Triflex

Delivering solutions together.

Planning documents

Balcony decoupling system

Triflex ProDrain®

BALCONIES | TERRACES | WALKWAYS

Balcony decoupling system

Triflex ProDrain®

Applications

Triflex ProDrain is a special solution which is ideal for refurbishing saturated substrates on balconies and terraces.

Balcony coating and waterproofing solutions extend the life of balconies and roof terraces. In many cases, however, as the substrate ages it requires increasing amounts of refurbishment, for which the only solution is a tried-and-tested, reliable system.
Refurbishment is often put off until the substrate is saturated or heavily soiled. At worst, the existing coverings are damaged or the substrate cracked. Substrates prone to slight movement can be just as problematic.

Refurbished in a fraction of the time

Triflex ProDrain saves time and money compared to conventional refurbishment solutions. With Triflex ProDrain, there is generally no need to remove existing coverings, thus reducing the amount of dust and rubble produced. And because there's no demolition or slow-drying screed involved, there's no noise, dust or the long wait residents would otherwise have to put up with.

Closure times with the quick-lay Triflex DC-Mat decoupling membrane and the following Triflex BTS-P waterproofing system are between 1 and 2 days, a fraction of the usual 5 to 6 weeks.

Advantages at a glance

Ideal for refurbishments

With Triflex ProDrain there is no need for the time-consuming and expensive removal of sound substrates. And, thanks to its slim design, low door sills pose no problem at all.

Short closure periods

The simple system uses quick-curing resins, reducing the length of time each step takes. After just 1 or 2 days, balconies and walkways can be fully utilised by residents again.

Neutralised substrate moisture

Saturated cantilever slabs are protected by the waterproofing product Triflex BTS-P, which is applied on top of Triflex ProDrain. Moisture is expelled in the form of water vapour via the many channels of the self-supporting Triflex DC-MAT decoupling membrane.

Triflex ProDrain®

And this is how it's done …

1. Prepare the substrate, mineral substrates are primed with Triflex ProDrain Primer.

2. Apply the Triflex ProDrain Fix+ adhesive in two layers ...

3. ... and then roll our the Triflex DC-Mat decoupling membrane.

4. Affix the membrane using a pressure roller over the entire surface.

5. Generously priming with Triflex Cryl Primer 276 gives the decoupling membrane its rigidity.

6. For ventilation via leading edge, affix eaves flashings with Triflex Cryl Paste.

7. Water-proof wall junctions and details with Triflex ProDetail.

8. Finally, the Triflex BTS-P waterproofing system can be applied.

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.

