

Planning documents
Parking deck coating system (OS 8)

Triflex DeckFloor



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Applications



Fast execution down to the smallest detail

The PMMA resins used in the Triflex DeckFloor system cure in just a few hours. Complete coating applications can be carried out in stages in a single day. Disruptions caused by closures can therefore be kept to a minimum. Downtimes caused by out of service parking bays and access areas are kept to a minimum. The whole area is only watertight when all the details and construction and expansion joints have been properly waterproofed. The Triflex DeckFloor system is also fleece-reinforced at the details and joint areas so that the waterproofing is full-surface joint-bridging and uniform.

Triflex DeckFloor is a watertight thick-layer system with static crack-bridging. The system is able to withstand high mechanical loads and has been specially designed for heavily used, naturally ventilated intermediate decks. The OS 8 coating system can also be used in exposed areas.





Advantages at a glance

Long-lasting

Triflex DeckFloor is a statically 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 waterproofed and fleece-reinforced.

Ideal for refurbishments

The system can be applied to virtually all substrates and, with mass per unit area of less than 10 kg/m², it is also suitable for application on asphalt coverings without negatively affecting stability. This saves removal costs and time.

Short closure periods

Triflex DeckFloor offers 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 car park is soon ready for use again.

Colours

Triflex DeckFloor 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 8 as per the German Committee on Reinforced Concrete's (DAfStb) guideline "Protection and Repair of Concrete Structural Components" (RL SIB) and TR maintenance as per VV TB, Part A, No. A 1.2.3.2. Fire classification B_{ff}-s1 in compliance with DIN EN 13501-1.

And this is how it's done...



1. The substrate is prepared and primed.



2. The details are waterproofed using Triflex ProDetail.



3. Triflex DeckFloor self-levelling mortar is applied ...



4. ... and spread evenly using a Triflex toothed rubber squeegee.



5. The wet coating can be sanded down, e.g. for parking bays.



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



7. Done!



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-layer system based entirely on polymethyl methacrylate (PMMA).
- For naturally ventilated intermediate decks and underground car parks
- · Withstands high mechanical loads
- Shear-resistant construction
- Seamless
- System-integrated detail solutions
- Full-surface adhesion and impermeable
- Statically crack-bridging (0.1 mm at -10 °C)
- Cold-applied
- · Fast-curing

- Ready for vehicle traffic after approx. 3 hrs
- Chemical-resistant, resistant to de-icing salt.
- Weather-resistant (UV, IR etc.)
- Fire classification B_{ff}-s1 in compliance with with DIN EN 13501-1
- Non-slip
- · Variety of colours available

Variation 2

 Meets the requirements of Class OS 8 as per the German Committee on Reinforced Concrete's (DAfStb) guideline "Protection and Repair of Concrete Structural Components" (RL SIB) and TR maintenance as per VV TB, Part A, No. A 1.2.3.2.

Variation 3

System variations and system build-up

Variation 1	Variation 2	Variation 3
Surfaces with standard loads and stresses; e.g. parking lanes and parking spaces	Surfaces with high loads and stresses, e.g. entrances and exits, straight and spiral ramps and lanes	Surfaces with high loads and stresses and high grip requirements; e.g. steep ramps

Wearing layer	
Coating Primer	
Substrate	

Variation 1

	System components, variation 1	System components, variation 2	System components, variation 3
Wearing layer	Triflex Cryl Finish 209	Triflex Cryl M 264	Triflex Cryl Finish 202
Coating*	Triflex DeckFloor dressed with quartz sand 0.7—1.2 mm	Triflex DeckFloor	Triflex DeckFloor dressed with coarse hard grain
Primer	Trif	lex Primer(See Substrate pre-treatment ta	ble)

^{*} Designation as per "German Committee on Reinforced Concrete (DAfStb — Guidelines for the protection and repair of concrete components" = primarily effective surface protection layer (hwO)), the DBV leaflet "Multi-storey and underground car parks" and TR maintenance = "elastic surface protective layer (hwO)"

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System description

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 $R_{\rm t}=0.5~{\rm mm}.$

Moisture: When carrying out coating 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.

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)

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

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. to max. 3 hrs.

Important:

Adhesion must always be tested on the specific substrate!

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)

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 guartz 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 Rt 1 to 10 mm:

Levelling coat for repairing mineral or bituminous substrates with the addition of up to 20.00 kg of guartz 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.

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 waterproofing 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 (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 consumption of Triflex ProDetail: at least 3.00 kg/m².

Can be recoated after approx. 45 mins.

4. Triflex Cryl Finish 209

Cross-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 DeckFloor system drawings.

