



Heavy duty, thick layer, fully reinforced waterproofing and surfacing system for exposed car park decks

Triflex PDS

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Triflex PDS

Heavy duty, thick layer, fully reinforced waterproofing and surfacing system for exposed car park decks

Potentially the most difficult waterproofing and surfacing projects are car parks and service decks over occupied premises. The waterproofing and surfacing system must not only prevent water ingress into the occupied premises below, but provide a highly durable, anti-skid, aesthetic wearing surface capable of withstanding long term trafficking.

An added complication is that as relatively few new build constructions are built to this configuration, the occupied premises are likely to be live, with existing surfacings and insulation. Any solution which requires removal of the existing surfacings, for example asphalt and lytag screed will be disruptive and leave areas vulnerable to water ingress during the works.

The Triflex solution

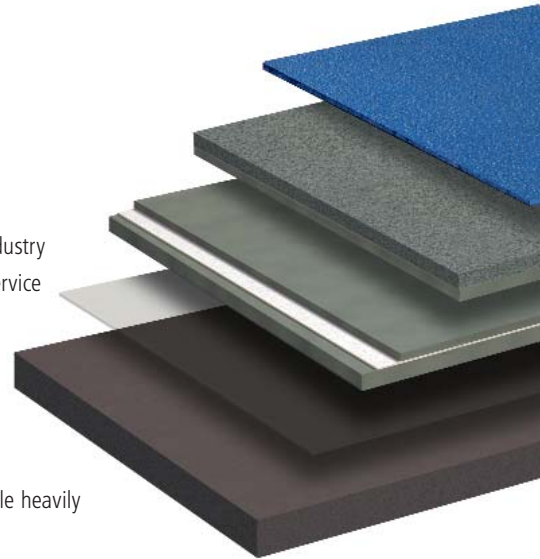
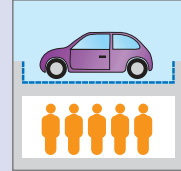
The Triflex PDS has been used for more than 20 years and is acknowledged as the industry leader in providing long term waterproofing and surfacing to exposed car park and service decks over occupied premises.

Triflex have an unsurpassed record in asphalt overlay and can overlay virtually any material likely to be encountered on projects of this nature. Through our ability to overlay, the costs, disruption and risks associated with removal can be avoided.

The unique, fully reinforced Triflex PDS also allows high risk car park decks, for example heavily cracked lightweight structures to be overlaid.

Suitable for:

Waterproofing and surfacing of exposed car park and service decks over occupied premises



Service decks

The nature of the trafficking of service decks over occupied premises requires special consideration, with high vehicle weights, tail lifts, skips and compactors. The Triflex Technical Team can assist in providing detailed solutions to ensure that all areas can be treated with total confidence.



Triflex PDS

System Benefits

Heavy duty, thick layer, fully reinforced waterproofing and surfacing system for exposed car park decks

- OVERLAY vs STRIP AND REPLACE** :: The Triflex PDS can be used for both refurbishment and new build projects. When dealing with refurbishment projects the unique properties of the Triflex PDS allow virtually all existing substrates, including asphalt to be overlaid, meaning that the risks, costs and disruption associated with removal of the existing waterproofing are avoided. The area can be treated section by section with seamless continuity, with no increased risk of water ingress during the refurbishment process.

The Triflex PDS has been used successfully over asphalt for more than 20 years, and Triflex systems generally are acknowledged as the industry leaders in asphalt overlay.
- TRACK RECORD** :: The unique properties of the Triflex PDS allow specification in the most technically challenging car park and service deck environments. The system has been proven to offer long term waterproofing and surfacing to high volume, car park and service decks forming the roof to occupied premises. The Triflex PDS has the longest BBA durability statement for any membrane system on the market - 20 years. The BBA certificate also gives specifiers and users confidence that the system has been in use since 1981.
- UNIQUE FULLY REINFORCED LIQUID APPLICATION** :: Meaning that all details and potential areas of weakness can be safely incorporated within the same homogenous waterproofing and surfacing membrane. Through incorporation of the unique Triflex reinforcement with our Patented resin technology, the Triflex PDS has exceptional long term resistance to regular and unforeseen movement and flexural fatigue.
- DURABILITY** :: The Triflex PDS system features a heavy duty wearing course fully filled with either crystal quartz, basalt or crushed granite. This aggregate is tightly bound within the resin matrix and provides the wearing layer for traffic. Unlike other systems which feature a scattering of anti-skid granules, the Triflex PDS fully aggregate filled wearing course provides long term resistance to wear and damage. In addition, unlike the more commonly available resins, Triflex resins achieve excellent inter layer adhesion, do not suffer inter layer delamination and have excellent resistance to shear forces from vehicle tyres.
- THICK LAYER BUILD UP** :: With a finished thickness in excess of 4.5mm, the Triflex PDS has exceptional durability, helps mask deck imperfections and provides a more aesthetically pleasing, easier to maintain system. The system thickness allows profiled substrates such as brushed concrete and crimped asphalt to be overlaid without the original profile reflecting through.

