

Planning documents
Parking Deck Flooring System (OS 13)

Triflex DeckFloor



Triflex DeckFloor



Applications



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. Top decks can also be fitted with a surfacing system made of polymethyl methacrylate resin (PMMA).

Triflex DeckFloor is approved in compliance with OS 13 as well as OS 8.

Fast execution down to the smallest detail

The resin used in the Triflex DeckFloor system cures 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 settlement 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.



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 a surface weight 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 safety

The system set-up meets the requirements of Class OS 13 and OS 8 in compliance with DIN V 18026 and the German Committee on Reinforced Concrete's guidelines for the protection and repair of concrete components (DAfStb Rili SIB 2001 – Repair Guideline 2005). Fire classification B_{fl}-s1 in compliance with DIN EN 13501-1.

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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 the Triflex Special Roller.



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 lab-scale and application coordinated as a result of 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
- 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.)
- Non-slip
- Variety of colours available
- Meets the requirements of Class OS 13 and OS 8 in compliance with DIN V 18026 and the German Committee on Reinforced Concrete's guidelines for the protection and repair of concrete components (DAFStb Rili SIB 2001 – Repair Guideline 2005).
- Fire classification B_{fl}-s1 in compliance with with DIN EN 13501-1

System variants and system set-up

Triflex DeckFloor, Variant 1

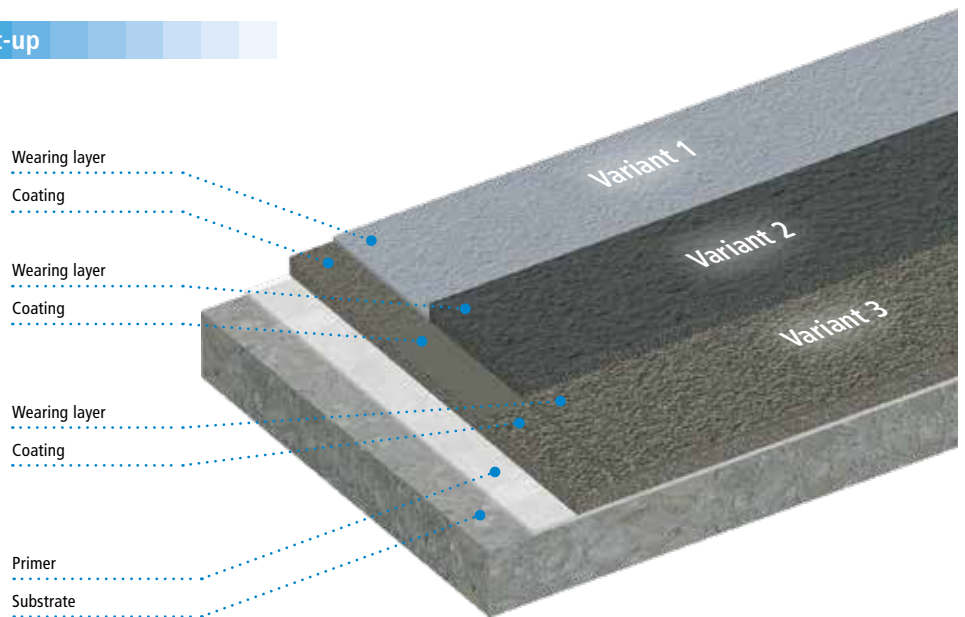
Surfaces with standard loads and stresses; e.g. parking spaces

Triflex DeckFloor, Variant 2

Surfaces with high loads and stresses; e.g. entrances and exits, straight and spiral ramps, lanes

Triflex ProPark, Variant 3

Surfaces with high loads and stresses and high grip requirements; e.g. steep ramps



System components

Primer

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

Coating layer, Variant 1

Triflex DeckFloor with quartz sand dressing 0.7–1.2 mm, wearing layer: Triflex Cryl Finish 209

Coating layer, Variant 2

Triflex DeckFloor, wearing layer: Triflex Cryl M 264

Wearing layer, Variant 3

Triflex DeckFloor with coarse hard grain dressing, wearing layer: Triflex Cryl Finish 202

* Please note: Term in compliance with "German Committee on Reinforced Concrete (DAFStb – Guidelines for the protection and repair of concrete components" = primarily effective surface protection layer (hwO)

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System description

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. The substrate must be pre-treated in accordance with the specifications in the Repair Guideline (Rili SIB). The following volume specifications relate to a roughness depth of $R_T = 0.5$ 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 permitted to fully harden for at least 28 days.

