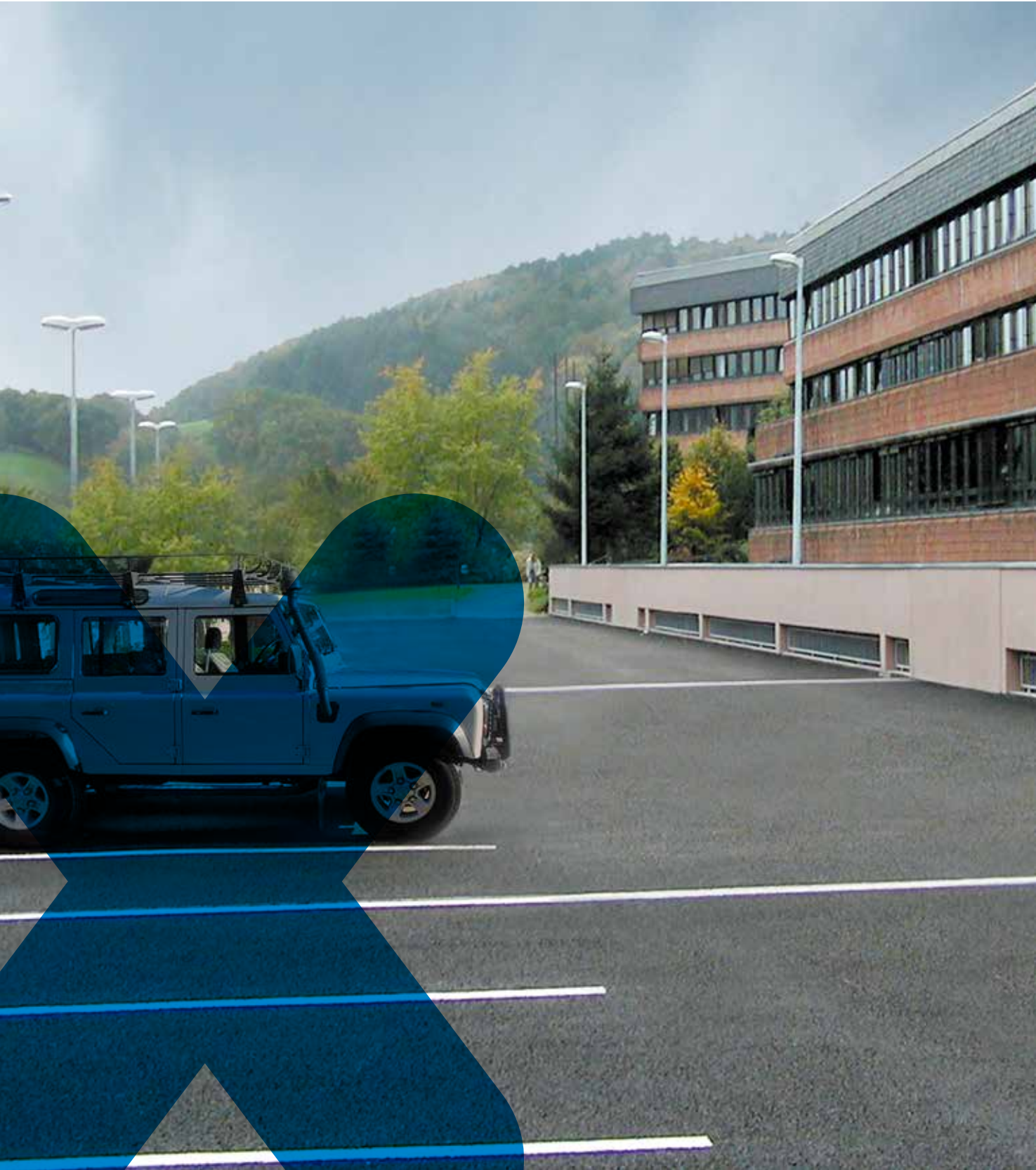


Planning documents
Waterproofing system under mastic asphalt (OS 10)

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 45 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 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 dressings 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-resistant and alkali-resistant. It also fully bonds to the substrate preventing the underflow of rainwater.

Certified reliability

Triflex AWS has been awarded a Class OS 10 general building supervisory authority test certificate (abP) with a protective layer of mastic asphalt, and meets the requirements as per DIN 18532, Part 6 and VV TB, Part C, No. C 3.16, 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 VV TB, Part C, No. C 3.28 "Liquid-applied waterproofing of building structures".

Waterproofing system under mastic asphalt (OS 10)

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 carefully coordinated on the basis of laboratory testing and years of experience. This standard of quality ensures optimum results during both application and use.