Joint waterproofing

All joints must be waterproofed before the the surface coating is applied. To prevent abutting edges, joints should always be embedded in the substrate (see system drawings).

Construction joint:

1. Triflex Cryl RS 240

Level joint flush with surface (if necessary).

Points 2 to 4 below are implemented wet-on-wet.

2. Triflex ProDetail

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

3. 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.

4. Triflex ProDetail

Apply until the Triflex Special Fleece is fully saturated. Consumption: at least 0.30 kg/m. Can be recoated after approx. 45 mins.

5. Triflex ProDetail

Apply as top layer.

Consumption: at least 0.40 kg/m.

Total consumption of Triflex ProDetail: at least 1.00 kg/m.

Can be recoated after approx. 45 mins.

For dimensions, see Triflex DeckFloor system drawings.

Important:

The construction joint is taped off for the subsequent surface coating and wearing layer with 2.5 cm wide adhesive tape so that the area of the joint is

⁽¹⁾ The quartz sand grading curve must be adjusted on site, if necessary. (2) if necessary, Triflex Special Fleece mouldings

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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

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

Can be recoated after approx. 1 hr.

After application of the surface coating and driving surface.

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.

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

Important:

 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.

For joints subject to high mechanical stress, see

Triflex ProJoint+ – Waterproofing system for expansion joints.

Surface coating

Triflex DeckFloor

Apply evenly with a Triflex squeegee (toothed rubber 9 mm) and cross-coat with a Triflex trowel (straight).

Consumption: at least 4.00 kg/m².

Can be recoated after approx. 2 hrs.

For dimensions, see Triflex DeckFloor system drawings.

Important:

- In system variations 1 and 3 the system is built up whilst the surface coating is still wet.
- The surface coating is omitted in the area of the construction and expansion joints.

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:

- The wearing layer is omitted in the area of the construction and 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 1% by weight Triflex Liquid Thixo.
- 3. In order to adhere to the consumption quantity with the Triflex trowel, you must pay attention to the wear on the toothed rubber.

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System description

Wearing layer, variation 2

Preparatory work:

To enable reliable drainage of the surface water, the coating is divided into panels. Vehicle traffic areas are divided into identically sized rectangular panels. The length of the rectangle should be max. twice the width of the traffic path. Ramps can be optionally divided into diagonal strips with a max. width of 50 cm. The dividing lines are omitted by taping over with adhesive tape (max. width: 2.5 cm).

Important:

The adhesive tape for subdividing the surface must be removed while the wearing layer is still wet.

Transitions between the surfaces of different system variations must be completed as shown in the Triflex DeckFloor 1201 system drawing.

Finishing the omissions in subdivided surfaces:

An approx. 10 cm wide strip of Triflex Cryl Finish 209 must be applied to the subsequent surface gap. The chosen colour of Triflex Cryl Finish 209 should be as dark as possible for cleaning reasons.

Triflex Cryl Finish 209

Apply a width of approx. 10 cm to the substrate in the area of the surface omission with a Triflex finish roller.

Consumption: at least $0.50\ kg/m^2$.

Can be recoated after approx. 1 hr.

Important:

- 1. We recommend applying Triflex Cryl Finish 209 over the entire surface in smaller areas such as ramps and spiral ramps.
- 2. When Triflex Cryl M 264 is applied, scoring occurs due to the guide grain. To achieve an optically consistent surface, the waterproofing resin should be selected in the same shade as Triflex Cryl M 264. In the area of special colours, the finish must be applied over the entire surface in the same colour shade.

Wearing layer:

Triflex Cryl M 264

Apply with a stainless steel trowel and spread over the grain tips or apply from a standing position with a Triflex trowel (offset) and, if necessary, remove surplus to improve the appearance with a Triflex cellular rubber spreader whilst still fresh.

Consumption: at least 4.00 kg/m². Can be walked on after approx. 1 hrs. Ready for vehicle traffic after approx. 3 hrs.

Wearing layer, variation 3

The product is applied to the wet surface coating:

1. Coarse hard grain

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 hrs.

2. Triflex Cryl Finish 202

Apply evenly and cross-coat using a Triflex finish roller. Consumption: at least 0.80 kg/m².

Ready for vehicle traffic after approx. 2 hrs.

Important:

- The wearing layer is omitted in the area of the construction and 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.

Collision protection

To protect from mechanical damage, the coating 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. (3)

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.

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.

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System drawings

Product information

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

Triflex Cleaner
Triflex Cryl Finish 202
Triflex Cryl Finish 209
Triflex Cryl M 264
Triflex Cryl Primer 222
Triflex Cryl Primer 287
Triflex Cryl RS 240
Triflex Cryl RS 242
Triflex Cryl Paste
Triflex DeckFloor

Triflex FlexFiller
Triflex Glass Cleaner
Triflex Glass Primer
Triflex Liquid Thixo
Triflex Metal Primer
Triflex Pox Primer 116+
Triflex ProDetail
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 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 $\pm 20\,^{\circ}\text{C}$.

