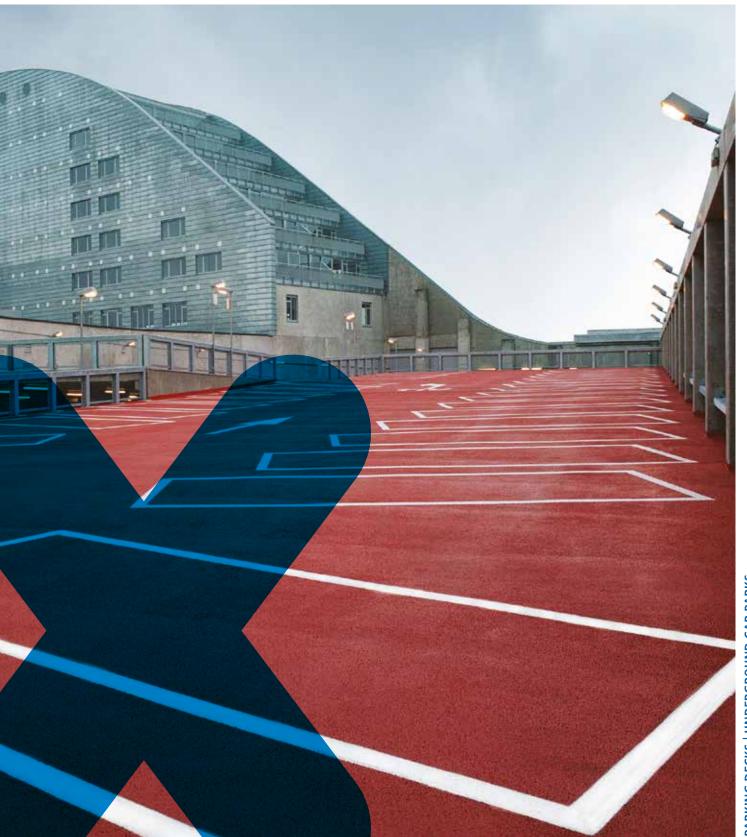


Planning documents
Parking deck coating system (OS 11a/b)

Triflex ProDeck



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Applications



A strong hold for long life

Triflex ProDeck is designed for surfaces subject to high mechanical loads. As a result of the innovative, special reinforcement, shearing forces, which arise in particular at tight curves and ramp approaches, are distributed across the surface. As a result of using only high-quality PMMA resins throughout the whole of the system build-up, a consistent chemical bond is achieved which, moreover, keys into the full surface of the substrate. This effectively prevents cracks and wide-area detachment from the substrate.

The system scarcely wears at all, even under continuous vehicle traffic, and can accept high mechanical loads. This is ensured by a particularly wear-resistant dressing. In spite of its high grip and highly non-slip finish, Triflex ProDeck is easy to look after.

Triflex ProDeck is a reinforced coating system with dynamic crack-bridging and as per RL SIB and TR maintenance has OS 11a approval for top decks and OS 11b approval for intermediate decks, underground car parks, ramps and spiral ramps. The system is able to withstand high mechanical loads and has been specially designed for heavily used parking decks. The Triflex ProDeck system build-up has been tested in compliance with OS 11a/b surface protection systems for surfaces for pedestrian and vehicular traffic subject to heavy mechanical loads with dynamic crack-bridging capabilities in compliance with DIN 18532, Part 6 surface protection systems for concrete from products that comply with DIN EN 1504-2.

The patent pending, innovative Triflex ProMesh special reinforcement minimises movements of the substrate through force redistribution, significantly reducing the wear, particularly in bends and acceleration and braking zones.



Advantages at a glance

Long-lasting

Triflex ProDeck is a reinforced, crack-bridging thick-layer system. The wearing layer can withstand even high mechanical stress and extends refurbishment intervals considerably.

System-integrated detail solutions

The cured resin forms a seamless and joint-free surface. Complex details and joints are always waterproofed and fleece-reinforced.

Ideal for refurbishments

The system, which has a mass per unit area of less than 10 kg/m², is suitable for application on concrete and asphalt substrates without negatively affecting the structural stability. This saves removal costs and time.

Short closure periods

Triflex ProDeck offers considerably faster curing times than systems made of EP or PUR resins. Parking decks can also be coated in stages. This reduces closure times and disruptions to traffic.

The parking deck surfaces are ready for full use again after only 3 hours.

Colours

Triflex ProDeck can be finished in a range of colours. This facilitates recognition and orientation among car park users and improves traffic safety.