Adhesion: The following minimum tensile adhesion strengths must be met on pre-treated test areas:

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

Substrate pre-treatment

Substrate	Pre-treatment	Primer
Aluminium ⁽¹⁾	Abrade with Triflex Cleaner, roughen surface	No primer ⁽²⁾
Asphalt	Grinding, milling or dust-free shot-blasting	Triflex Cryl Primer 222
Composite thermal insulation systems ⁽¹⁾		Triflex Pox Primer 116+
Concrete	Grinding, milling or dust-free shot-blasting	Triflex Cryl Primer 287
Copper ⁽¹⁾	Abrade with Triflex Cleaner, roughen surface	No primer ⁽²⁾
Epoxy resin coating	Roughen surface, adhesive strength and compatibility test	No primer
Glass ⁽¹⁾	Abrade with Triflex Cleaner, roughen surface, adhesive strength test	Triflex Glass Primer
Lightweight concrete ⁽¹⁾		Triflex Cryl Primer 287
Mortar, resin-modified	Grinding, milling or dust-free shot-blasting; adhesive strength and compatibility test	Triflex Pox Primer 116+
Paints	Grinding or milling, completely remove	See substrate
Plaster/masonry ⁽¹⁾		Triflex Cryl Primer 287
PU coating	Roughen surface, adhesive strength and compatibility test	No primer
PVC moulded components, hard ⁽¹⁾	Abrade with Triflex Cleaner, roughen surface	No primer
Screeds	Grinding, milling or dust-free shot-blasting	Triflex Cryl Primer 287
Stainless steel ⁽¹⁾	Abrade with Triflex Cleaner, roughen surface	No primer ⁽²⁾
Steel, galvanised ⁽¹⁾	Abrade with Triflex Cleaner, roughen surface	No primer ⁽²⁾
Tiles	Mechanically remove glaze	Triflex Cryl Primer 287
Wood ⁽¹⁾	Remove paints	Triflex Cryl Primer 287
Zinc ⁽¹⁾	Abrade with Triflex Cleaner, roughen surface	No primer ⁽²⁾

⁽¹⁾ Only in areas not subject to high mechanical stress, e.g. details and flashing.

⁽²⁾ Alternative to roughening: Abrade with Triflex Cleaner, prime with Triflex Metal Primer. Loose rust and blistering rust must first be removed. 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 Cryl Primer 222

Apply evenly with a Triflex Universal Roller.

Volume: at least 0.40 kg/m².

Can be recoated after approx. 45 min.

Triflex Cryl Primer 287

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

Then recoat using a Triflex Universal Roller crosswise.

Volume: at least 0.35 kg/m².

Can be recoated after approx. 45 min.

Triflex Glass Primer

Wipe on GP evenly with a cleaning cloth.

Volume: approx. 50 ml/m².

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

Triflex Metal Primer

Apply a thin coat with a short-pile roller or, alternatively, spray a thin coat with a spray can.

Volume: approx. 80 ml/m².

Can be recoated after approx. 30 to 60 min.

Triflex Pox Primer 116+

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

Then recoat using a Triflex Universal Roller.

Do not allow puddles to form.

Dress with not too much of the fresh primer.

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

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

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

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System description

Repairing

Triflex Cryl RS 240

Mortar for repairing mineral substrates with roughness depths of $R_T > 10$ mm.
Volume: at least 2.20 kg/m² per mm layer thickness.
Can be recoated after approx. 45 min.

Triflex Cryl RS 242

Mortar for repairing bituminous substrates with roughness depths of $R_T > 10$ mm.
Volume: at least 2.20 kg/m² per mm layer thickness.
Can be recoated after approx. 1 hr.

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Levelling paste for repairing mineral or bituminous substrates with roughness depths of R_T 1 to 10 mm with the addition of up to 20.00 kg quartz sand 0.7–1.2 mm* per 33.00 kg of Triflex DeckFloor.
Volume: at least 2.00 kg/m² per mm layer thickness.
Can be recoated after approx. 1 hr.

Scratch coat for repairing mineral or bituminous substrates with roughness depths of R_T 0.5 to 1 mm with the addition of up to 10.00 kg quartz sand 0.2–0.6 mm* per 33.00 kg of Triflex DeckFloor.
Volume: at least 2.00 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 are completed wet-on-wet.

1. Triflex ProDetail

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

2. Triflex Special Fleece

Lay strips, removing any air bubbles.
Overlap the fleece strips by at least 5 cm.

3. Triflex ProDetail

Apply until the Triflex Special Fleece is fully saturated.
Volume: at least 1.00 kg/m².

Total volume of Triflex ProDetail: at least 3.00 kg/m².
Can be recoated after approx. 45 min.

4. Triflex Cryl Finish 209

Cross-coat evenly using a Triflex Universal Roller.
Volume: 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 surfaces are coated. 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 are completed wet-on-wet.

2. Triflex ProDetail

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

3. Triflex Special Fleece

Lay a 15 cm wide strip, removing any 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.
Volume: at least 0.30 kg/m.
Can be recoated after approx. 45 min.

5. Triflex ProDetail

Apply as top layer.
Volume: at least 0.40 kg/m.

Total volume of Triflex ProDetail: at least 1.00 kg/m.
Can be recoated after approx. 45 min.

For dimensions, see Triflex DeckFloor system drawings.

Important note:

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 omitted.

* The quartz sand grading curve must be adjusted on site, if necessary.