Waterproofing system under mastic asphalt (OS 10)

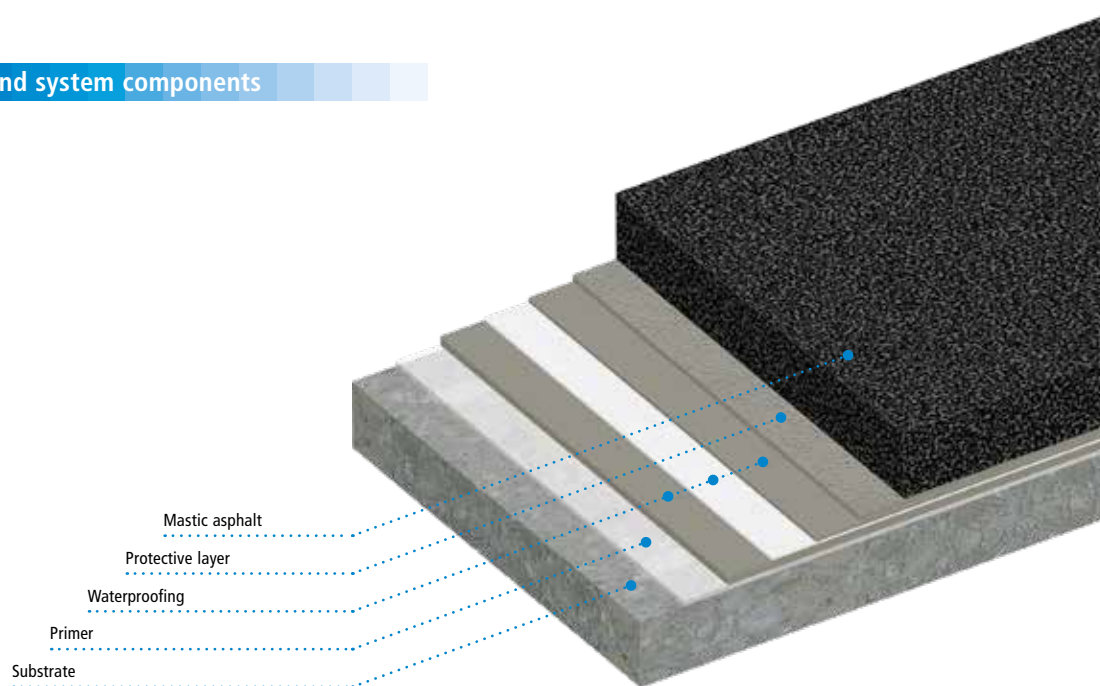
Triflex AWS

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 resistant to infiltration from below
- 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)
- Fire classification C_{fl}-s1 in compliance with DIN EN 13501-1
- Additional test according to TL/TP BEL-B 3, which confirms shear and tear strength
- ETA certification with CE marking
- General building supervisory authority test certificate (abP) for class OS 10 as per VV TB, Part C, No. C 3.16 and as per DIN 18532-6

System build-up 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

The suitability of the specific substrate should always be tested on a case-by-case basis. The substrate must be clean, dry and free of cement bloom, dust, oil, grease and other adhesion-inhibiting substances. The substrate must be pretreated in accordance with the specifications in the Repair Guideline (RL SIB). The consumptions specified below assume a surface roughness of $R_f = 0.5$ 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 pretreated test areas:

Concrete: on average, 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 ^(A)	Abrade with Triflex Cleaner	Triflex Metal Primer ^(B)
Asphalt	Grinding, milling or dust-free shot-blasting in criss-cross pattern	Triflex Cryl Primer 222
Bitumen membrane (APP, SBS)	Cleaning, adhesive strength and compatibility test	Triflex Cryl Primer 222
Composite thermal insulation systems ^(A)	Remove any loose material	Triflex Pox Primer 116+
Concrete	Grinding, milling or dust-free shot-blasting in criss-cross pattern	Triflex Cryl Primer 287
Copper ^(A)	Abrade with Triflex Cleaner	Triflex Metal Primer ^(B)
Epoxy resin coating	Roughen surface and test adhesive strength and compatibility	No primer
Glass ^(A)	Abrade with Triflex Glass Cleaner, adhesive strength test	Triflex Glass Primer
Lightweight concrete ^(A)	Remove any loose material	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+
Paint	Grinding or milling to remove completely	See substrate
Plaster/render/masonry ^(A)	Remove any loose material	Triflex Cryl Primer 287
PU coating	Roughen surface and test adhesive strength and compatibility	No primer
PVC mouldings, rigid ^(A)	Abrade with Triflex Cleaner, roughen surface	No primer
Screeds	Grinding, milling or dust-free shot-blasting in criss-cross pattern	Triflex Cryl Primer 287
Stainless steel ^(A)	Abrade with Triflex Cleaner	Triflex Metal Primer ^(B)
Steel, galvanised ^(A)	Abrade with Triflex Cleaner	Triflex Metal Primer ^(B)
Tiles	Mechanically remove glaze	Triflex Cryl Primer 287
Wood ^(A)	Remove any paint	Triflex Cryl Primer 287
Zinc ^(A)	Abrade with Triflex Cleaner	Triflex Metal Primer ^(B)

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

^(B) Alternative to priming: Abrade with Triflex Cleaner and roughen surface.

