mastic asphalt (OS 10)

Triflex AWS

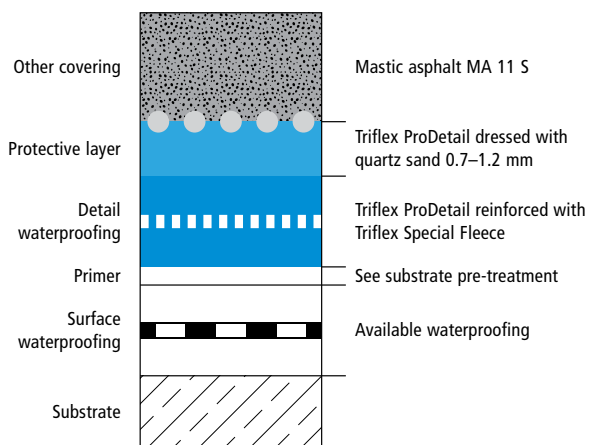
System drawings



Triflex AWS



System set-up – Detail D





Waterproofing system under mastic asphalt (OS 10)

Triflex AWS

Triflex AWS surfaces

Details – dress with quartz sand and finish with Triflex Cryl Finish 209



7030 Stone grey



7031 Blue grey



7032 Pebble grey



7035 Light grey



7037 Dusty grey



7040 Window grey



1023 Traffic yellow



2009 Traffic orange



3020 Traffic red



4006 Traffic purple



5017 Traffic blue



6024 Traffic green



7043 Traffic grey



9010 White

Note:

Minor variations between the colour shown here and the actual colour are due to printing technology and the materials used.

Waterproofing system under mastic asphalt (OS 10)

Triflex AWS



Triflex

Delivering solutions together.

International

Triflex GmbH & Co. KG
Karlstrasse 59
32423 Minden | Germany
Fon +49 571 38780-708
international@triflex.com
www.triflex.com