Balcony decoupling system

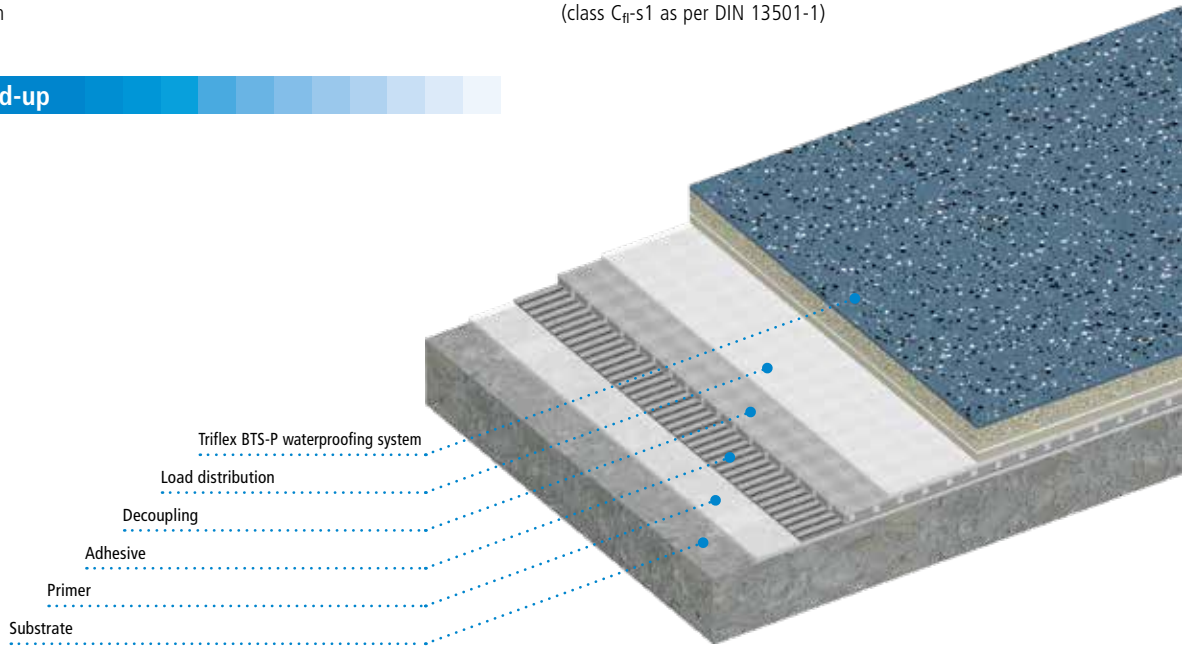
Triflex ProDrain®

System description

Properties

- Decouples
- Ventilates
- Can be used on saturated substrates
- Withstands mechanical loads
- Self-supporting
- High rigidity
- Ideal for refurbishments
- Low build-up height of approx. 1 cm
- High strength
- Low mass per unit area
- Dynamic crack-bridging properties
- Vapour-tight
- Fast-curing
- Cold-applied
- Combined with:
  Triflex BTS-P Balcony Waterproofing System
- In combination with Triflex BTS-P (S1), flame-retardant
  (class C_{fl}-s1 as per DIN 13501-1)

System build-up



Important:
In the event of particular problems with the planning, costing or application of the Triflex ProDrain system, do not hesitate to contact the Technical Department. The maximum area is limited to 25 m².

System components

Primer
Triflex ProDrain Primer is used as a deep-penetrating primer and protects from quick dehydration.

Adhesive
Triflex ProDrain Fix+ for affixing the drainage layer.

Decoupling
Triflex DC-Mat decoupling membrane with quartz sand chambers for high rigidity and ventilation channels on the underside.

Load distribution
Cryl Primer 276 as a load distribution layer on the Triflex DC-Mat decoupling membrane. The load-bearing layer providing the necessary compressive strength.

Waterproofing
The Triflex BTS-P balcony waterproofing system completes the decoupling system. For further information visit www.triflex.com.

Substrate

The suitability of the specific substrate should always be tested on a case-by-case basis.

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: All substrates must be full-hardened and sound.
Temperature: During application and curing of the products, the substrate and ambient temperatures permitted for the product must be adhered to. These can be found in the product information.

Triflex ProDrain®

System description

Substrate pre-treatment

Triflex ProDrain is ideal for use on saturated substrates. The substrate must be free of loose particles and must be sound. Tile surfaces must be sanded down. The product must not be used on cavities, loose paving or areas of damage. These must be removed beforehand and levelled out.

In addition, it is essential to ensure the sufficient gradient of the substrate (min. 1 %). If the gradient is insufficient or the substrate is uneven, this must be corrected before the Triflex DC-Mat decoupling membrane is laid, e.g., using mineral screed.

Substrate	Pre-treatment	Primer
Concrete	Grinding	Triflex ProDrain Primer
Lightweight concrete	Remove any loose material	Triflex ProDrain Primer
Screeds	Grinding	Triflex ProDrain Primer
Tiles	Mechanically remove the glaze, use water to make matt damp in advance	N/A

Important:
Adhesion must always be tested on the specific substrate!

Priming

Triflex ProDrain Primer
Apply evenly and cross-coat using a Triflex Universal Roller.
Consumption: at least 0.15 kg/m².
Can be recoated after approx. 10 mins.