Information on other substrates is available on request (technik@triflex.de).

Important:

Adhesion must always be tested on the specific substrate!

Priming

Triflex Cryl Primer 222

Apply evenly and cross-coat using a Triflex Universal Roller.

Consumption: at least 0.40 kg/m².

Can be recoated after approx. 45 mins.

Triflex Cryl Primer 287

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

Then spread crosswise using a Triflex universal roller.

Consumption: at least 0.35 kg/m².

Can be recoated after approx. 45 mins.

Triflex Glass Primer

Wipe on GP evenly with a cleaning cloth.

Consumption: approx. 0.05 l/m²

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

Triflex Metal Primer

Apply a film with a short-pile roller (e.g. MP roller) or alternatively, apply a film with a spray can.

Consumption approx. 0.15 l/m².

Can be recoated after approx. 60 mins.

Triflex Pox Primer 116+

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

Then spread crosswise using a Triflex universal roller.

Do not allow puddles to form.

Dress the fresh primer – not to excess.

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

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

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

For highly absorbent substrates and substrate moisture levels of 4 to 6 wt%, an additional layer of primer has to be applied to the surface. Only the second layer is dressed with quartz sand.

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



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 10.00 kg quartz sand 0.2–0.6 mm⁽¹⁾ per 33.00 kg of Triflex DeckFloor. Consumption 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 20.00 kg of quartz sand 0.7–1.2 mm⁽¹⁾ per 33.00 kg of Triflex DeckFloor. Consumption at least 2.00 kg/m² per mm layer thickness. Can be recoated after approx. 1 hr.

In the case of roughness R_t >10 mm:

Triflex Cryl RS 240

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

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. Consumption: approx. 1.40 kg/m² per mm layer thickness. Can be recoated after approx. 1 hr.

Detail waterproofing

Points 1 to 3 below are implemented wet-on-wet.

1. Triflex ProDetail

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

2. Triflex Special Fleece/Triflex Special Fleece PF⁽²⁾

Embed cut-outs with no air bubbles.
Overlap the fleece strips by at least 5 cm.

3. Triflex ProDetail

Apply until the Triflex Special Fleece is fully saturated.
Consumption: 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 mins., can be overlaid with mastic asphalt after approx. 3 hrs. For dimensions, see Triflex AWS system drawings.

Important:

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 dressing can be applied. See the following for application:

Protective layer for detail waterproofing:

1. Triflex ProDetail

Apply evenly with a radiator roller.
Consumption: at least 1.50 kg/m².

2. Quartz sand, grain size 0.7–1.2 mm

Dress the fresh protective layer in excess.
Consumption: at least 7.00 kg/m².

Remove any surplus quartz sand after approx. 2 hrs.

Can be recoated with mastic asphalt after approx. 3 hrs. For dimensions, see Triflex AWS system drawings.

Important:

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).

Points 3 to 5 below are implemented wet-on-wet.

3. Triflex ProDetail

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

4. Triflex Special Fleece/Special Fleece PF

Insert a 15 cm wide strip, making sure there are no 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.
Consumption: 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 mins., can be recoated with mastic asphalt after approx. 3 hrs. For dimensions, see Triflex AWS system drawings.

⁽¹⁾ The quartz sand grading curve must be adjusted on site, if necessary.

⁽²⁾ if necessary, Triflex Special Fleece mouldings

Triflex AWS



System description

Expansion 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.

Points 3 to 7 below are implemented wet-on-wet.

3. Triflex ProDetail

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

Consumption: at least 0.70 kg/m.

4. Triflex Special Fleece/Triflex Special Fleece PF

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 fully saturate the Triflex Special Fleece and as a preliminary layer for the next fleece loop.

Consumption: at least 0.70 kg/m.

6. Triflex Special Fleece/Triflex Special Fleece PF

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.

Consumption: at least 0.70 kg/m.

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

Can be recoated after approx. 1 hr.

After application of the surface waterproofing and finishing.

8. PE round sealing band

Place in the joint.

9. Triflex FlexFiller

Fill the joint so it is flush with the surface.

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

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

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

For dimensions, see Triflex AWS system drawings.

Important:

1. The construction joint or expansion 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 expansion joints are all maintenance joints. For visual reasons, it may be necessary to replace joint ingress protection (Triflex FlexFiller) 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 Triflex squeegee (toothed rubber 6 mm).

Consumption: at least 2.00 kg/m².

2. Triflex Special Fleece/Special Fleece PF

Embed with no air bubbles. Overlap the strips of fleece by at least 5 cm.

3. Triflex ProPark

Apply evenly with a Triflex universal roller to fully saturate the Triflex Special Fleece.

Consumption: at least 1.00 kg/m².

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

Can be recoated after approx. 1 hr.

For dimensions, see Triflex AWS system drawings.

