

Triflex

Delivering solutions together.

Planning documents

Roof Surface Waterproofing System

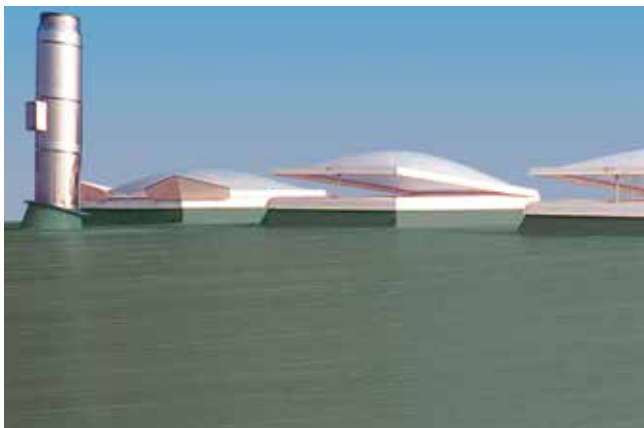
Triflex ProThan®





Roof Surface Waterproofing System Triflex ProThan®

Applications



Flat roofs place very high demands on the waterproofing material used. A waterproofing system must be able to cope with these high demands if it is to prove its functionality. Rain, wind and weather; mechanical, thermal and chemical loads imposed by the environment all test the waterproofing.

Triflex has almost 40 years experience of using durable waterproofing and coating systems in the world of building refurbishment. **Triflex ProThan** is a waterproofing system developed specially for flat roofs in odour-sensitive areas that ensures the lasting reliable protection of buildings.



System solution for odour-sensitive areas

Triflex ProThan is an alternative for waterproofing odour-sensitive areas. The solvent-free system, which is also odourless during application, can, for instance, be used on the roofs of hospitals, schools or nursing homes for the elderly. There is no disruption to operations because ventilation shafts and other building ventilation equipment can continue to be used.

Safe waterproofing, applied without a naked flame

The liquid waterproofing material with a PU resin base is cold applied to roof surfaces. The resin is rainproof within 2 hours. There is no risk of a fire on the roof, as is the case with conventional bitumen sheeting due to the use of torches. The single-layer waterproofing system applied in two coats requires no further surface protection.



Advantages at a glance

Waterproof down to the smallest detail

The cured resin forms a seamless and joint-free surface. Even complex details, such as ventilation pipes in close proximity to each other, or H-beams, can be homogeneously waterproofed using liquid applied waterproofing.

Odourless and solvent-free

The polyurethane resin is low-odour during application, making it suitable for use in sensitive areas, such as on hospitals and schools. The building ventilation is not affected.

Highly resilient with dynamic crack-bridging

The fully reinforced system offers a level of flexibility that leaves it unaffected by any movement of the other functional layers.

Short reaction times

The liquid applied 2-component resin has short curing times. The waterproofing material is rainproof after only 2 hours. The waterproofing can be walked on after only approx. 12 hours.

Certified safety

Triflex ProThan has obtained European Technical Approval (ETA) and meets the requirements of the Construction Products Directive of the EU (CE marking). Its root resistance is also certified acc. to FLL standards (EN 13948). In addition, Triflex ProThan meets the requirements of DIN 18531 Parts 1 to 4.



And this is how it's done ...



1. Prime surface and joints, if necessary.



2. Apply generous coating of Triflex ProThan Detail.



3. Work the Triflex Special Fleece into the laid material, making sure that there are no air bubbles.



4. Cut into the special fleece at the corners and ...



5. ... apply another generous coat of Triflex ProThan Detail.



6. Apply a generous coating of Triflex ProThan to the surface.



7. Place the Triflex Special Fleece onto the laid material, making sure that there are no air bubbles.



8. Cover the fleece with a second generous coat of Triflex ProThan.



9. Finished!



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.