In contrast, many competitors systems are less than 2.0mm thick, are less durable, and highlight rather than mask profiles and imperfections in the existing substrate. By following the profile of the existing substrate these thin layer systems are subject to accelerated wear on high spots and will collect dirt in low spots.
- COLD APPLIED WITH RAPID CURE TIMES** :: All elements of the system are cold applied avoiding the risks and insurance costs associated with hot works. The rapid cure times ensure that areas are rapidly waterproofed, overall time on site is minimised, weather windows can be maximised and areas can be opened to traffic sooner.
- HIGH LEVELS OF ANTI-SKID** :: Ensuring that the surface will provide adequate levels of slip resistance for both pedestrians and cars, making the car park safer, reducing the potential for accidents and providing an accepted defensible standard against claims.
- FIRE RESISTANCE** :: Exposed trafficked decks over occupied premises are effectively roofs - the Triflex PDS achieves the highest fire rating under BS476:Part3:1958 – EXT F.AA.
- AESTHETICS** :: All Triflex resins are UV stable and use UV stable inorganic pigments meaning that colour is retained over time. Our Triflex Finish can be produced in virtually any colour, meaning that aesthetic and design requirements can be fulfilled.
- SIMPLE MAINTENANCE** :: The Triflex PDS can easily be cleaned and maintained using conventional methods.
- COMMITMENT TO THE ENVIRONMENT** :: The Triflex environmental policy is certified under ISO 14001. All Triflex car park waterproofing, surfacing and protection systems are solvent and isocyanate free.
- RE-USABLE CONTAINERS** :: To minimise the impact on landfill, all core resins are available in re-usable 1,000kg stainless steel containers.
- CERTIFIED PROTECTION** :: The Triflex PDS is BBA certified no. 91/2639 – with the longest durability statement for any car park waterproofing and surfacing membrane at 20 years.
- QUALITY ASSURED MANUFACTURING** :: As all materials are manufactured to ISO9001 you can be assured of consistent quality.
- QUALITY DESIGN AND SPECIFICATION ASSISTANCE** :: The Triflex Technical Team can assist in all areas of the design and specification process from preparing initial rendered visualisations to project specific specifications and sketch details.
- QUALITY INSTALLATION** :: Triflex car park waterproofing and surfacing systems are only installed by our Approved Contracting Partners who have been selected for their ability to provide the highest level of client service.
- WARRANTIED PROTECTION** :: The Triflex PDS system is offered as standard with a 10 year materials warranty. Other warranties are available – please contact Triflex (UK) Limited directly for details.