Important:

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

Protective layer

1. Triflex ProPark

Apply evenly with a Triflex universal roller.

Consumption: at least 1.50 kg/m².

2. Quartz sand, grain size 0.7–1.2 mm

Dress the fresh protective layer in excess.

Consumption: at least 7.00 kg/m².

Remove any surplus quartz sand after approx. 2 hrs.

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

Important:

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

Finishing

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

Triflex Cryl Finish 209

Apply evenly and cross-coat using a Triflex finish roller.

Consumption: at least 0.50 kg/m².

Rainproof after approx. 30 mins.

Important:

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

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

Important:

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

Marking

For traffic markings with cold plastic, coloured finish or high-solid paint, see **Triflex DMS** – parking deck marking system.

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 mins. Transitions to subsequent waterproofing must overlap including Triflex Special Fleece by a minimum of 10 cm. This also applies to connections 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.

Product information

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

Triflex Cleaner
Triflex Cryl Finish 209
Triflex Cryl Paste
Triflex Cryl Primer 222
Triflex Cryl Primer 287
Triflex Cryl RS 240
Triflex DeckFloor
Triflex FlexFiller
Triflex Glass Cleaner

Triflex Glass Primer
Triflex Liquid Thixo
Triflex Metal Primer
Triflex Pox Primer 116+
Triflex ProDetail
Triflex ProPark
Triflex Special Fleece
Triflex Special Fleece PF
Triflex Support Strip

Quality standard

All Triflex products are manufactured in accordance with the standards defined in ISO 9001. To ensure quality of workmanship, Triflex products are only installed by fully trained and qualified specialist 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.

Pinholes

Air pockets in concrete or screed go on to cause "pinholes". The mechanical substrate pre-treatment causes the air pockets to open on the surface. The subsequent coating closes the access to the air spaces. The warming of the air inside the pockets as a result of the reaction and ambient temperature causes the volume to expand and the pressure to increase. The air then rises up through the coating to the surface. This is a purely physical process and is not triggered by the coating material itself. In order to prevent the formation of pinholes in the coating, it is recommended that processing be performed when temperatures are falling.

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 consumptions / Waiting times

The specified consumptions apply only to smooth, flat substrates with a maximum roughness of $R_t = 0.5$ mm. Special allowance must be made for unevenness, roughness and porosity. Specified flash times and waiting times apply to a substrate and ambient temperature of +20 °C.

Information about tools

The Triflex tools mentioned in the system description are a guideline for correct application of the individual functional layers with the respective volumes of product. The use of Triflex tools is not mandatory as long as correct application of the Triflex products is assured.

Remarks on use

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.



Waterproofing system under mastic asphalt (OS 10)

Triflex AWS

System description

General notes

The system descriptions, system drawings and product information sheets form the basis for using Triflex products, and it is essential to follow these when planning and carrying out your building project. Any deviation from the technical information provided by Triflex GmbH & Co. KG that is current at the time the work is carried out may invalidate the warranty. Any project-related deviations require written approval from Triflex.

All the information 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 contractor is required to test the suitability, e.g., of the substrate.

Non-Triflex products must not be used in combination with Triflex systems. Triflex reserves the right to make modifications in the interest of technical enhancement or optimisation of Triflex products.

Tender texts

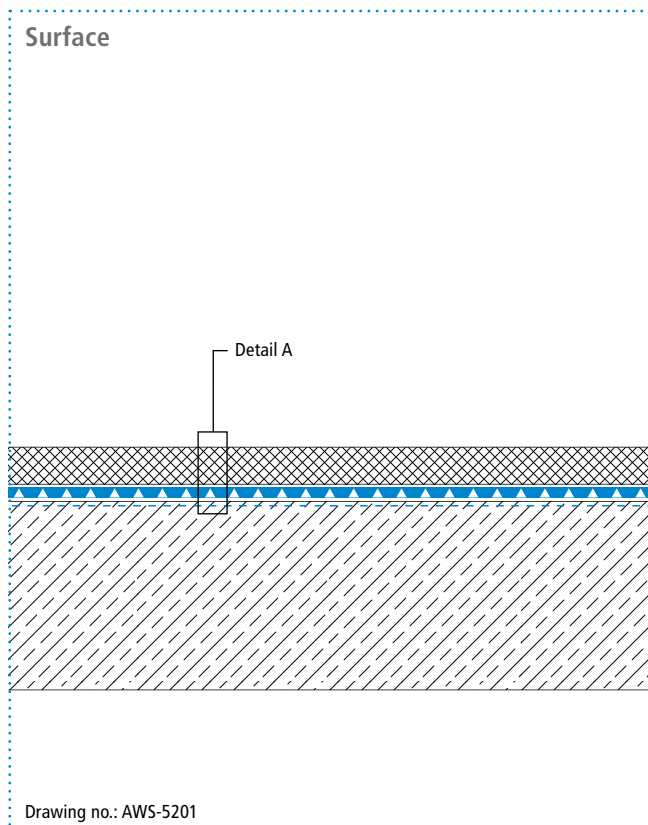
Please visit the Download section of the Triflex website at www.triflex.com to obtain the current standard specifications, which are available in a range of different file formats. Alternatively, visit the website www.ausschreiben.de or www.heinze.de.