Certified reliability

The system build-up meets the requirements of Class OS 11a/b in compliance with DIN 18532, Part 6 and German Committee on Reinforced Concrete's (DAfStb) guideline "Protection and Repair of Concrete Structural Components" and TR maintenance. Fire classification in compliance with DIN EN 13501-1, class $B_{\rm ff}$ -s1.

And this is how it's done...



1. Prepare substrate, e.g. by shot-blasting.



2. Prime joints and surfaces with Primer.



3. Waterproof joints and details with fleece-reinforced Triflex ProDetail.



4. The Triflex ProMesh reinforcement is laid on the surface starting at



5. ... edge-to-edge, one strip after another.



6. The reinforcement is soaked with Triflex Cryl Primer 287 and pressed on with the roller, ensuring that no bubbles remain.



7. The coating with Triflex ProDeck then follows.



8. Quartz sand or fine hard grain is then scattered onto the fresh coating.



9. Any surplus is removed once the coating has cured.

10. The surface is then finished with Triflex Cryl Finish 209.





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.

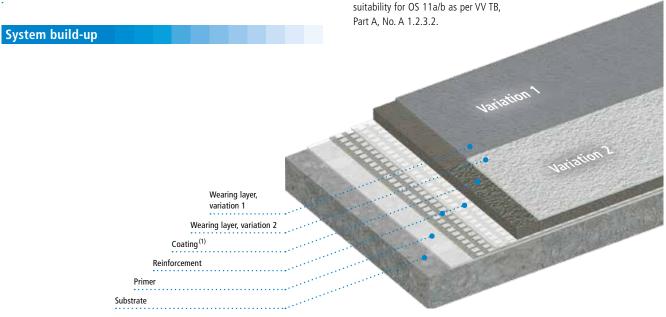
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System description

Properties

- Waterproof thick coating based entirely on polymethyl methacrylate (PMMA)
- · Cracks are avoided through force redistribution
- Triflex ProDeck (OS 11a) for exposed top decks
 Triflex ProDeck (OS 11b) for intermediate decks, underground car parks, ramps and spiral ramps
- Withstands high mechanical loads
- Shear-resistant design (does not delaminate)
- Seamless
- System-integrated detail solutions
- · Full-surface adhesion and resistant to infiltration from below
- Dynamically crack-bridging, class B 3.2 (-20 °C)

- · Cold-applied
- Fully reinforced with special fabric
- Fast-curing
- Ready for vehicle traffic after approx. 3 hrs
- Chemical-resistant
- Weather-resistant (UV, IR, etc.)
- Fire classification B_{fl}-s1 in compliance with with DIN EN 13501-1
- Non-slip
- · Variety of colours available
- Meets the requirements for class OS 11a/b as per DIN 18532, Part 6 and TR maintenance in conjunction with German Committee on Reinforced Concrete's (DAfStb) guideline (RL SIB) and a certificate of



System components

Prime

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

Reinforcement

Triflex ProMesh (special reinforcement).

Coating⁽¹⁾

Triflex ProDeck as surface protection system of the classification OS 11a or OS 11b.

Wearing layer, variation 1

Quartz sand infill 0.7–1.2 mm, Triflex Cryl Finish 209 as surface finish.

Wearing layer, variation 2

Fine hard grain infill,

Triflex Cryl Finish 209 as a surface finish.

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 $R_1 = 0.5$ mm.

Moisture: When carrying out the 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 allowed to fully harden for at least 28 days. **Adhesion:** The following minimum tensile adhesion strengths must be met on pretreated test surfaces:

Concrete: at least 1.5 N/mm² on average, and no single value below 1.0 N/mm².

⁽¹⁾ Note: Designation as per "German Committee on Reinforced Concrete (DAfStb – Guidelines for the protection and repair of concrete components" = primarily effective surface protection layer (hw0)), the DBV leaflet "Multi-storey and underground car parks" and TR maintenance = "elastic surface protective layer (hw0)"

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System description

Substrate pre-treatment

Substrate	Pre-treatment 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
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)

 $[\]ensuremath{^{\text{(A)}}}$ Only in areas not subject to mechanical stress, e.g. details and flashing.

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. $0.05\ l/m^2$ 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.

⁽B) Alternative to priming: Abrade with Triflex Cleaner and roughen surface. Information on other substrates is available on request (technik@triflex.de).

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System description

Repairing

In the case of roughness depths Rt 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⁽²⁾ per 33.00 kg of Triflex ProDeck. Consumption: at least 2.00 kg/m² per mm layer thickness. Can be recoated after approx. 1 hr.