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System description

Settlement 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.

The subsequent application is wet-on-wet.

3. Triflex ProDetail

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

Volume: at least 0.70 kg/m.

4. Triflex Special Fleece

Lay a 35 cm wide strip as the first loop, making sure there are no air bubbles.

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

5. Triflex ProDetail

Apply to completely saturate the Triflex Special Fleece and as a preliminary layer for the next fleece loop.

Volume: at least 0.70 kg/m.

6. Triflex Special Fleece

Lay a 35 cm wide strip as the second loop, making sure that 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.

Volume: at least 0.70 kg/m.

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

Can be recoated after approx. 1 hr.

After application of the surface 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.

Volume: 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 note:

1. The construction joint or settlement 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 settlement joints are all maintenance joints. For visual reasons, it may be necessary to renew the joint ingress protection after structural movement.**

For joints subject to high mechanical stress, see

Triflex ProJoint – Waterproofing system for expansion joints.

Surface coating

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Apply evenly with a Triflex Special Roller.

Volume: at least 4.00 kg/m².

Can be recoated after approx. 2 hrs.

For dimensions, see Triflex DeckFloor system drawings.

Important note:

1. **In system variants 1 and 3 the system is built up whilst the surface coating is still wet.**
2. The surface coating is omitted in the area of the construction and settlement joints.

Wearing layer – Variant 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.

Volume: at least 7.00 kg/m².

Can be recoated after approx. 2 hrs.

2. Triflex Cryl Finish 209

Apply transversely to the direction of travel using a hard rubber spreader and cross-coat using a Triflex Universal Roller.

Volume: at least 0.70 kg/m².

Ready for vehicle traffic after approx. 2 hrs.

Important note:

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

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System description

Wearing layer – Variant 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 note:

- The adhesive tape for subdividing the surface must be removed while the wearing layer is still wet.
- Transitions between the surfaces of different system versions 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 waterproofing at the surface omission with a Triflex Universal Roller.

Volume: at least 0.50 kg/m².

Can be recoated after approx. 1 hr.

Important note:

- We recommend applying Triflex Cryl Finish 209 over the entire surface in smaller areas such as ramps and spiral ramps.
- 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.

Volume: at least 4.00 kg/m².

Can be walked on after approx. 1 hr.

Ready for vehicle traffic after approx. 3 hrs.

Wearing layer – Variant 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.

Volume: at least 7.00 kg/m².

Can be recoated after approx. 2 hrs.

2. Triflex Cryl Finish 202

Cross-coat using a Triflex Universal Roller.

Volume: at least 0.80 kg/m².

Ready for vehicle traffic after approx. 2 hrs.

Important note:

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

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

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

Can be subject to loads after approx. 45 min.

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 min. Transitions to subsequent waterproofing must overlap including Triflex Special Fleece by a minimum of 10 cm. This also applies to junctions, transitions 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.

* Alternative to roughening: Remove loose rust and rust scale, prime with Triflex Metal Primer.

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System drawings

System components

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

Triflex Cleaner	Triflex DeckFloor
Triflex Cryl Finish 202	Triflex FlexFiller
Triflex Cryl Finish 209	Triflex Glass Primer
Triflex Cryl M 264	Triflex Liquid Thixo
Triflex Cryl Primer 222	Triflex Metal Primer
Triflex Cryl Primer 287	Triflex Pox Primer 116+
Triflex Cryl RS 240	Triflex ProDetail
Triflex Cryl RS 242	Triflex Special Fleece
Triflex Cryl Paste	

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.

Gradient/Evenness

Before commencing any work and during the work itself, it is essential to ensure the correct gradient and evenness of the substrate. Any corrections required must be taken into account during this work.

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 volumes/Waiting times

The specified volumes apply only to smooth, even substrates with a maximum roughness depth of $R_T = 0.5$ mm. 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.

Application notes

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 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-Triflex products must not be used with Triflex systems. 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, which are available in a range of different file formats. Alternatively, visit the website www.ausschreiben.de or www.heinze.de.

CAD drawings

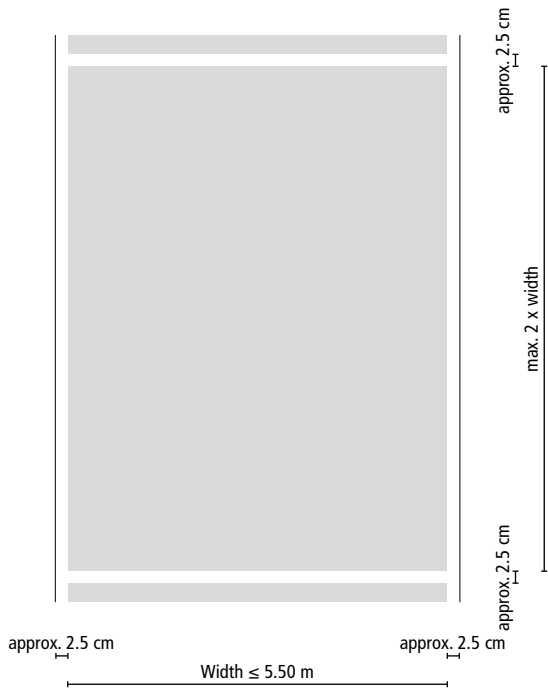
All CAD system drawings can be downloaded free of charge from the Download section of the Triflex website at www.triflex.com.