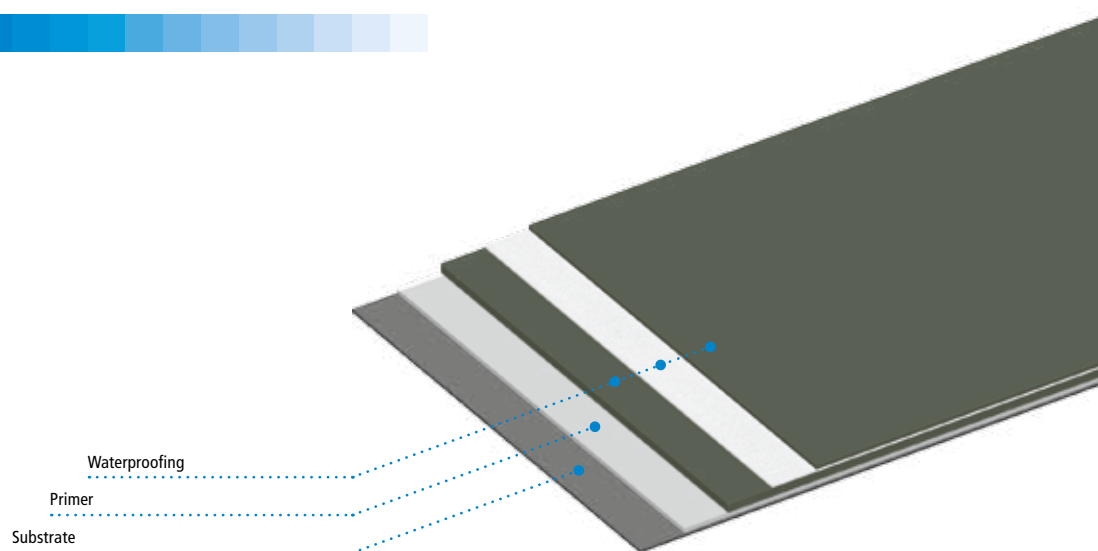


System description

Properties

- Fully reinforced waterproofing system with a polyurethane (PU) resin base
- Seamless
- Vapour-permeable
- Extremely weather-resistant (UV, IR, etc. without additional protective layer)
- Cold-applied
- Elastic and crack-bridging
- Mechanically strong and wear-resistant
- Odourless
- Solvent-free
- Resistant to external fire exposure to DIN EN 13501-5: B_{Roof} (t1)
- Fire classification in compliance with DIN EN 13501-1: Class E
- European Technical Approval with CE mark in the highest usage categories (W3, M and S, P1 to P4, S1 to S4, TL4, TH4)
- Meets the requirements of DIN 18531 (2010 version) and the German Flat Roof Guidelines

System design



System components

Primer

Triflex Pox R 100 for sealing the substrate and ensuring substrate adhesion (if necessary, see table substrate pre-treatment).

Waterproofing

Triflex ProThan waterproofing membrane, fully reinforced with a sturdy Triflex Special Fleece made of polyester.

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.

Moisture: When carrying out waterproofing 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 tensile strengths must be verified on pre-treated test surfaces:

Concrete: in the centre, at least 1.5 N/mm², individual value not less than 1.0 N/mm².



System description

Substrate pre-treatment

Substrate	Pre-treatment	Primer
Acrylic glass	Abrade with Triflex Cleaner, roughen surface	No primer
Aluminium	Abrade with Triflex Cleaner, roughen surface	No primer
Asphalt	Grind	No primer
Cold bitumen coating	Adhesion test	No primer
Composite thermal insulation systems		Triflex Pox R 100
Concrete	Grind	Triflex Pox R 100
Copper	Abrade with Triflex Cleaner, roughen surface	No primer
FRP / Skylight frame	Abrade with Triflex Cleaner, roughen surface	No primer
Glass	Abrade with Triflex Glass Cleaner, adhesion test	Triflex Glass Primer
Hot bitumen coating	Adhesion test	No primer
Lightweight concrete		Triflex Pox R 100
Mortar, resin-modified	Grind	Triflex Pox R 100
Paints	Completely grind off	See substrate
Plastic sheeting (PIB)	Roughen surface, adhesion test	On request
Plastic sheeting (PVC-P, nB), EVA	Abrade with Triflex Cleaner	No primer
Plastic sheeting (TPO, FPO, EPDM)	Abrade with Triflex Cleaner, roughen surface, adhesion test compulsory	On request
Plaster/masonry		Triflex Pox R 100
Polymer bitumen sheeting (PY-P) mod. (APP)	Adhesion test	No primer
Polymer bitumen sheeting (PY-E) mod. (SBS)		No primer
PVC mouldings, rigid	Abrade with Triflex Cleaner, roughen surface	No primer
Screeds	Grind	Triflex Pox R 100
Stainless steel	Abrade with Triflex Cleaner, roughen surface, adhesion test	No primer
Steel, galvanised	Abrade with Triflex Cleaner, roughen surface	No primer
Wood	Remove paints	Triflex Pox R 100
Zinc	Abrade with Triflex Cleaner, roughen surface	No primer

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 Glass Primer

Uniformly wipe up with a cleaning cloth GP.