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

Levelling coat for repairing mineral or bituminous substrates with the addition of up to 20.00 kg quartz sand 0.7–1.2 mm $^{(2)}$ per 33.00 kg of Triflex ProDeck. Consumption: at least 2.00 kg/m 2 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.

Triflex Cryl RS 242

Mortar for repairing bituminous substrates. Consumption: at least 2.20 kg/m² per mm layer thickness. Can be recoated after approx. 1 hr.

Detail waterproofing

All junctions, transitions and other detail solutions must be completed before the surface coating is applied.

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(3)

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 consumption of Triflex ProDetail: at least 3.00 kg/m 2 .

Can be recoated after approx. 45 mins.

 Triflex Cryl Finish 209Cross-coat evenly using a Triflex finish roller. Consumption: at least 0.50 kg/m².

Can be recoated after approx. 1 hr.

For dimensions, see Triflex ProDeck system drawings.

Joint waterproofing

All joints must be implemented before applying the reinforcement and coating the surface coating. To prevent abutting edges, joints should always be embedded in the substrate (see system drawings).

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 PFLay 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.

Consumption: at least 0.70 kg/m.

Triflex Special Fleece/Triflex Special Fleece PFLay 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 consumption of Triflex ProDetail: at least 2.10 kg/m.

Can be recoated after approx. 1 hr.

After application of the surface coating and the wearing layer.

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/m per mm layer thickness.

Ready for pedestrian and vehicle traffic after approx. 3 hrs. For dimensions, see Triflex ProDeck system drawings.

Important

- The expansion joint is taped off with adhesive tape for the subsequent layers so that the joint remains permanently omitted.
 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) in case of major structural movements.

For joints subject to high mechanical stress, see **Triflex ProJoint+** – expansion joint waterproofing system.

System description

Reinforcement

Triflex ProMesh

The special Triflex ProMesh reinforcement is laid edge-to-edge on the substrate, transversely to the movement to be expected from the construction.

Triflex ProMesh is secured to the surface with an additional layer of primer. A chalk line can be used to align the first strip with Triflex ProMesh being secured in selected points with the primer. The choice of material for the additional primer layer depends on the surface primer used.

Surface primer consists Triflex Cryl Primer 222:

Triflex Cryl Primer 222

Apply evenly and cross-coat using a Triflex Universal Roller. Consumption at least $0.40\ kg/m^2$ Can be recoated after approx. 1 hr.

Surface primer consists Triflex Cryl Primer 287:

Triflex Cryl Primer 287

Pour on the surface and remove surplus with a Triflex cellular rubber spreader (rigid). Then spread crosswise using a Triflex universal roller. Consumption at least $0.40\ kg/m^2$

Can be recoated after approx. 1 hr.

Surface primer consists of Triflex Pox Primer 116+:

Triflex Cryl Primer 287

Pour on the surface and remove surplus with a Triflex cellular rubber spreader (rigid). Then spread crosswise using a Triflex universal roller.

Consumption at least 0.80 kg/m²

Can be recoated after approx. 1 hr.

Surface coating

Top decks as per OS 11a:

Triflex ProDeck

Apply evenly with a Triflex squeegee (toothed rubber 11 mm) and cross-coat with a Triflex trowel (straight).

Consumption: at least 5.00 kg/m².

Interior decks, underground car parks and ramps as per OS 11b:

Triflex ProDeck

Apply evenly with a Triflex squeegee (toothed rubber 10 mm) and cross-coat with a Triflex trowel (straight).

Consumption: at least 4.50 kg/m².

Important:

- 1. The system is then built up while the surface coating is still wet.
- 2. The surface coating is omitted in the area of the expansion joint.
- 3. In the area of ramps and spiral ramps, the Triflex ProDeck requires a thixotropic formulation, depending on the inclination. The product is thickened by the in-situ addition of max. 3 % by weight of Triflex Powder Thixo.
- **4.** In order to adhere to the consumption quantity with the Triflex trowel, you must pay attention to the wear on the toothed rubber.

Wearing layer, variation 1

The product is applied to the wet surface coating:

1. Quartz sand size 0.7-1.2 mm

Dress the wet coating in excess.

Once the coating is cured, remove any surplus.

Consumption: at least 7.00 kg/m².

Can be recoated after approx. 2 hr.

2. Triflex Cryl Finish 209

Apply evenly and cross-coat using a Triflex finish roller. Consumption: at least 0.70 kg/m².

Ready for vehicle traffic after approx. 2 hrs.