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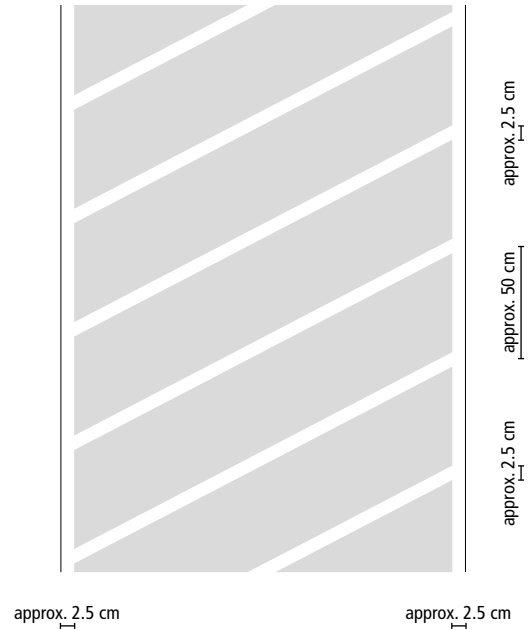
System drawings

Surface subdivision



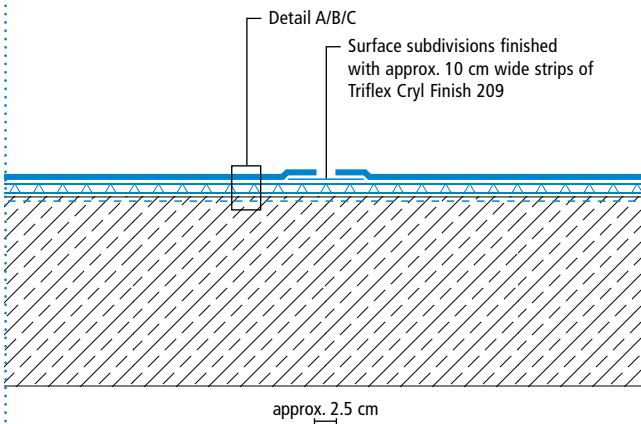
Drawing no.: DeckFloor-1201

Ramp surface subdivision



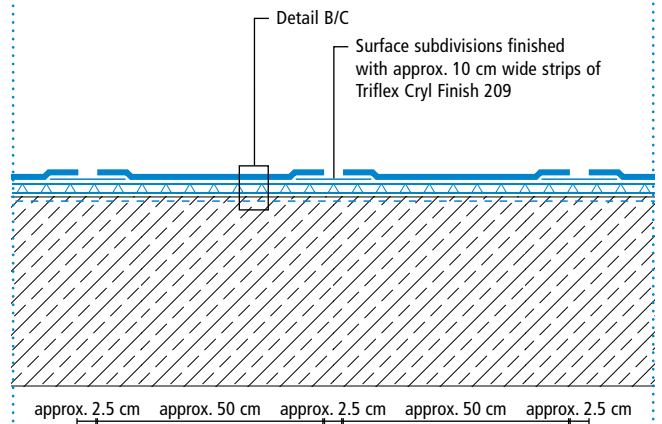
Drawing no.: DeckFloor-1203

Area



Drawing no.: DeckFloor-1202

Ramp



Drawing no.: DeckFloor-1204

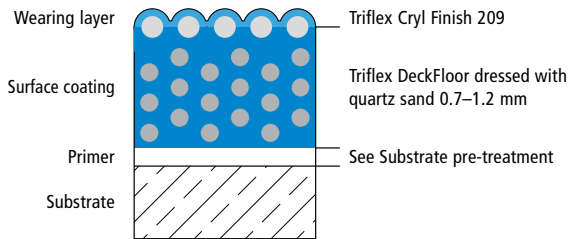
Height differences between fleece overlaps are exaggerated.