Volume: approx. 50 ml/m².

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

Triflex Pox R 100

Apply evenly using a Triflex universal roller and immediately sand down with plenty of quartz sand.

Volume of Triflex Pox R 100: at least 0.30 kg/m²,

Volume of quartz sand 0.2–0.6 mm: at least 2.00 kg/m².

Can be recoated after approx. 12 hrs.

Detail waterproofing

Triflex ProThan Detail must be applied to all junctions, transitions and other detail solutions before surface waterproofing.

Application is wet-in-wet.

1 Triflex ProThan Detail

Apply evenly with a radiator roller.

Volume: at least 2.00 kg/m².

2 Triflex Special Fleece

Lay fleece strips, removing any air bubbles.

Overlap the fleece strips by at least 5 cm.

3 Triflex ProThan Detail

Apply until the Triflex Special Fleece is fully saturated.

Volume: at least 1.00 kg/m².

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

Rainproof after approx. 2 hrs.

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

For dimensions, see Triflex ProThan system drawings.



Roof Surface Waterproofing System

Triflex ProThan®

System description

Joint waterproofing

All joints must be waterproofed with Triflex ProThan Detail before surface waterproofing.

1. PE round sealing band

Seal on top of the joint.

Points 2 to 4 are completed wet-in-wet.

2. Triflex ProDetail

Apply at least 5 cm to both sides of the joint with a radiator roller.

Volume: at least 2,00 kg/m².

3. Triflex Special Fleece

Lay fleece strips, removing any air bubbles.

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

4. Triflex ProThan Detail

Apply until the Triflex Special Fleece is fully saturated.

Volume: at least 1,00 kg/m².

Total volume of Triflex ProThan Detail: at least 3,00 kg/m².

Rainproof after 2 hrs.

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

For dimensions, see Triflex ProThan system drawings.

Surface waterproofing

Application is wet-in-wet.

1 Triflex ProThan

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 fleece by at least 5 cm.

3 Triflex ProThan

Apply until the Triflex Special Fleece is fully saturated.

Volume: at least 1.00 kg/m².

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

Rainproof after approx. 2 hrs.

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

Surface protection

To protect against mechanical influences, we recommend laying a protective layer (e.g., plastic fleece, min. 300 g/m²) underneath other coverings (gravel, paving, etc.).

What to do if work is interrupted

If work is interrupted for more than 24 hrs, or if soiled by rain etc., the surface must be cleaned with water and roughen to produce an intermediate adhesion. Transitions to subsequent waterproofing must overlap (incl. Triflex Special Fleece) by a minimum of 10 cm. This also applies to junctions, transitions and detail solutions.

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 Pox R 100

Triflex ProThan

Triflex ProThan Detail

Triflex Special Fleece

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.

Safety tips / Accident prevention

Read the safety data sheets before using the products.

Volumes required / Waiting times

The specified volumes apply only to smooth, even surfaces. 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 °C.



System description

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-system substances must not be added to Triflex products. Subject to change in the interests of technical advancement or enhancement of Triflex products.