Triflex PDS

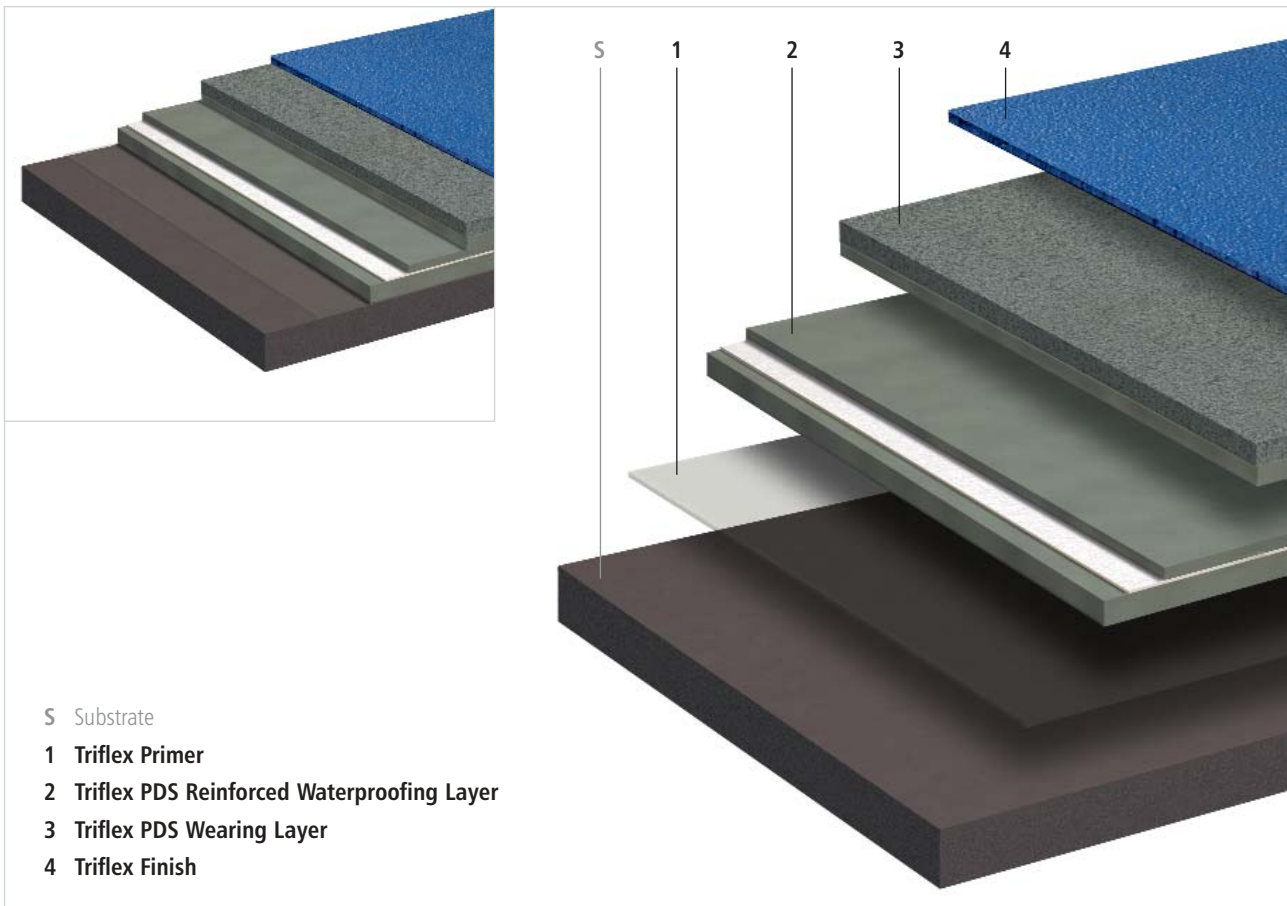
System Data Sheet

Heavy duty, thick layer, fully reinforced waterproofing and surfacing system for exposed car park decks

Properties

- Totally waterproof
- Fully reinforced, thick layer system
- BBA certified - no. 91/2639 (20 year durability statement)
- Anti-skid – SRT 70-81
- Tough – highly abrasion resistant
- Fast curing
- Cold applied
- Compatible with a wide range of substrates
- Seamless
- Elastomeric
- Dynamic crack bridging
- Available with the following finish options:
 - 0.7-1.2mm crystal quartz with pigmented seal
 - 1.0-1.6mm basalt with Traffic Grey pigmented seal
 - 1.0-2.0mm crushed granite with Traffic Grey pigmented seal
- Fire resistant to BS476:PART3:1958 (EXT.FAA)
- Chemical resistant
- Resistant to Chloride and Carbon Dioxide ingress
- Vapour permeable
- UV resistant
- Solvent free
- Isocyanate free
- Tailored design options

System Build Up



System Details

Triflex Primer - Primer for sealing of substrate and to improve adhesion.

Triflex PDS Reinforced Waterproofing Layer - Waterproofing layer fully reinforced with a tough polyester fabric.

Triflex PDS Wearing Layer - Incorporating a hard wearing crystal quartz, basalt or crushed granite aggregate.

Triflex Finish - Abrasion resistant system seal coat.

Applications

The system is suitable for the waterproofing and surfacing of exposed car park and service decks, including roof top decks over occupied premises.