Important:

- 1. The wearing layer is omitted in the area of the expansion joints.
- 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.

Wearing layer, variation 2

The product is applied to the wet surface coating:

1. Fine hard grain

Dress the wet layer in excess.

Once the coating is cured, remove any surplus.

Consumption: at least 7.00 kg/m².

Can be recoated after approx. 2 hrs.

2. Triflex Cryl Finish 209

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

Consumption: at least 0.70 kg/m².

Ready for vehicle traffic after approx. 2 hrs.

Important:

- 1. The wearing layer is omitted in the area of the expansion joints.
- 2. 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 approx. 1 % by weight of Triflex Liquid Thixo.

Collision protection

To protect against mechanical damage, the waterproofing should be protected in risk areas (e.g. kerbs, thresholds and joints) by stainless steel cover plates.

1. Triflex Cleaner

Degrease plates and roughen the underside. (4)

2. Triflex Cryl Paste

Cover the entire underside of the plate with Triflex Cryl Paste.

3. Cover plate

Stick into place and remove surplus paste with a trowel, secure mechanically if necessary.

Consumption of Triflex Cryl Paste: at least 0.50 kg/m2.

Can be subject to loads after approx. 45 mins.

⁽⁴⁾ Alternative to roughening: remove loose rust and rust scale, prime with Triflex Metal Primer.

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System description

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 Liquid Thixo **Triflex Cryl Finish 209 Triflex Metal Primer Triflex Cryl Primer 222 Triflex Powder Thixo Triflex Cryl Primer 287** Triflex Pox Primer 116+ **Triflex ProDeck** Triflex Cryl RS 240 Triflex Cryl RS 242 **Triflex ProDetail Triflex Cryl Paste Triflex ProMesh Triflex FlexFiller Triflex Special Fleece Triflex Glass Primer Triflex Special Fleece PF Triflex Glass Cleaner** 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 applying the pattern or decoration, and during application, always 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 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 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 $+20\,^{\circ}\text{C}$.

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.



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.q. 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.

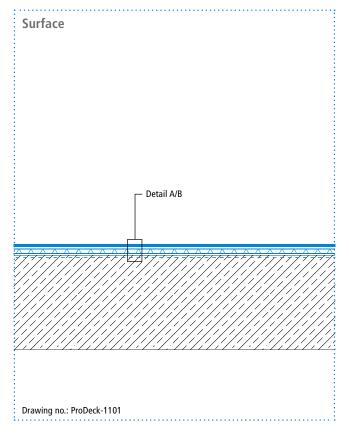
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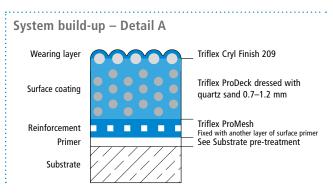
Please visit the Download section of the Triflex website at www.triflex.com to obtain the current standard specifications, which are available in a range of different file formats. Alternatively, visit the website www.ausschreiben.de or www.heinze.de.

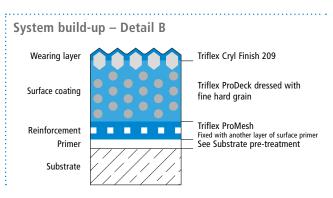
CAD drawings

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.