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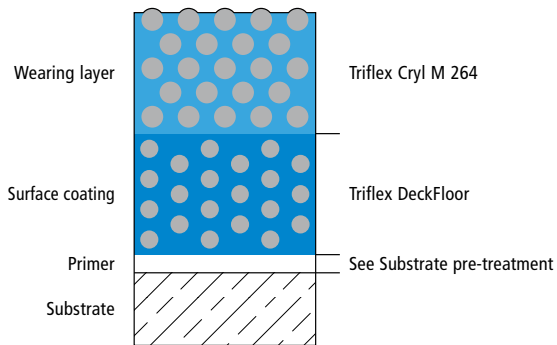


System drawings

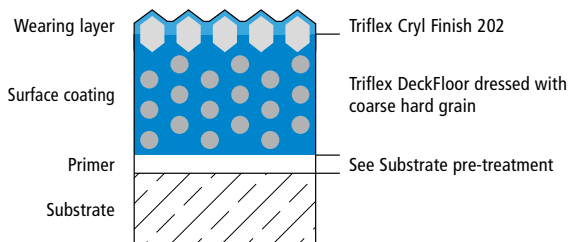
System set-up, Variant 1 – Detail A



System set-up, Variant 2 – Detail B



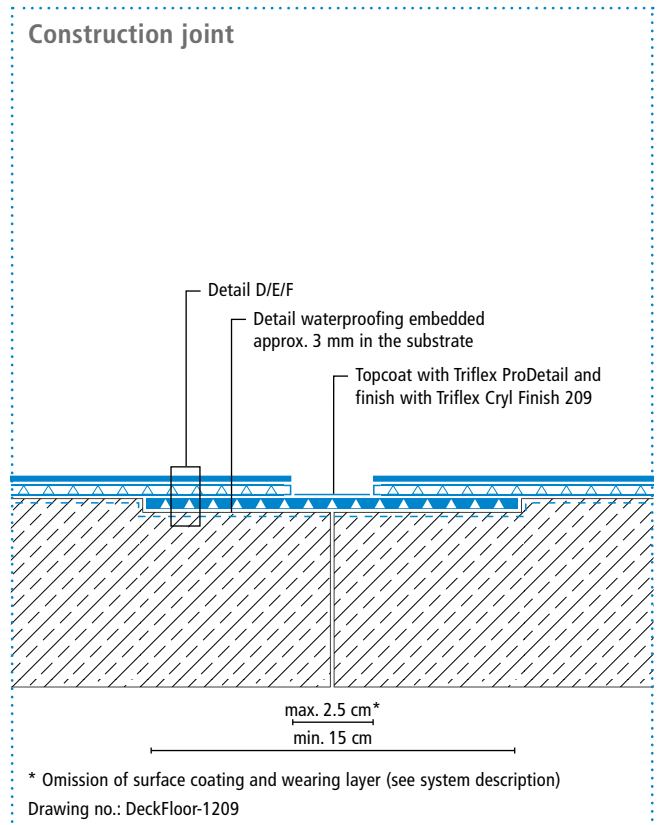
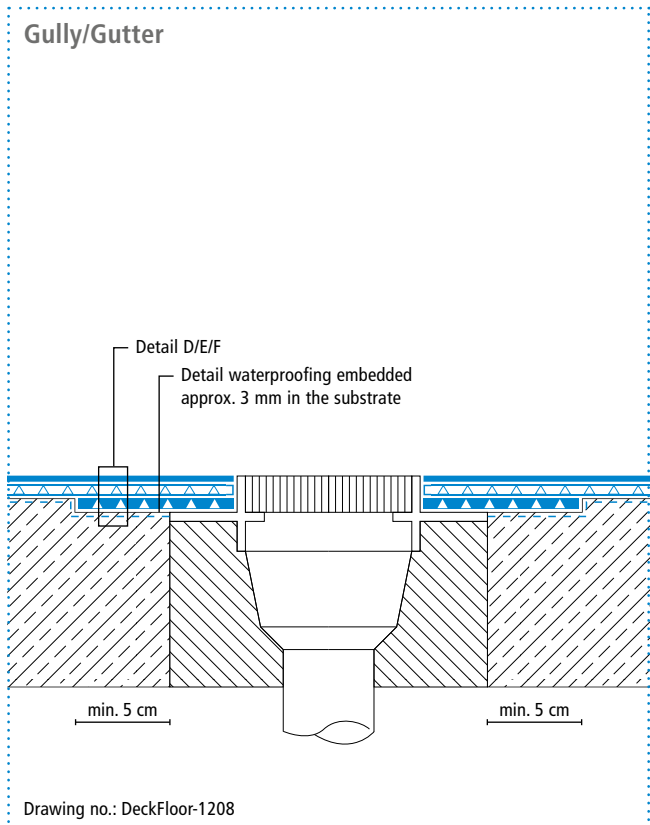
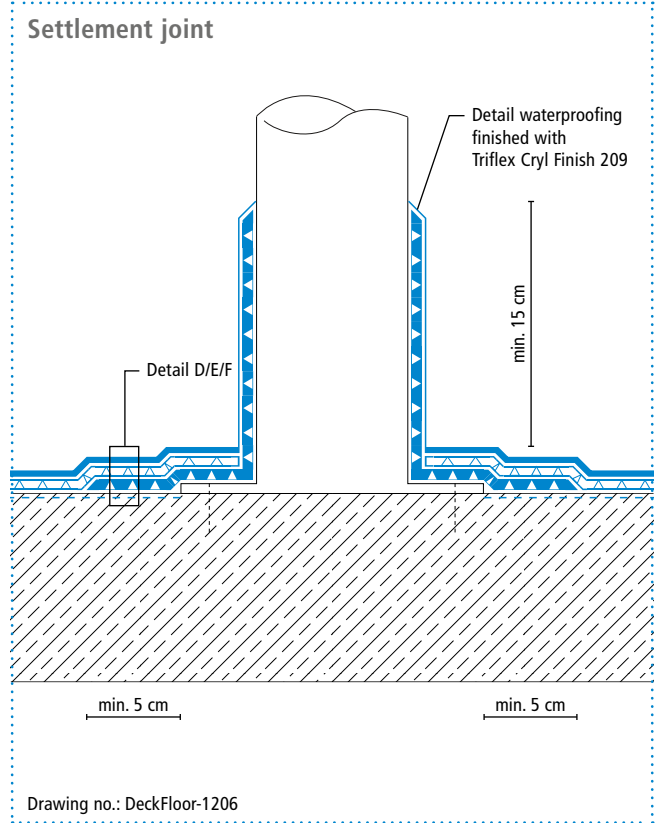
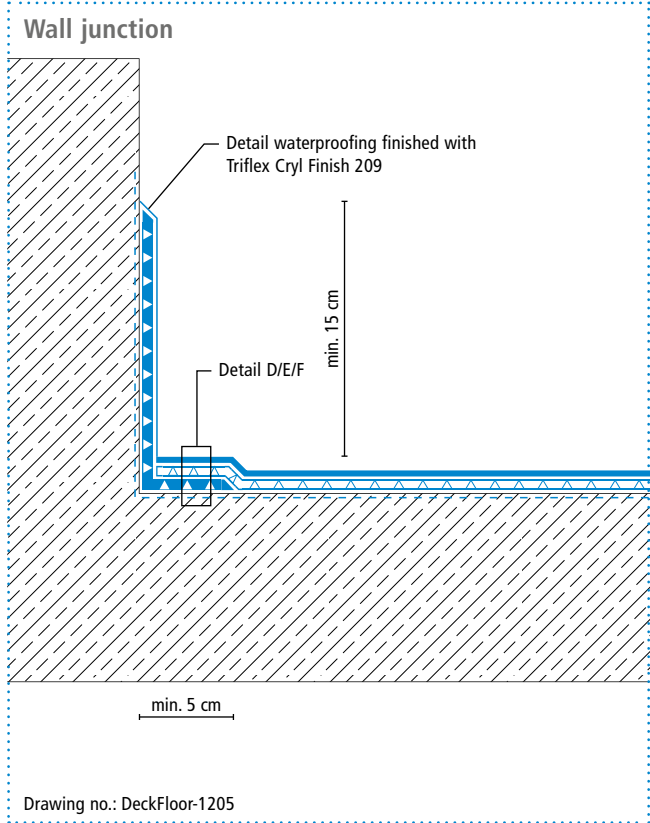
System set-up, Variant 3 – Detail C