Ventilation

In saturated substrates, substrate moisture is expelled in the form of water vapour via the ventilation channels on the underside of the Triflex DC-Mat decoupling membrane and also via a special detail feature at the leading edge or wall junction.
With either detail solution, providing ventilation on the long side normally suffices to disperse the substrate moisture. However, this must always be checked on a case-by-case basis.

Decoupling

The Triflex DC-Mat decoupling membrane is laid by means of full-surface adhesion. Where ventilation occurs via the wall junction, the membrane must be laid no closer than 1 cm to the wall. Where ventilation occurs via the leading edge, the membrane is laid right up to the wall. Individual mats are not overlapped but laid edge-to-edge. Penetrations, posts etc. are omitted.
For lengths greater than 5 m, the sheet must be cut in half.

1. Triflex ProDrain Fix+
Apply thinly to the substrate with a smoothing trowel.
Apply a second layer wet-on-wet with a notched trowel.
Consumption: at least 4.50 kg/m².

2. Triflex DC-Mat decoupling membrane
Lay the mat which you have cut to size in the fresh adhesive and firmly press it onto the substrate with a pressure roller. The short side of the mat (1.00 m in width) is always laid to the ventilation side.
Can be recoated after approx. 2 hrs.

Important:
1. During application of Triflex ProDrain Fix+ and while it is drying, substrate temperatures must not drop below +7 °C or exceed +30 °C.
2. The next step for load distribution should be performed after 2 hrs. The decoupling membrane must not be left exposed over night.
3. The curing time of Triflex ProDrain Fix+ is 45 mins. to 5 hrs. During this time, the Triflex DC-Mat decoupling membrane must not be mechanically loaded, though it can be recoated.

Load distribution

Seal the leading edges of the Triflex DC-Mat decoupling membrane with adhesive tape.

1. Triflex Cryl Primer 276
Apply thickly with a Triflex universal roller.
Recoat highly absorbent spots.
Consumption: at least 0.70 kg/m².
Apply in a second layer 0.40 kg/m².
Total consumption: 1.10 kg/m²
Can be recoated after approx. 45 mins.

Important:
1. The Triflex DC-Mat decoupling membrane must be loaded as little as possible when applying the load layer and the subsequent Triflex BTS-P waterproofing system. To protect it from point loads, a thin wooden board can be placed on top.
2. The primer is omitted from the surface for the subsequent waterproofing system.

System description

Joint waterproofing

Construction joint:

The Triflex DC-Mat decoupling membrane is laid over construction joints.

Expansion joint:

The Triflex DC-Mat decoupling membrane is omitted for the expansion joint and laid up to the joint waterproofing.

Ventilation via leading edge

Where the substrate moisture is ventilated via the leading edge,
Triflex Cryl Primer 276 is used as the load-distribution layer, and is laid as described above.

Affix the eaves flashing:

1. **Triflex Cleaner**
   Degrease the eaves flashing and roughen the top and underside with sandpaper or primer on both sides with Triflex Metal Primer.
2. **Triflex Cryl Paste**
   Cover the entire underside of the plate with paste.
3. **Eaves flashing**
   Apply and remove excess paste with the trowel.

Consumption of Triflex Cryl Paste: at least 0.50 kg/m².
Can be recoated after approx. 45 mins.

Seal the transition between load-distribution layer and eaves flashing:

Application is wet-on-wet.
1. **Triflex ProDetail**
   Apply a width of 20 cm with a radiator roller.
   Consumption: at least 0.40 kg/m.
2. **Triflex Special Fleece/Special Fleece PF**
   Insert a 20 cm wide strip, making sure there are no air bubbles.
   Overlap the ends of the fleece by at least 5 cm.
3. **Triflex ProDetail**
   Apply until the Triflex Special Fleece is fully saturated.
   Consumption: at least 0.20 kg/m.

Total volume of Triflex ProDetail: at least 0.60 kg/m.
Can be recoated after approx. 45 mins.
For dimensions, see Triflex ProDrain system drawing.