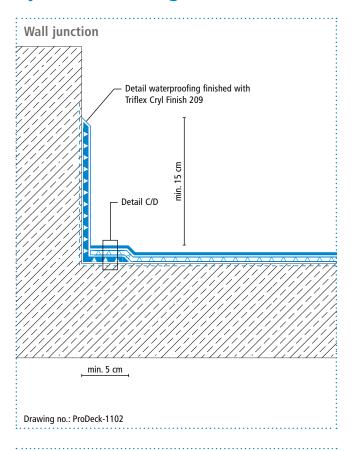


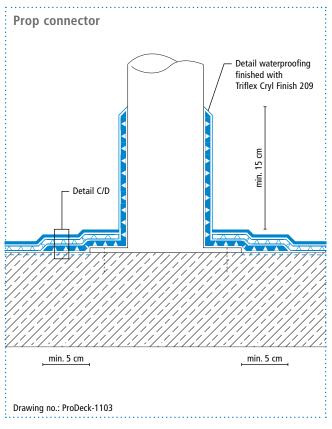


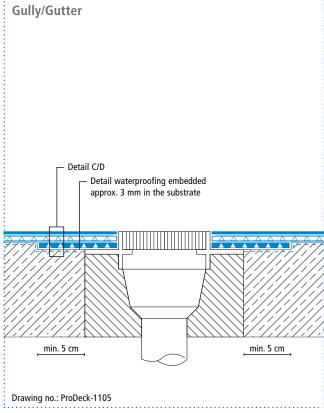


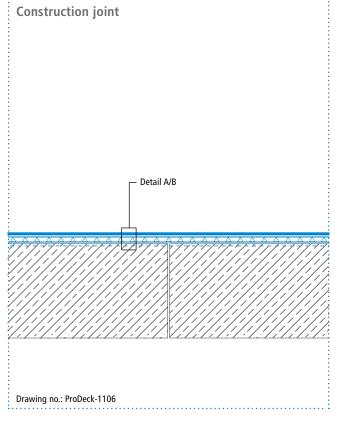


System drawings



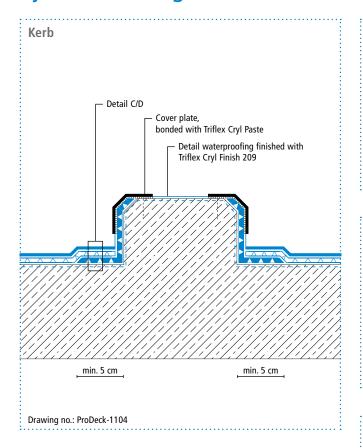


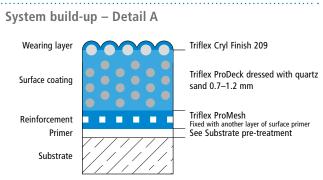


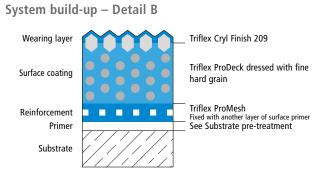


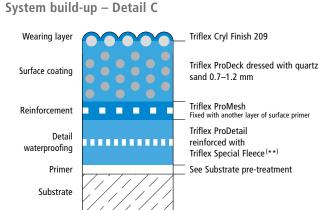
Height differences where the fleece overlaps are exaggerated.

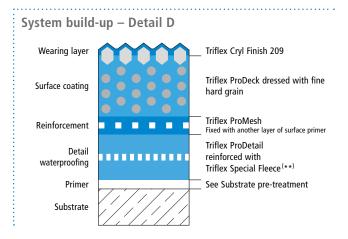
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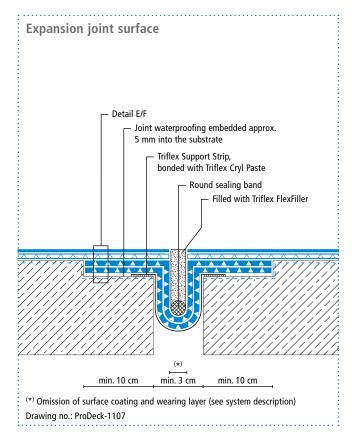


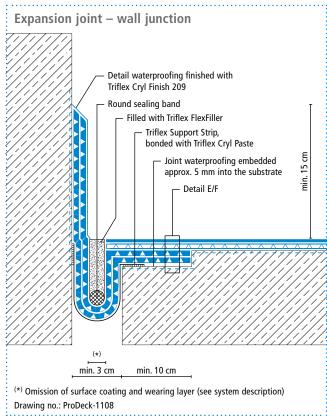




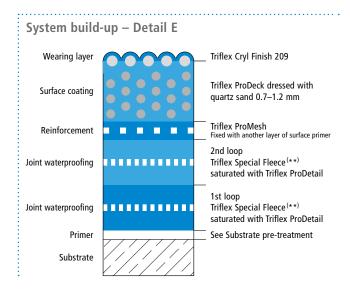
^(**) Triflex Special Fleece or Triflex Special Fleece PF Height differences where the fleece overlaps are exaggerated.

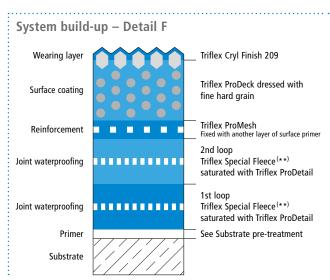






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Triflex ProDeck surface

Variation 1 – dress with quartz sand 0.7–1.2 mm and finish with Triflex Cryl Finish 209



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Triflex ProDeck surface

Variation 2 – dress with fine hard grain and finish with Triflex Cryl Finish 209



Please note:

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



002.LS Planning documents Triflex ProDeck EN A4 05/2024