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System Data Sheet

Substrate preparation and priming

Substrate	Preparation Notes	Priming	
		Triflex PDS main area	Triflex prodetail* for details
Asphalt	1	Triflex Cryl Primer 222	Triflex Cryl Primer 222
Hot Rolled Asphalt (HRA)	1 / 8	Triflex Cryl Primer 222	Triflex Cryl Primer 222
Stone Mastic Asphalt (SMA)	1 / 8	Triflex Cryl Primer 222	Triflex Cryl Primer 222
Felt	2	N/A details only	No primer required
SBS Felt	2	N/A details only	No primer required
APP Felt	3	N/A details only	No primer required
Concrete / Screed	1 / 6	Triflex Cryl Primer 276	Triflex Cryl Primer 276
Lightweight concrete	1 / 6	Triflex Cryl Primer 276	Triflex Cryl Primer 276
Polymer modified concrete repair materials	1 / 6	Triflex Cryl Primer 276	Triflex Cryl Primer 276
Steel	4	N/A details only	No primer required
Galvanised steel	4	N/A details only	No primer required
Stainless steel	4	N/A details only	No primer required
Aluminium	4	N/A details only	No primer required
Copper	4	N/A details only	No primer required
Zinc	4	N/A details only	No primer required
Lead	4	N/A details only	No primer required
Glass	4	N/A details only	No primer required
Wood	2	N/A details only	Triflex Cryl Primer 276
Plastics (sheets, coatings, mouldings)			
CPE	4	N/A details only	No primer required
EVA	2	N/A details only	No primer required
PIB	2	N/A details only	No primer required
PVC-P, nB	4	N/A details only	No primer required
UPVC	4	N/A details only	No primer required
GRP	4	N/A details only	No primer required
PU (polyurethane)	5 / 7	No primer required	No primer required
PMMA (acrylic)	5 / 7	No primer required	No primer required
UP (polyester)	5 / 7	No primer required	No primer required
EP (epoxy)	5 / 7	No primer required	No primer required

For other substrates, consult Triflex (UK) Limited for required preparation methods and priming.

Notes:

- 1 = Scarify, grind or lightly bead blast
- 2 = Clean thoroughly
- 3 = Liquefy surface by application of heat and immediately top with quartz
- 4 = Rub down thoroughly with Triflex Cleaners, and sand/grind metals and hard plastics
(steel must be ground or blasted to bright metal)
- 5 = Lightly sand and carry out adhesion test
- 6 = The equilibrium moisture content of cementitious substrates must not exceed 6% or 75% RH. Where moisture levels are in excess of 6% equilibrium moisture or 75% RH refer to Triflex Pox R103.
- 7 = Must be applied over dimensionally stable, fully bonded substrate with a minimum hardness of 25N/mm² and subject to approval by Triflex (UK) Limited.
- 8 = For HRA and SMA, increase primer consumption by 50% and use maximum practical catalyst (minimum 6%).

Where there are any doubts as to adhesion, carry out an adhesion test.

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System Data Sheet

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Substrate Assessment

In all cases the condition and stability of the underlying substrate should be assessed prior to the commencement of work. See Substrate Testing section. Concrete structures should be designed in accordance with BS8110/CP110.

Substrate Preparation

Refer to substrate preparation and priming schedule.

Generally:

Remove existing paint and finishes etc. by grinding.

Ensure that the prepared surface is clean, dry and free from dust, laitance, grease, oil and any other contaminants.

Priming

Refer to substrate preparation and priming schedule.

Triflex Cryl Primer 222:

Apply with a lambswool roller (0.4kg/m² min.)

Rainproof after approx. 30 minutes.

Can be walked upon/next coat applied after approx. 45 minutes.

Triflex Cryl Primer 276:

Apply with a lambswool roller (0.4kg/m² min.)

Rainproof after approx. 30 minutes.

Can be walked upon/next coat applied after approx. 45 minutes.

Note: For new cementitious materials where it is not practical to allow the substrate to hydrate to below 6% equilibrium moisture content and 75% RH, or for existing cementitious substrates with higher levels of moisture, Triflex Pox R103 can be used where the equilibrium moisture content is less than 10%.

Triflex Pox R103:

Apply with a lambswool roller (0.5kg/m² min.)

Can be walked on after approx. 8 hours.