CAD drawings

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

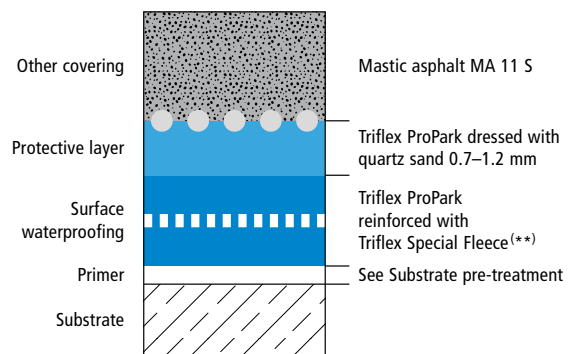
Contact us at technik@triflex.de to request further true-to-scale CAD drawings.

System drawings



Height differences where the fleece overlaps are exaggerated.

System build-up – Detail A

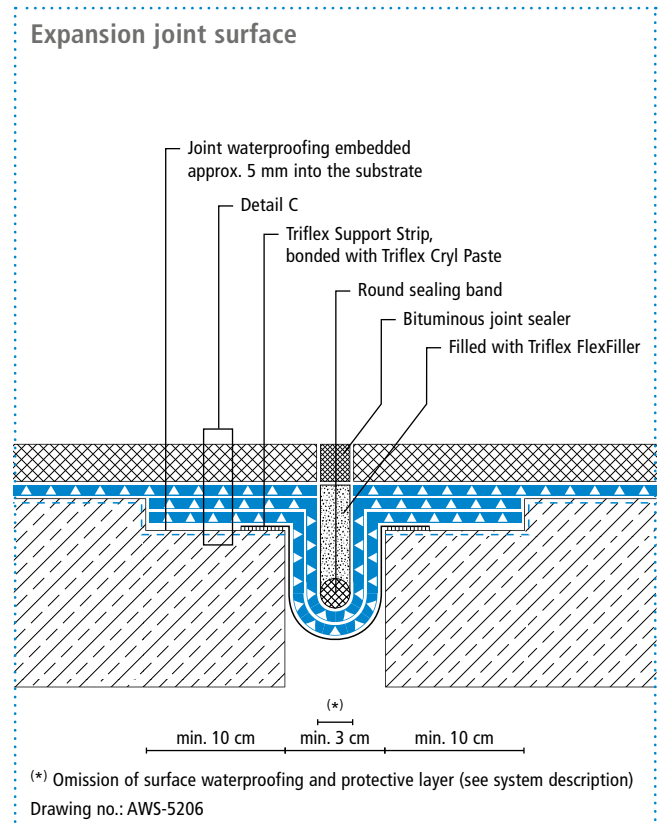
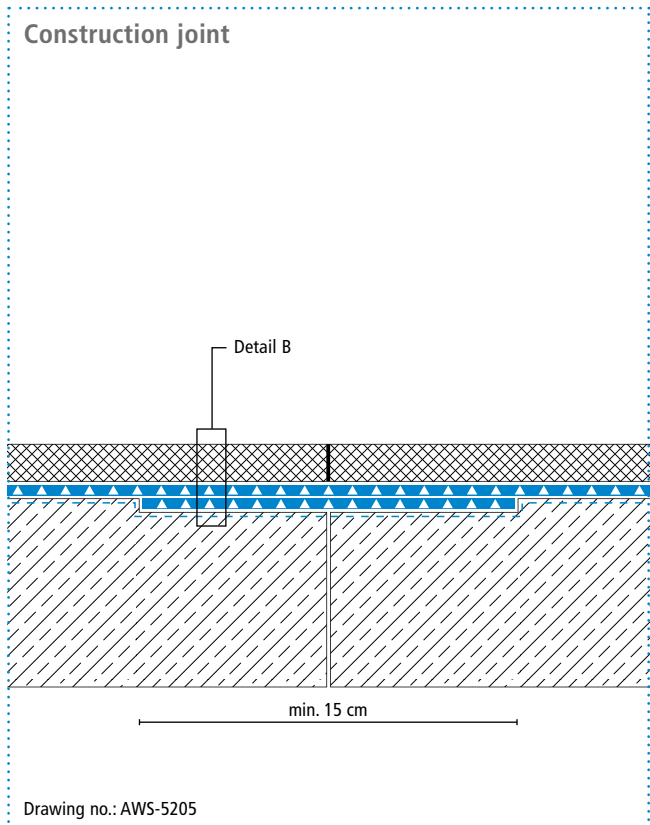
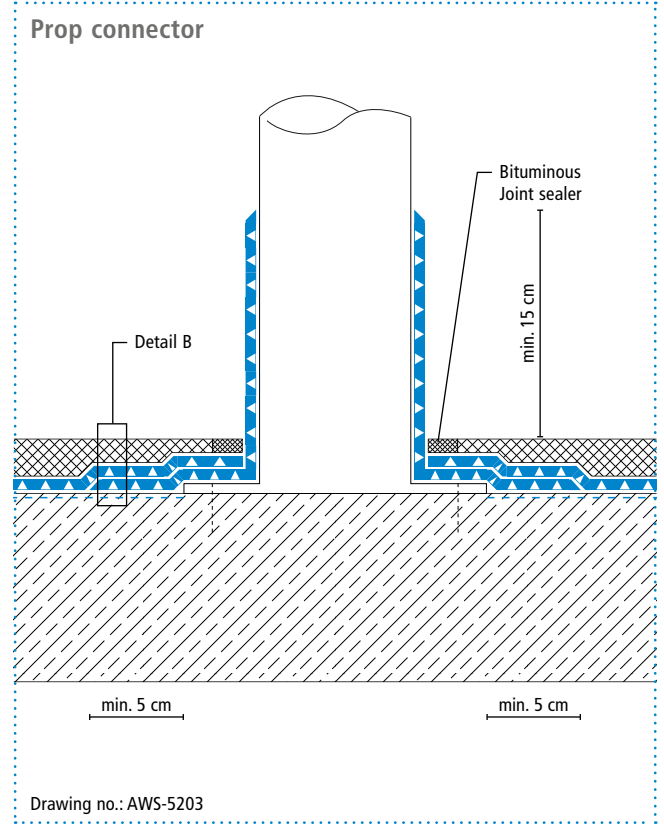
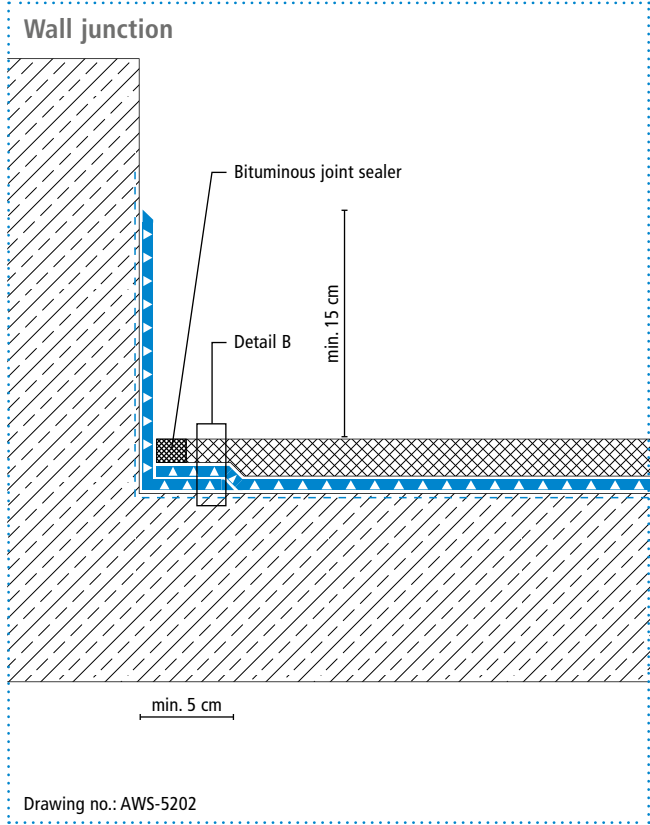