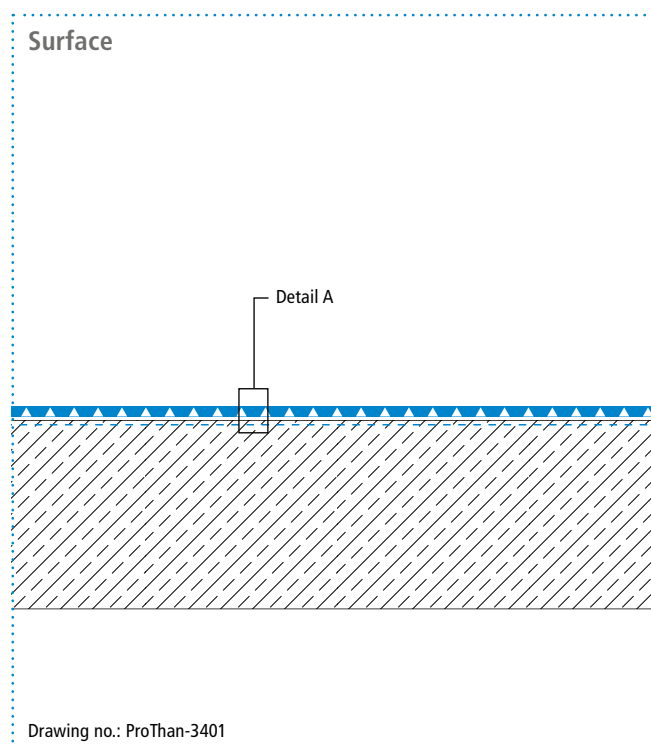
Tender texts

Please visit the download section of the Triflex website at www.triflex.com to obtain the current standard specifications for tender, which are available in a range of different file formats.

CAD drawings

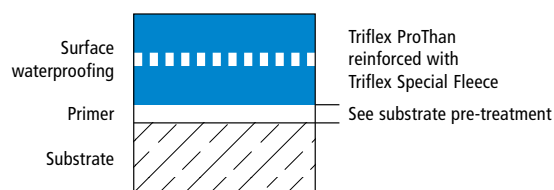
All CAD system drawings can be downloaded free of charge from the download section of the Triflex website www.triflex.com.

System drawings



Height differences between fleece overlaps are exaggerated.