Important:
To guarantee ventilation function, 1 cm must be left between the leading edge and the vertical plane of the flashing.

Ventilation via wall junction

Where the substrate moisture is ventilated via the wall junction,
Triflex Cryl Primer 276 is used as the load-distribution layer, and is laid as described above.

Affix the in wall flashing:

1. **Triflex DC-Mat decoupling membrane**
   Secure a strip of the decoupling mat to the wall as a spacer.
   (No subsequent application of Triflex Cryl Primer 276).
2. **Triflex Cleaner**
   Degrease wall flashing and roughen both sides with sandpaper, or prime both sides with Triflex Metal Primer.
3. **Triflex Cryl Paste**
   Cover the entire underside of the plate with paste.
4. **Wall flashing**
   Apply and remove excess paste with the trowel.
   Flashing transitions are levelled out with Triflex Cryl Paste.

Volume of Triflex Cryl Paste: at least 0.50 kg/m².
Can be recoated after approx. 45 mins.

Seal the transition between load-distribution layer and wall flashing:

Application is wet-on-wet.
1. **Triflex ProDetail**
   Apply a width of 20 cm with a radiator roller.
   Consumption: at least 0.40 kg/m.
2. **Triflex Special Fleece/Special Fleece PF**
   Insert a 20 cm wide strip, making sure there are no air bubbles.
   Overlap the ends of the fleece by at least 5 cm.
3. **Triflex ProDetail**
   Apply until the Triflex Special Fleece is fully saturated.
   Consumption: at least 0.20 kg/m.

Total volume of Triflex ProDetail: at least 0.60 kg/m.
Can be recoated after approx. 45 mins.

To rain-proof the wall junction, a projecting flashing is placed over the wall flashing and fixed by mechanical means.
For dimensions, see Triflex ProDrain system drawing.

Important:
1. To guarantee ventilation function, 2 cm must be left between the wall flashing and the projecting flashing.
2. The upper edge of the projecting flashing must be rain-proofed using additional flashing with seal or using Triflex ProDetail waterproofing.

Surface waterproofing

The Triflex BTS-P balcony waterproofing system completes the Triflex ProDrain decoupling system. Priming is no longer necessary.
The sanded load-distribution layer must be protected against precipitation.
If weather conditions are unpredictable, the surface should be adequately covered.
Further information on surface and detail waterproofing is available online at www.triflex.com.

System description

Product information

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

Triflex Balcony Edge Finishing Profile
Triflex Cleaner
Triflex Cryl Primer 276
Triflex Cryl Paste
Triflex DC-Mat decoupling membrane
Triflex Metal Primer
Triflex ProDetail
Triflex ProDrain Fix+
Triflex ProDrain Primer
Triflex Special Fleece
Triflex Special Fleece PF

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 applying the pattern or decoration, and during application, always ensure the correct gradient and evenness of the substrate. In order to ensure the drainage of rainwater and to avoid puddles, we recommend a gradient of at least 1.5 % on balconies in accordance with DIN 18531-5 and of at least 2.0 % on used roof areas in accordance with DIN 18531-1 and the technical rules for waterproofing systems. 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 the 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 volumes required apply only to smooth, even 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.

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

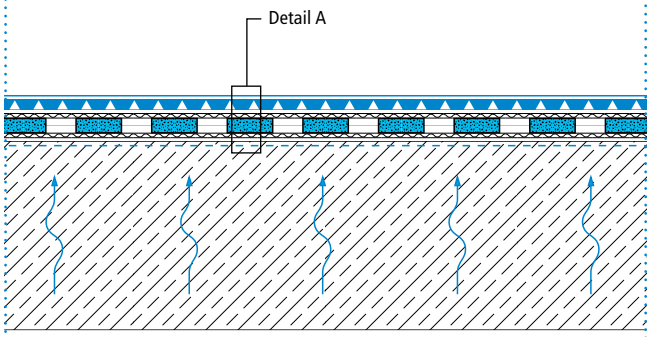
Please visit the Download section of the Triflex website at www.triflex.com to obtain the current standard specifications, which are available in a range of different file formats. Alternatively, visit the website www.ausschreiben.de or www.heinze.de.