(**) Triflex Special Fleece or Triflex Special Fleece PF

Triflex AWS



System drawings



Height differences where the fleece overlaps are exaggerated.

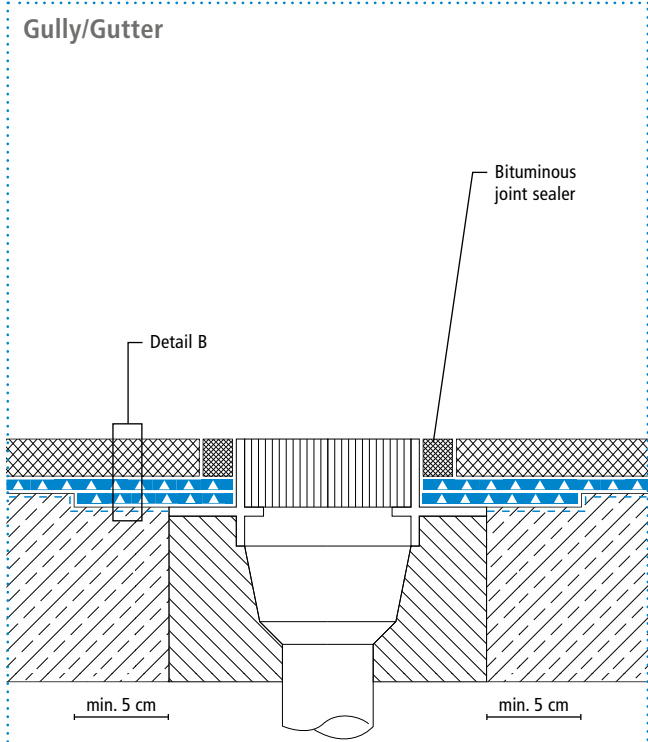


Waterproofing system under mastic asphalt (OS 10)