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. This does not affect the mechanical properties of the cured coating.

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.

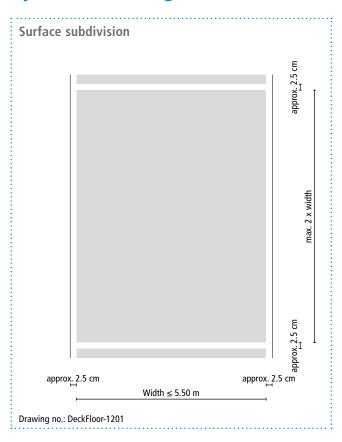
CAD drawings

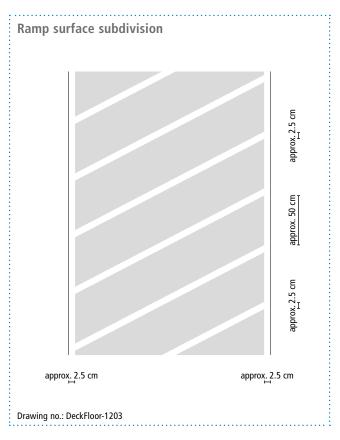
All CAD system drawings can be downloaded free of charge from the Download section of the Triflex website at www.triflex.com.

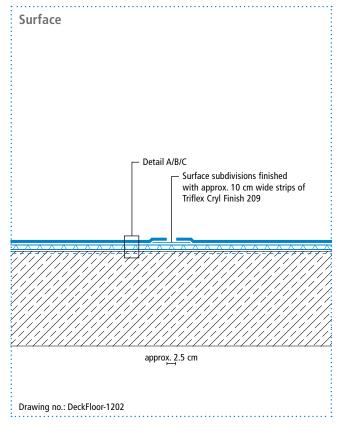
Contact us at technik@triflex.de to request further true-to-scale CAD drawings.

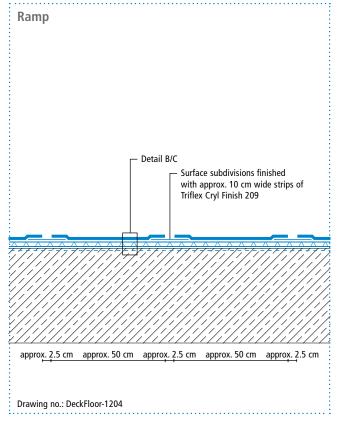


System drawings



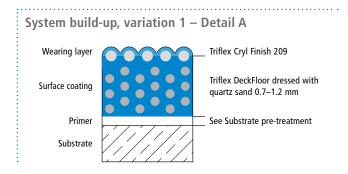


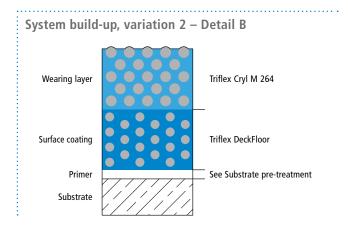


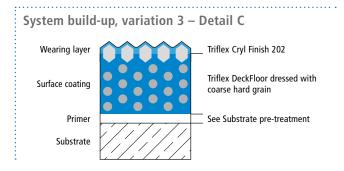


Height differences where the fleece overlaps are exaggerated.