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.

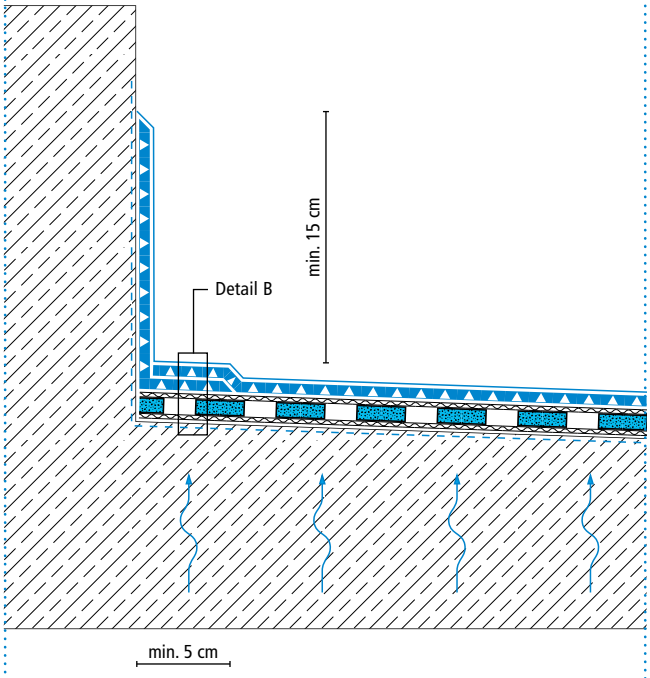
System drawings

Surface



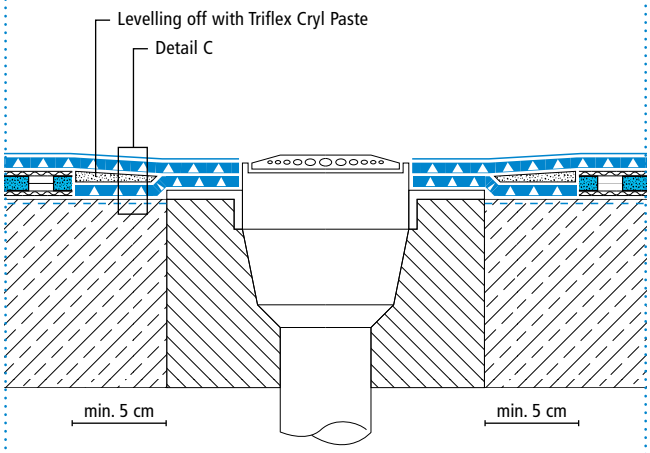
Drawing no.: ProDrain-2901

Wall junction sealed



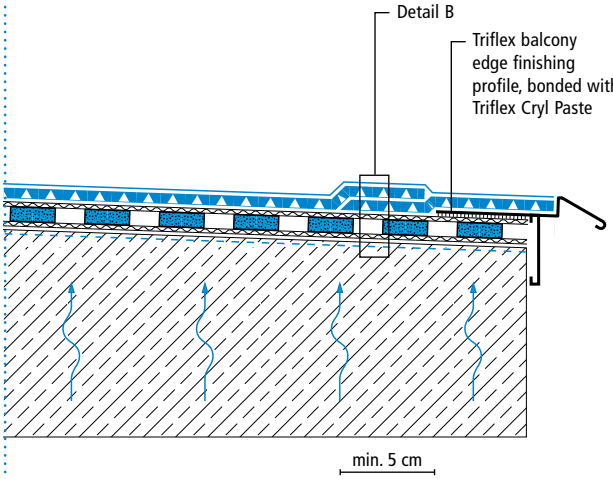
Drawing no.: ProDrain-2902

Gully



Drawing no.: ProDrain-2904

Leading edge with edge finishing profile



Drawing no.: ProDrain-2905

Height differences where the fleece overlaps are exaggerated.