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System drawings

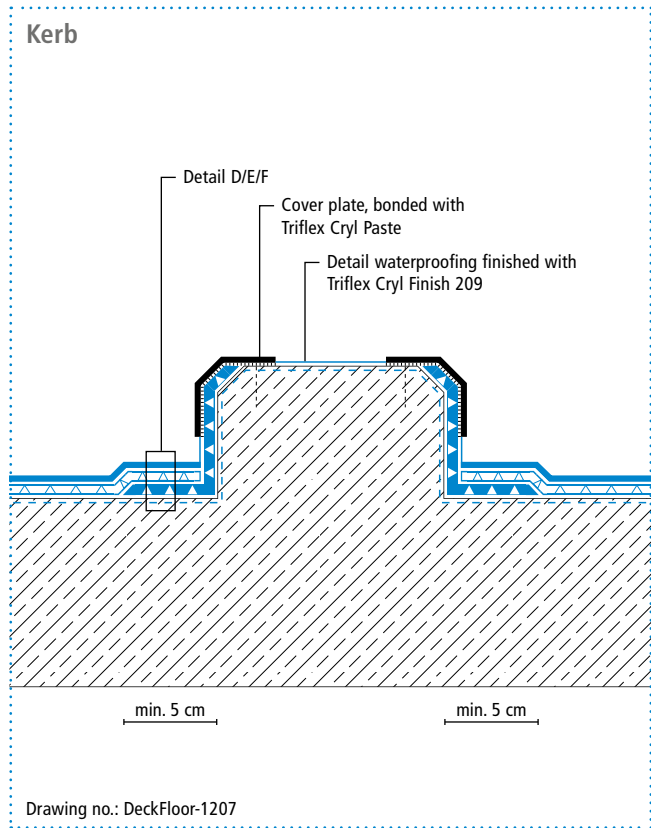


Height differences between fleece overlaps are exaggerated.