Triflex AWS

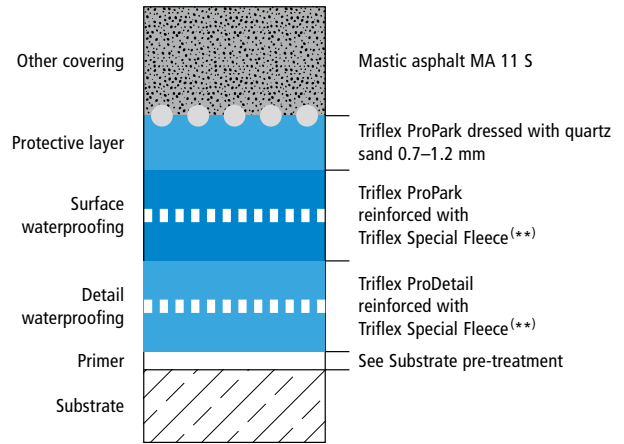
System drawings

Gully/Gutter

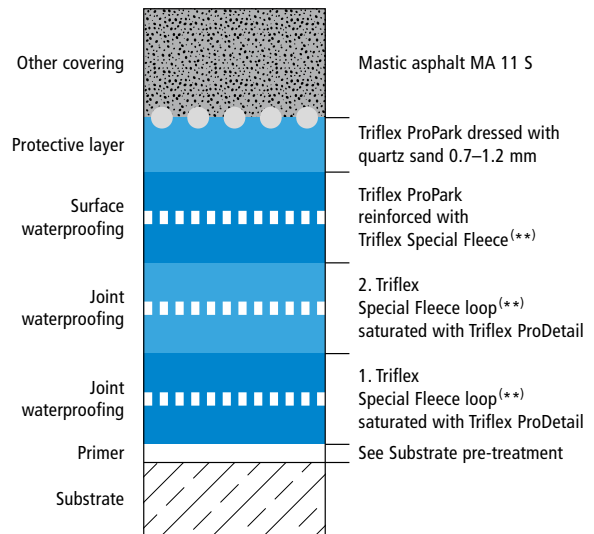


Drawing no.: AWS-5204

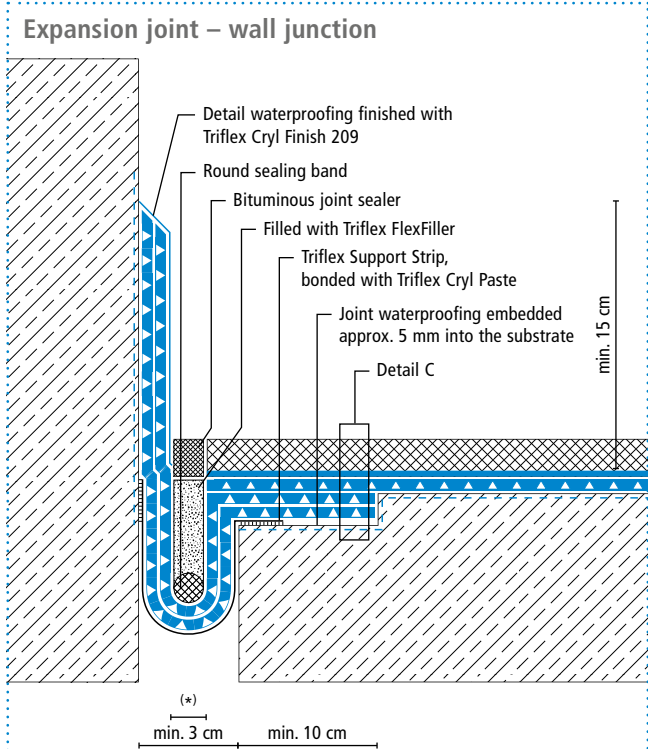
System build-up – Detail B



System build-up – Detail C



Expansion joint – wall junction



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

Drawing no.: AWS-5207

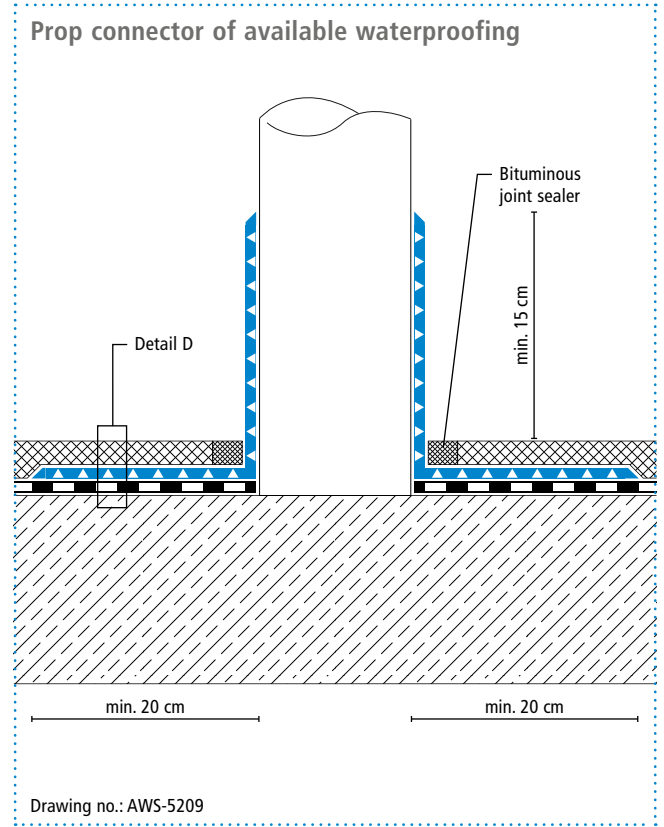
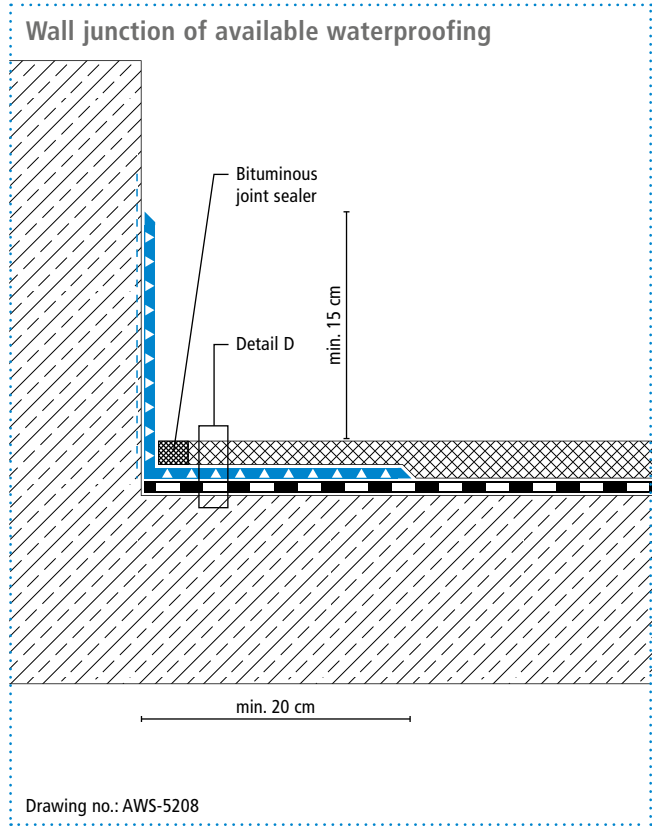
Height differences where the fleece overlaps are exaggerated.

(**) Triflex Special Fleece or Triflex Special Fleece PF

Triflex AWS



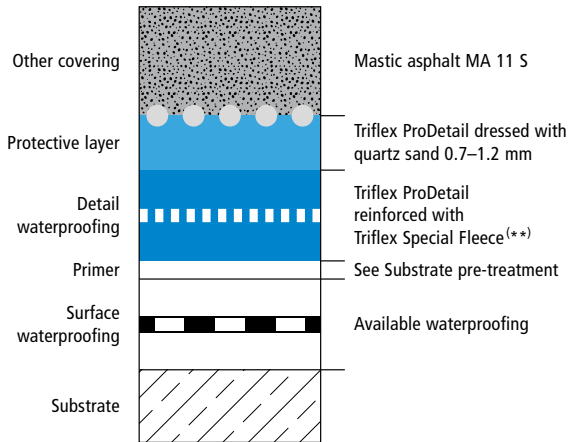
System drawings



Triflex AWS



System build-up – Detail D



(**) Triflex Special Fleece or Triflex Special Fleece PF



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



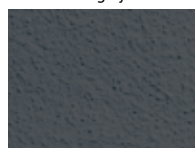
7038 Agate grey



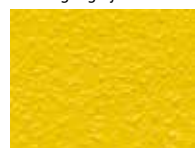
7040 Window grey



7042 Traffic grey A



7043 Traffic grey B



1023 Traffic yellow



2009 Traffic orange



3020 Traffic red



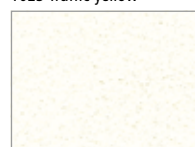
4006 Traffic purple



5017 Traffic blue



6024 Traffic green



9010 White

Please 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)

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