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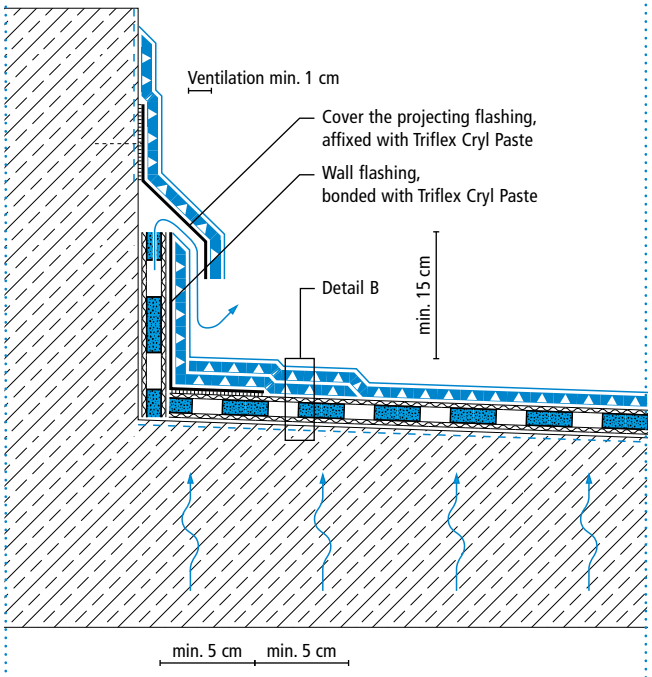
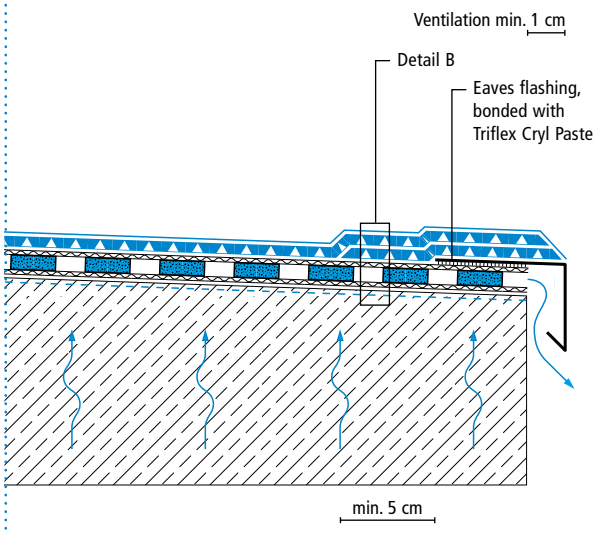
System drawings