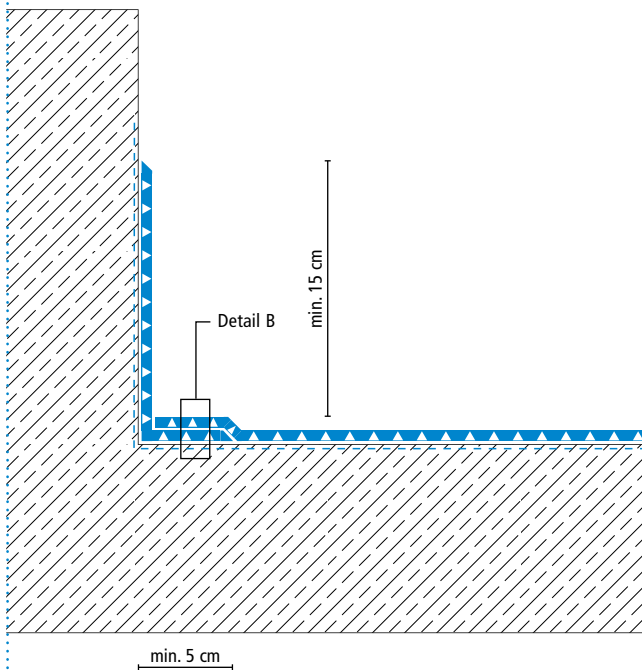
System design – Detail A





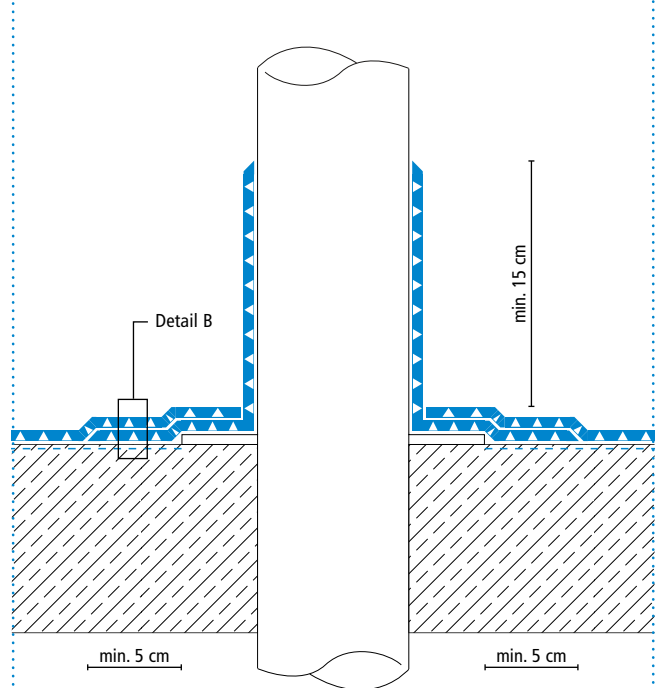
System drawings

Wall junction



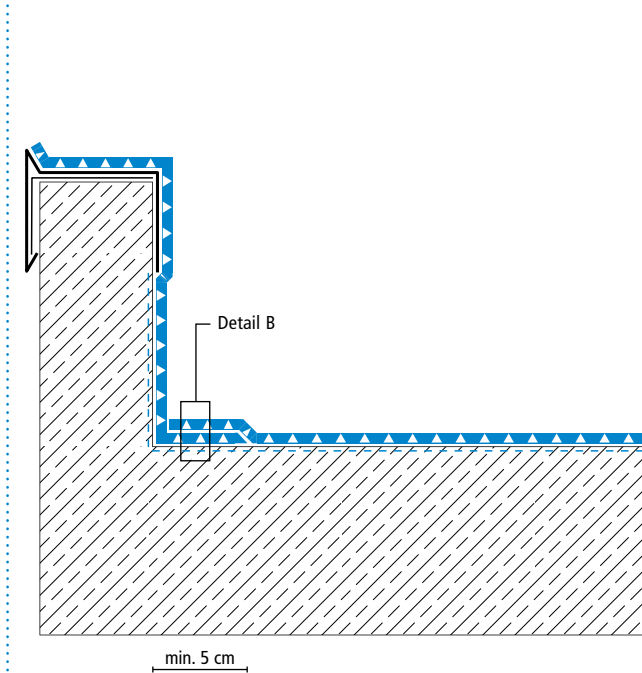
Drawing no.: ProThan-3402

Penetration



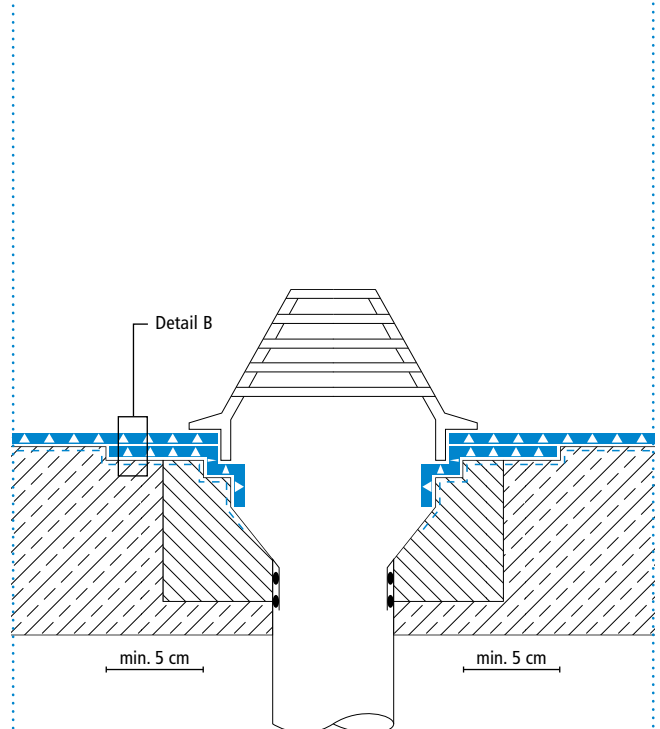
Drawing no.: ProThan-3403

Parapet edge finishing



Drawing no.: ProThan-3405

Gully



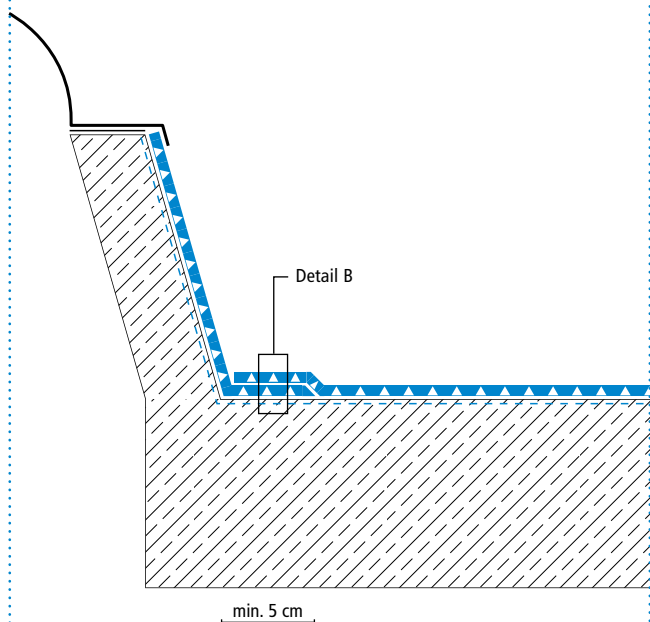
Drawing no.: ProThan-3406

Height differences between fleece overlaps are exaggerated.