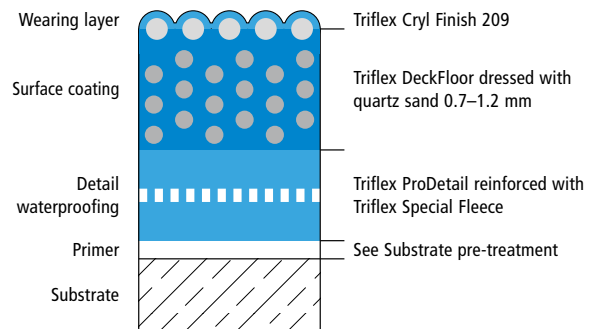
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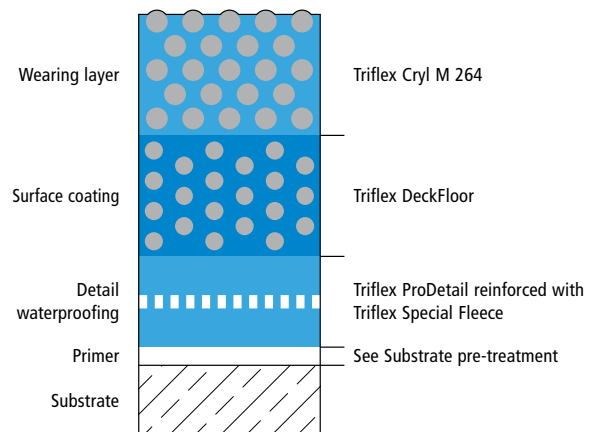
System drawings



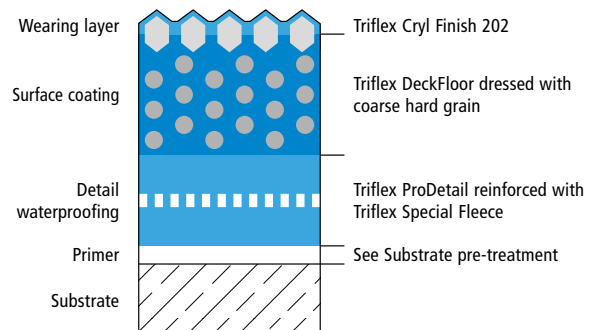
System set-up, Variant 1 – Detail D



System set-up, Variant 2 – Detail E



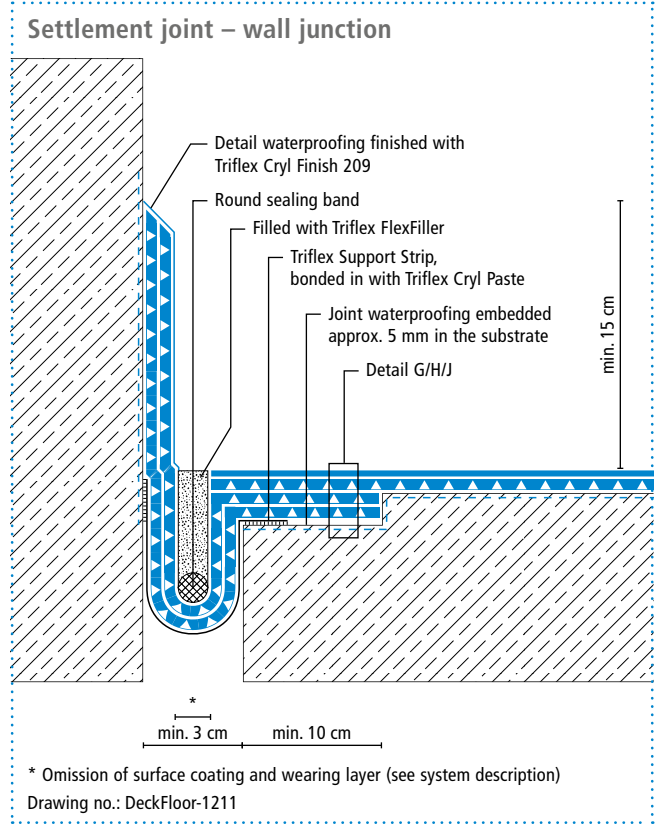
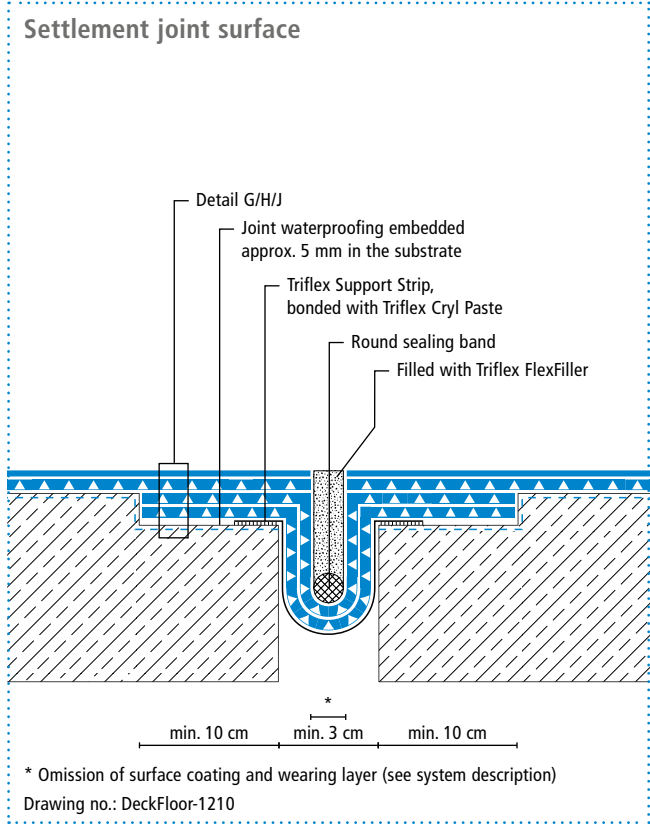
System set-up, Variant 3 – Detail F