Wall junction with ventilation



Drawing no.: ProDrain-2903

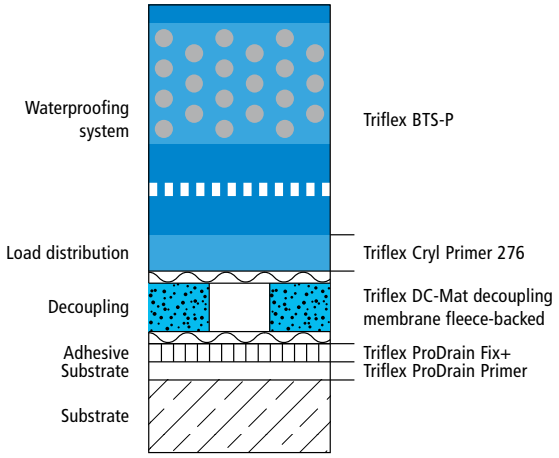
Leading edge with ventilation



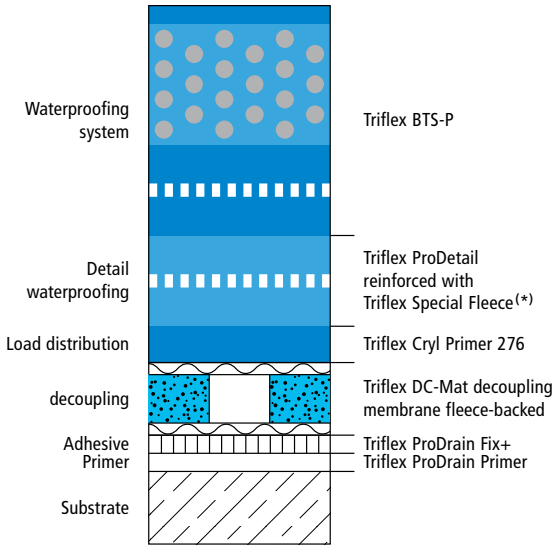
Drawing no.: ProDrain-2906

Height differences where the fleece overlaps are exaggerated.