Next coat applied after approx. 18 hours.

Able to withstand stress after approx. 24 hours.

Surface Repairs and Filling

Cut out blisters and repair all minor indentations with scratch coat of Triflex Cryl RS 233. Allow to dry for a minimum of 1 hour.

Fill all voids in vertical surfaces and at upstand transitions with Triflex Cryl Paste and allow to dry for a minimum of 1 hour.

Larger indentations can be filled with Triflex RS 240 (cementitious substrates), Triflex Cryl Mortar or Triflex Cryl Paste Mortar (non-cementitious substrates).

Interface Details

Apply in accordance with standard and project specific sketch details.

General Details:

Apply Triflex prodetail® (2.0 kg/m² min.) with a lambswool roller.

Roll a strip of Triflex 110g Reinforcement into the wet resin, pressing trapped air free using the lambswool roller, ensuring a minimum 50mm overlap between the reinforcement sheets.

Apply Triflex prodetail® (1.0 kg/m² min.) wet on wet to ensure full saturation of the fleece.

Rainproof after approx. 30 minutes

Can be walked on/next coat applied after approx. 45 minutes.

Complex Details:

Where due to access restrictions, or complexity of the detail, prodetail® is not practical:

Apply Triflex Cryl R 295 fibre reinforced resin (1.5 kg/m² min.) with a brush and allow to cure for a minimum of 45 minutes.

Apply a further layer of Triflex Cryl R 295 fibre reinforced resin (1.5 kg/m² min.) by brush.

Rainproof after approx. 30 minutes.

Can be walked upon/next coat applied after approx. 45 minutes.

Note: Where details may be subject to mechanical damage from vehicles, consult Triflex (UK) Limited for mechanical protection solutions.

Main Deck

Reinforced Waterproofing Layer:

Apply an even layer of Triflex PD (1.5 kg/m² min.) with a lambswool roller.

Roll Triflex 110g Reinforcement into the wet resin, pressing trapped air free using the lambswool roller, ensuring a minimum 50mm overlap between the reinforcement sheets.

Apply Triflex PD (1.0 kg/m² min.) wet on wet to ensure full saturation of the fleece.

Rainproof after approx. 60 minutes

Can be walked upon/next coat applied after approx. 2 hours.

Wearing Layer:

Apply Triflex PD (1.5kg/m² min.) with a lambswool roller.

Embed into the liquid layer a full cover of crystal quartz (0.7-1.2mm), basalt (1.0-1.6mm), or crushed granite (1.0-2.0mm) (7.0kg/m²) approx. Allow to dry for a minimum of 3 hours, sweep away excess aggregate and vacuum clean.

Rainproof after approx. 60 minutes.

Can be walked upon after approx. 2 hours.

Next coat applied after approx. 3 hours.

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Finish

Interface Details

Apply Triflex Cryl Finish 205 (0.5kg/m²min) using a lambswool roller.

Rainproof after approx. 30 minutes.

Can be walked upon after approx. 1 hour.

Note: For interface details in excess of 250mm high, use Triflex Cryl Finish 205 Thixo.

Main Deck

Apply Triflex Cryl Finish 205 (0.65kg/m² min.), (0.80kg/m² min.) if over basalt or crushed granite) using a hard squeegee and a dry lambswool roller.

Rainproof after approx. 30 minutes.

Can be walked upon after approx. 1 hour.

Can be driven upon after approx. 3 hours (provided Wearing Layer has been allowed to cure for more than 12 hours).

Expansion Joints

Consult Triflex (UK) Limited for confirmation of design details required.

Interruptions During Works

If work is interrupted for more than 12 hours, use Triflex Cleaner to clean and reactivate the transition area.

Evaporation time: at least 20 minutes - overlay within 60 minutes.

For reinforced details, the subsequent waterproofing layers must overlap by at least 100 mm, including the Reinforcement.

System Components

Please refer to the appropriate Product Data Sheet for details about areas of application/application conditions/mixing instructions (available on request):

Triflex Cryl Primer 222

Triflex Cryl Primer 276

Triflex Pox R103

Triflex Cryl Paste

Triflex RS 240

Triflex Cryl Mortar

Triflex Cryl Paste Mortar

Triflex 110g Reinforcement

Triflex prodetail®

Triflex Cryl R 295

Triflex PD

Triflex Cryl Finish 205

Quality Standard

All products are manufactured to ISO 9001.