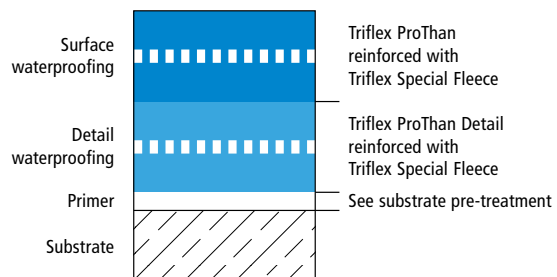
System drawings

Rooflight

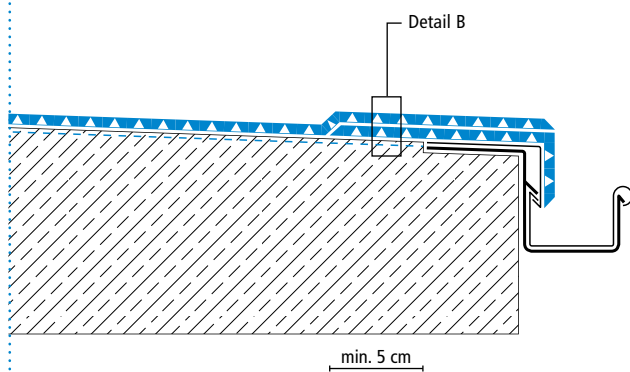


Drawing no.: ProThan-3404

System design – Detail B

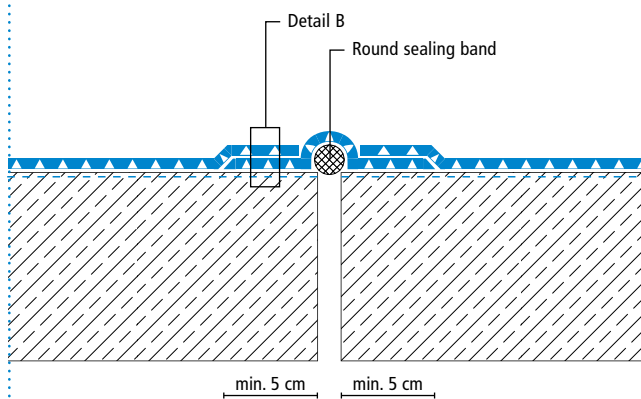


Edge finishing with bracket-mounted gutter



Drawing no.: ProThan-3407

Settlement joint



Drawing no.: ProThan-3408

Height differences between fleece overlaps are exaggerated.



Roof Surface Waterproofing System

Triflex ProThan®

Colours

Triflex ProThan



7009 Green grey

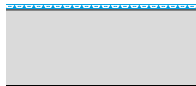
Please note:

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



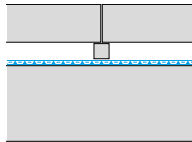
Different roof constructions

Waterproofing for roofs without thermal insulation



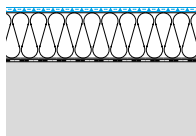
The full-surface fleece-reinforced Triflex waterproofing system provides seamless and jointless roof waterproofing, with no need for any additional surface protection.

Waterproofing under other coverings



The Triflex waterproofing system provides long-lasting protection under loose coverings and their sub-structures.

Waterproofing for non-ventilated roofs



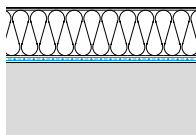
Over the thermal insulation (with support layer), the Triflex waterproofing system reliably waterproofs the building shell.

Waterproofing that can be walked on



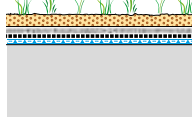
For maintenance paths, there are non-slip Triflex waterproofing systems available. Waterproofing with a higher load resistance is also possible.

Waterproofing for inverted roofs



With inverted roofs, the Triflex waterproofing system forms the seamless waterproofing membrane underneath the thermal insulation.

Waterproofing for green roofs



Triflex waterproofing systems are suitable for use under roof greening (root and rhizome-resistant).



Delivering solutions together.



International

Triflex GmbH & Co. KG
Karlstrasse 59
32423 Minden | Germany
Fon +49 571 38780-0
info@triflex.com
www.triflex.com