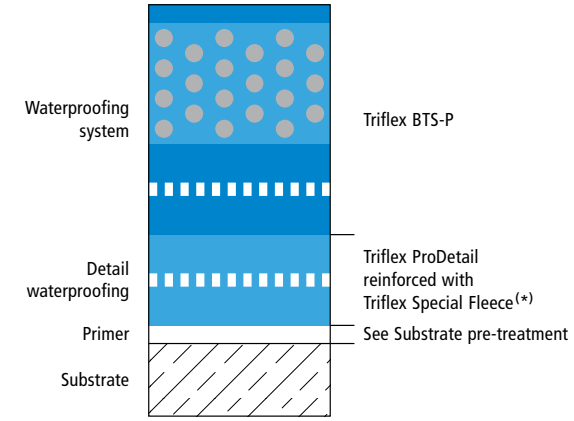
System build-up – Detail A



System build-up – Detail B



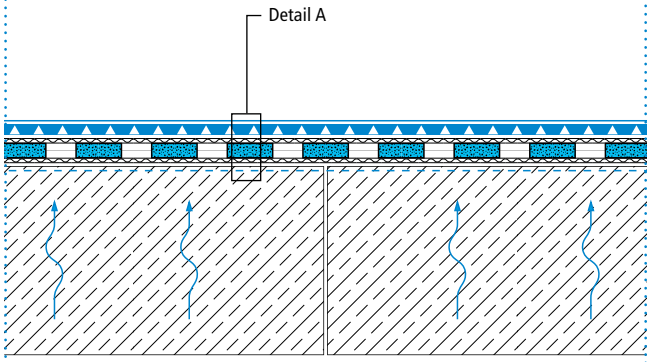
System build-up – Detail C



(*) Triflex Special Fleece or Triflex Special Fleece PF

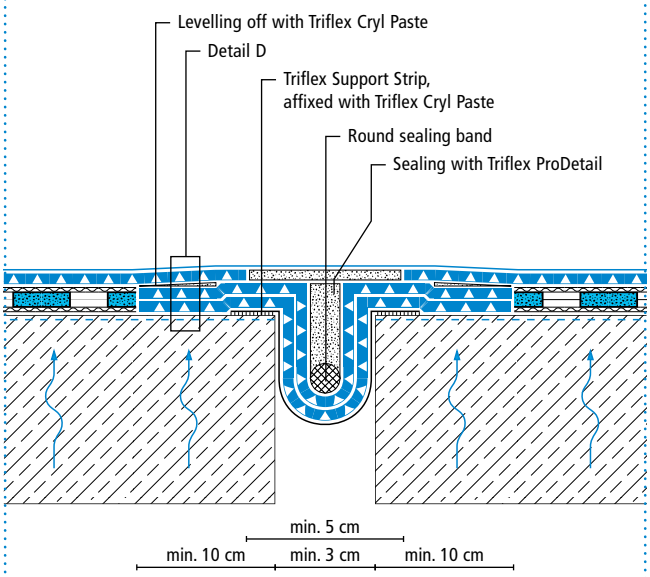
System drawings

Construction joint surface



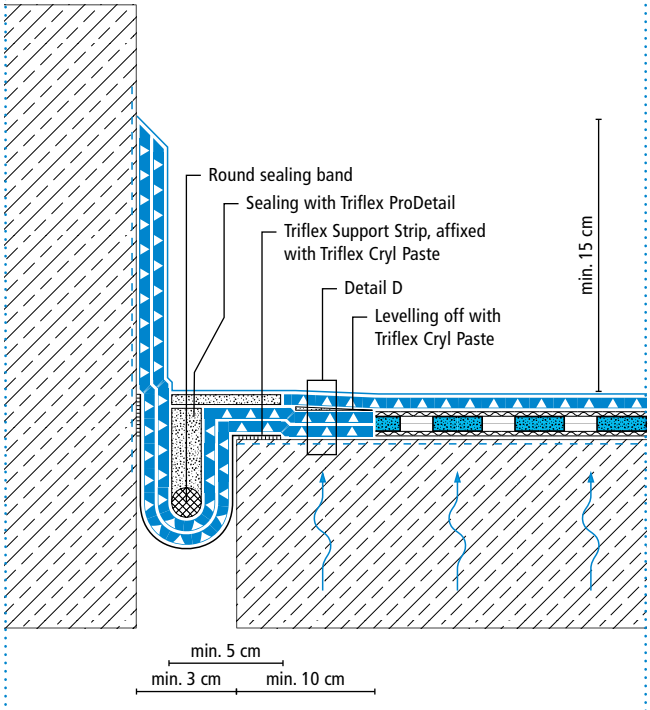
Drawing no.: ProDrain-2907

Expansion joint surface



Drawing no.: ProDrain-2908

Expansion joint – wall junction



Drawing no.: ProDrain-2909

Height differences where the fleece overlaps are exaggerated.

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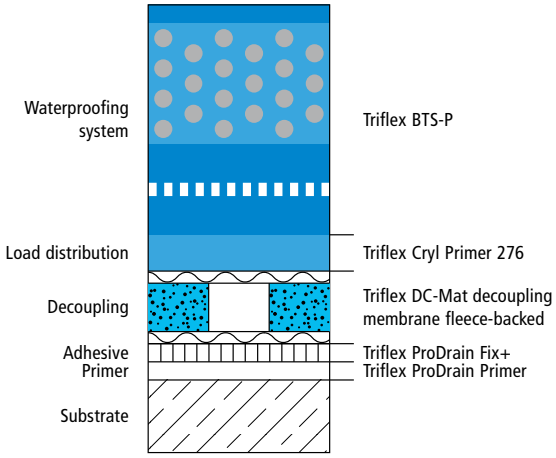
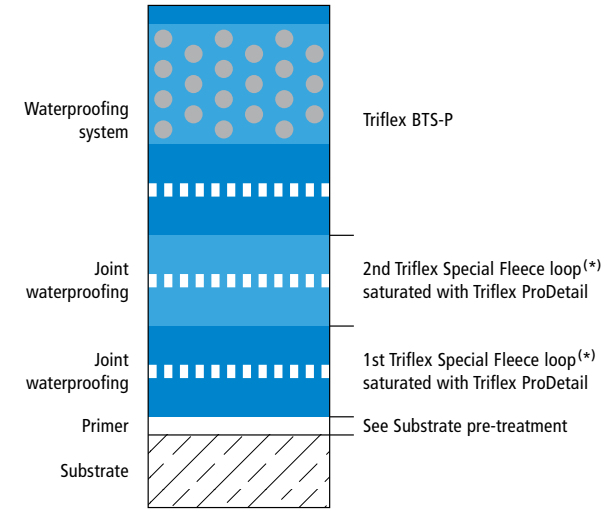
System drawings

System build-up – Detail A



System build-up – Detail D



(*) Triflex Special Fleece or Triflex Special Fleece PF

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Colours

For finishes and colours, see Triflex BTS-P planning documents or colour charts.

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