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System drawings

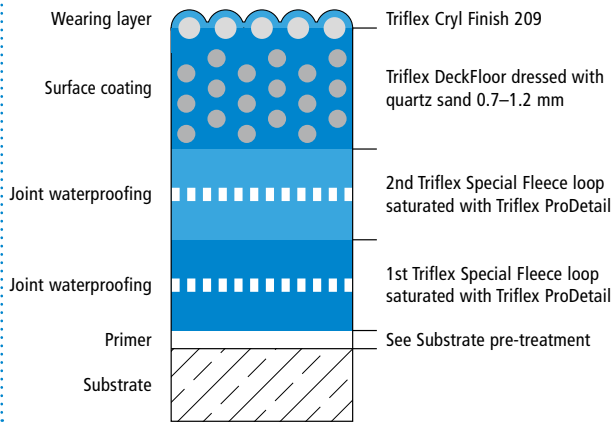


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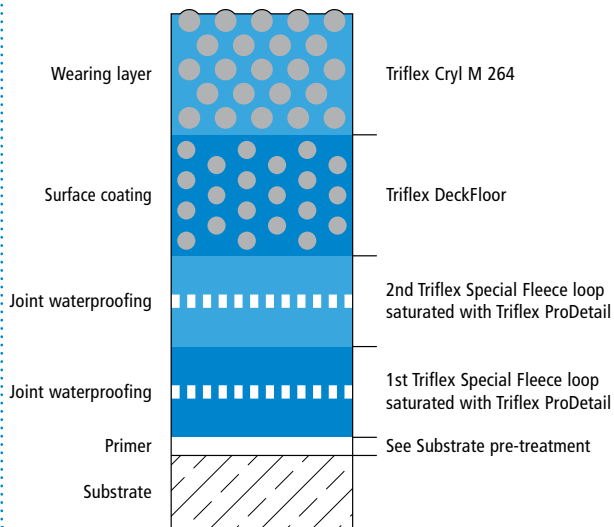


System drawings

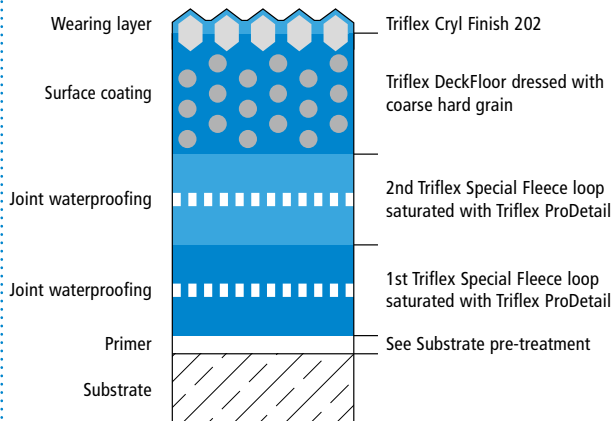
System set-up, Variant 1 – Detail G



System set-up, Variant 2 – Detail H



System set-up, Variant 3 – Detail J





Triflex DeckFloor

Triflex DeckFloor surfaces

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



7030 Stone grey



7031 Blue grey



7032 Pebble grey



7035 Light grey



7037 Dusty grey



7040 Window grey



1023 Traffic yellow



2009 Traffic orange



3020 Traffic red



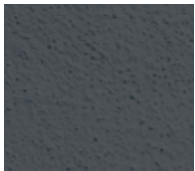
4006 Traffic purple



5017 Traffic blue



6024 Traffic green



7043 Traffic grey



9010 White

Triflex DeckFloor



Triflex DeckFloor surfaces

Variant 2 – the wearing layer with Triflex Cryl M 264



7030 Stone grey



7032 Pebble grey



1023 Traffic yellow



2009 Traffic orange



3020 Traffic red



4006 Traffic purple



5017 Traffic blue



6024 Traffic green

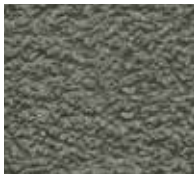


7043 Traffic grey



9010 White

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



Dark grey

Note:

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

Triflex

Delivering solutions together.



International

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