Substrate Testing

Prior to the commencement of work the Contractor must check and only proceed if he has satisfied the following requirements.

Hardness: All concrete substrates, concrete repair materials, screeds and mortars shall be cured and allowed to achieve a minimum hardness of 25N/mm².

Moisture: Prior to overlay with Triflex systems, the equilibrium moisture content of the substrate must not exceed 6% and 75% RH. For cementitious substrates with higher levels of moisture (less than 10% equilibrium) refer to Triflex Pox R103.

Adhesion: Trial areas to be prepared to ensure that the System achieves a minimum bond to the substrate of:

Concrete, concrete repair materials, screeds and mortars: 1.5N/mm²

All other substrates: 0.8N/mm²

Health and Safety

Refer to product Health and Safety data prior to using the materials.

Coverage Rates

The coverage rates given are guidelines based on smooth, level substrates.

Allowances must be made if the substrate is uneven, rough or porous.

Drying Times

The drying times stated are at +20°C and are dependent upon weather conditions.

Important Notes

It is the Contractors' responsibility to ensure that the substrate is suitable and that the system is applied in all areas in accordance with Technical Data Sheets, Application Guidelines and BBA certificate in force at the time.

The advice we can provide on the application of our products is based on extensive development work as well as many years of experience and is given to the best of our knowledge. However, the wide variety of requirements for a building under the most diverse conditions mean that it is necessary for the Contractor to test the product for suitability in any given case. We reserve the right to make alterations in keeping with technical developments or improvements.

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Model specification

Heavy duty, thick layer, fully reinforced waterproofing and surfacing system for exposed car park decks

J31 Liquid Applied Waterproof Roof Coatings

To be read with Preliminaries / General Conditions.

Liquid Applied Waterproof Roof Coating reference

Triflex PDS

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Generally

Apply Triflex PDS system fully in accordance with Manufacturer's System Data Sheet (Appendix), standard Sketch Details (Appendix) and project specific Sketch Details (Appendix).

Substrate Assessment

Assess substrate in accordance with Triflex PDS System Data Sheet.

Substrate Preparation

Prepare substrate in accordance with Triflex PDS System Data Sheet.

Priming

Apply Triflex primer in accordance with Triflex PDS System Data Sheet.

Primer reference: Triflex Cryl Primer 222 / Triflex Cryl Primer 276 / Triflex Pox R103.

Surface Repairs and Filling

Repair and fill surface in accordance with Triflex PDS System Data Sheet.

Filling reference: Triflex Cryl RS233 / Triflex Cryl Paste / Triflex Cryl RS240 / Triflex Cryl Mortar / Triflex Cryl Paste Mortar.

Interface Details

Apply interface details in accordance with Triflex PDS System Data Sheet, standard Sketch Details and project specific Sketch Details.

General details reference: Triflex prodetail with 110g Reinforcement.

Complex details reference: Triflex Cryl R295.

Main Deck

Reinforced waterproofing layer: Apply waterproofing to main deck area in accordance with Triflex PDS System Data Sheet.

Waterproofing reference: Triflex PD with 110g Reinforcement.

Wearing layer: Apply wearing course to main deck area in accordance with Triflex PDS System Data Sheet.

Wearing course reference: Triflex PD.

Aggregate reference: crystal quartz / basalt / crushed granite.

Finish

Apply finish in accordance with Triflex PDS System Data Sheet.

Finish reference: Triflex Cryl Finish 205.

Finish colour references: (INSERT).

Installation

The works shall be executed by a Triflex Approved Contracting Partner licensed to install Triflex car park waterproofing, surfacing and protection systems.

Required system properties

- BBA certified – 20 year durability statement
- Totally waterproof
- Fully reinforced
- Dry film thickness > 4mm
- Anti-skid – SRT 70-81
- Fast curing (maximum 3 hours before trafficking)
- Totally cold applied
- Compatible with a wide range of substrates
- Seamless
- Elastomeric
- Dynamic crack bridging
- Available in a wide range of colours and textures
- Fire resistant – BS476:PART3:1958 (EXT.FAA)
- Chemical resistant
- Resistant to Chloride and Carbon Dioxide ingress
- Vapour permeable
- UV resistant
- Solvent free
- Isocyanate free
- Standard 10 year materials warranty
- Optional extended warranty

General notes

The Triflex PDS System Data Sheet, standard Sketch Details and project specific Sketch Details are to be read as an integral part of this specification.