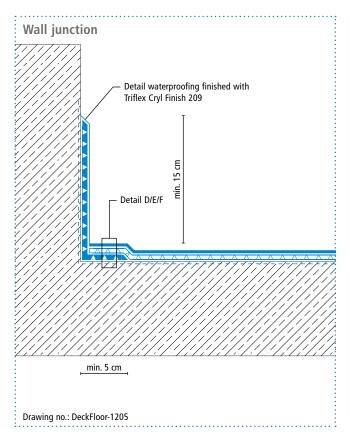


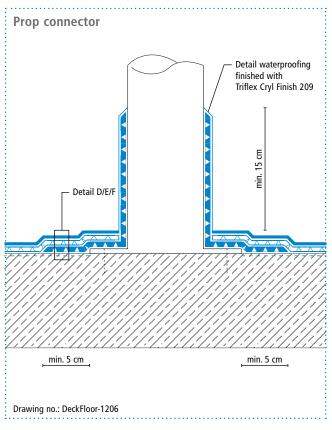


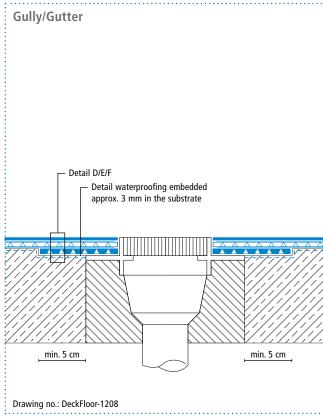


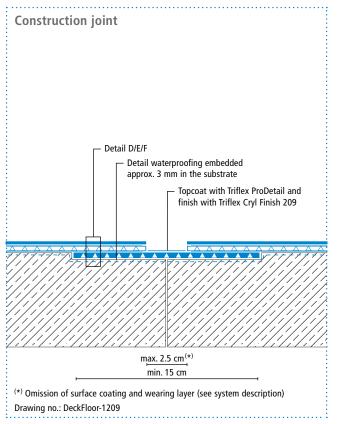
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System drawings



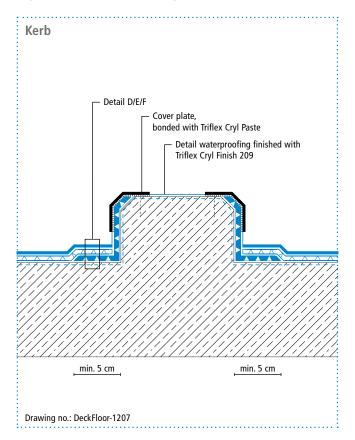


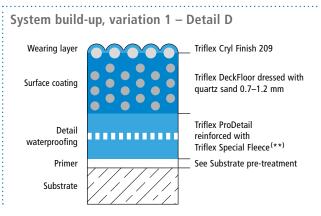


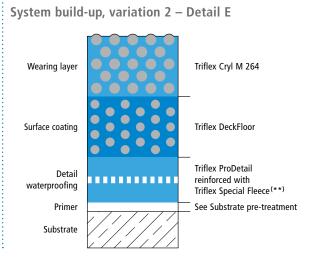


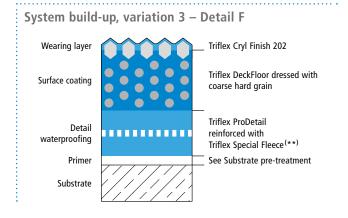
Height differences where the fleece overlaps are exaggerated.



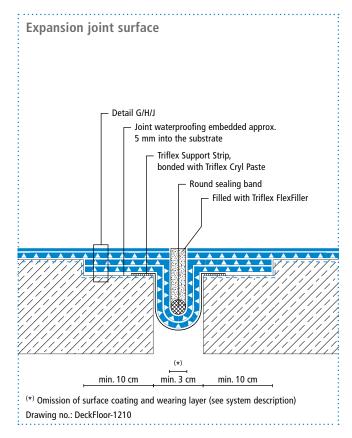


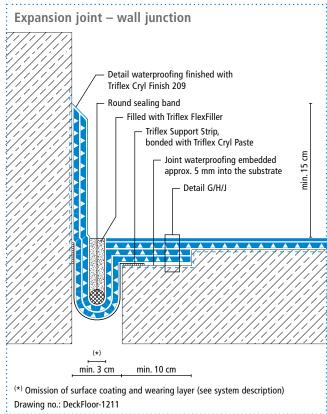




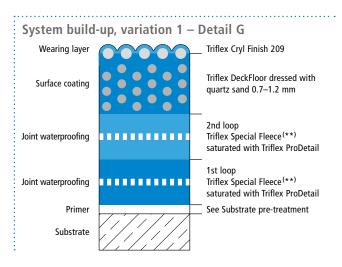


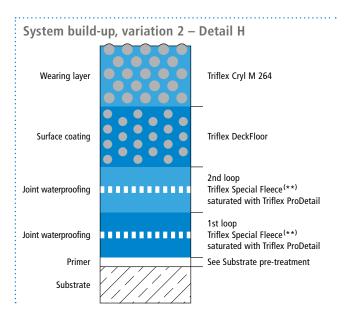


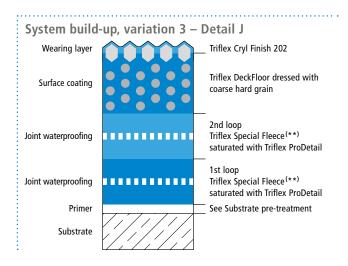




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^(**) Triflex Special Fleece or Triflex Special Fleece PF



Triflex DeckFloor surfaces

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



Variation 2 - wearing layer with Triflex Cryl M 264



Variation 3 – dress with coarse hard grain and finish with Triflex Cryl Finish 202



Dark grey