The Triflex Approved Contracting Partner is to install all details to comply with the Triflex PDS standard Sketch Details, any project specific Sketch Details and Triflex project specific recommendations. Should any detail arise where the treatment is not clear, the Contractor must seek advice and approval from Triflex (UK) Limited prior to commencing the works.

It is the Contractor's responsibility to ensure that the substrate is suitable and that the system is applied in all areas in accordance with System Data Sheets, Application Guidelines and BBA certificate in force at the time.

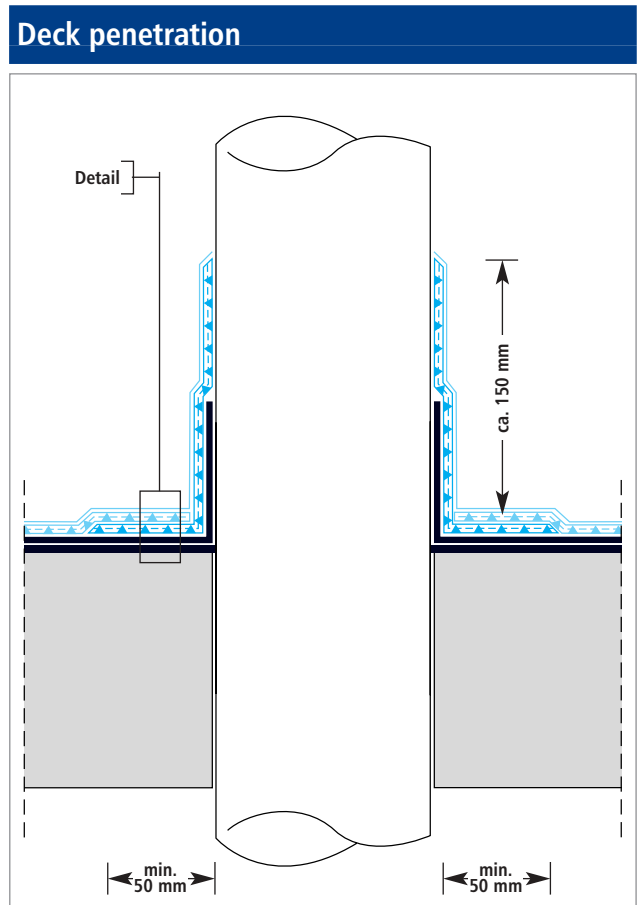
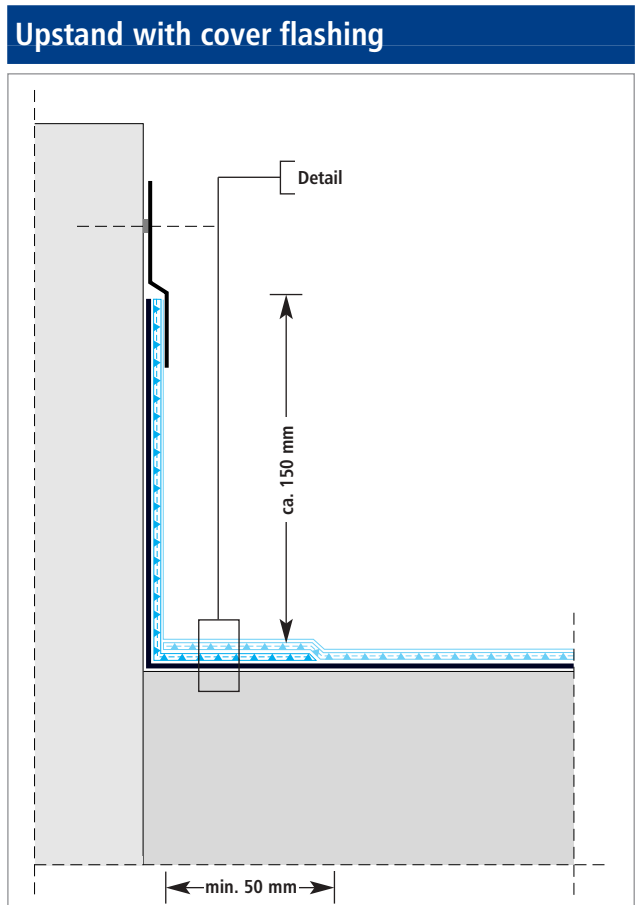
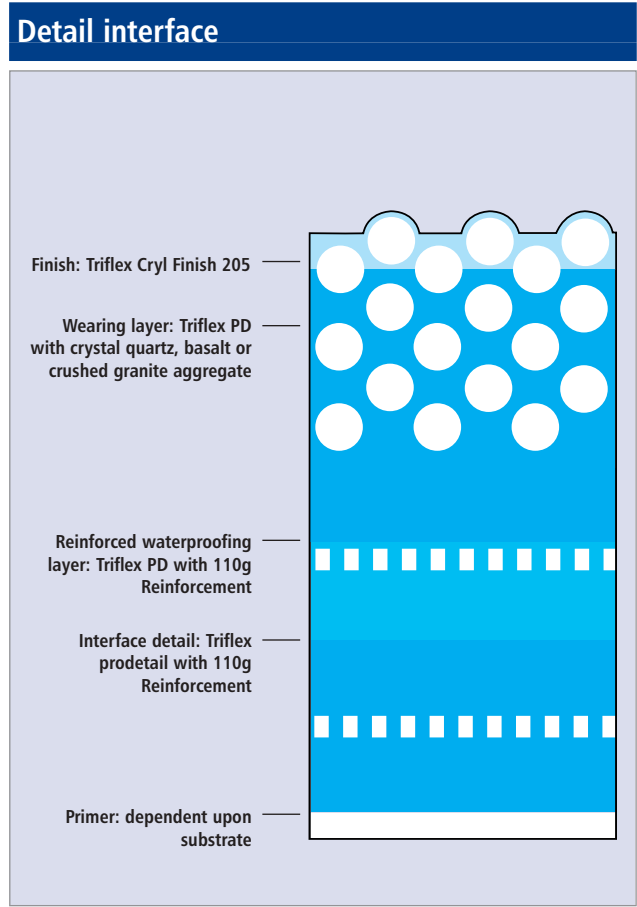
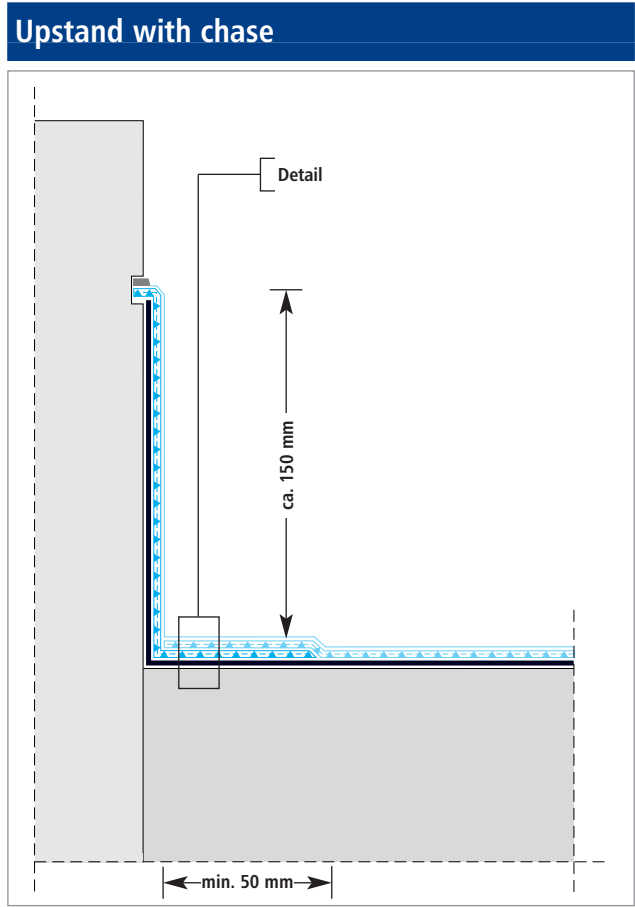
Notes to specifiers

We recommend that for all car park projects, the actual specification clauses for the Triflex waterproofing, surfacing and protection systems are prepared by the Triflex Technical Team.

This information can then be provided in a text format for insertion into Word and other documents.

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Sketch Details



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Sketch Details

