

Triflex

Delivering solutions together.

Waterproofing | Surfacing | Coating | Protection

Car park solutions



PARKING DECKS | UNDERGROUND CAR PARKS

MULTIPLE CHALLENGES, ONE SOLUTION.

Triflex understand that the appearance, functionality and safety of your car park is important in creating the vital first impression of your business and brand. As specialists in cold liquid applied waterproofing, surfacing and protection solutions, Triflex ensure that the aesthetic enhancement of your car park is not solely cosmetic. All of our systems are designed to offer long term protection, prolong building life and add value and safety to the structure.

LONG TERM PROTECTION FOR STRUCTURAL INTEGRITY.

As unique structures with maximum spans and minimal support, car parks are subjected to high loads from vehicles and are exposed to weathering, wear, mechanical damage and chemical attack primarily from chlorides and carbonation. Over time these influences can lead to structural damage and failures. With a legal duty of care to not endanger users, it is the responsibility of the owner / operator to ensure the integrity and safety of the structure at all times.

Triflex industry leading systems have been installed in some of the busiest car parks in Europe. Our experience and knowledge of car park construction, coupled with our technologies developed over more than 40 years, enable Triflex to offer unsurpassed levels of performance and provide long term structural protection for your peace of mind.





CREATIVE DESIGN FOR AESTHETIC ENHANCEMENT.

Triflex understand that the calibre of your business and the way you care about your customers can be judged by the quality and appearance of your car park. With an exceptional colour range, design opportunities become almost unlimited allowing the creation of an aesthetically pleasing and welcoming environment which will leave a positive first impression on the user. Triflex high quality, durable waterproofing, surfacing and protection systems offer a functional and creative design to improve and enhance the aesthetics of your car park.



CONSIDERATION FOR SAFETY AND SECURITY.

Inadequate skid and slip resistance, poor markings and unclear directional signage can lead to accidents. A clearly marked car park with a heavy duty, anti-skid surface is crucial to ensuring the safety and security of the structure and its users. Through a combination of high quality materials, design assistance, colour range and specialist materials, Triflex can help create a safe, secure and efficient car parking environment. Our heavy duty, waterproofing, surfacing and protection systems maintain their appearance and skid resistance over time helping to minimise accidents and improve safety and navigation for all users.

TRIFLEX FEATURES FOR YOUR BENEFIT.

- + Long term structural protection
- + Aesthetic enhancement
- + Safety and security

DELIVERING SOLUTIONS TOGETHER...



CONSULTATION

SURVEY

DESIGN

CONSULTATION

Triflex listen to and work with our clients providing the highest levels of technical service and support right through to the delivery of the finished projects.

SURVEY

Our aim at Triflex is to make life that little bit easier for you. If requested, the Triflex Team will visit the jobsite and make proposals for further investigations and testing.

DESIGN

Triflex will evaluate your project and support you with creating an individual specification based on the most suitable and tailored Triflex waterproofing or coating system.

As Europe's leading specialist manufacturer of cold liquid applied waterproofing, surfacing and protection systems and a pioneer in advanced resin technologies, Triflex have a solution to solve every problem.

For more than 40 years Triflex have been researching and developing solutions designed to protect, enhance and repair the built environment. With an impressive track record across the globe and dedicated technical support, we work closely with our clients – **delivering solutions together...**



SOLUTION

TRAININGS

WARRANTY

SOLUTION

Together as a team Triflex is finalizing all aspects of the project with the planner, the contractor and the owner and presents the individual solution.

TRAININGS

Triflex only work with authorized contractors, trained to install our systems. Our Technical Team also provides on-site support and quality control to ensure works are delivered to the highest standard.

WARRANTY

Triflex solutions are certified in the highest classifications according to different European norms and regulations such as ETAG 005, CSTB, BBA and EN 1504-2. Demonstrating our confidence in our solutions is underpinned by meaningful warranties.

MORE THAN JUST A CAR PARK...

Triflex is recognised throughout the world for its impeccable track record and the level of service we provide.

Our cold liquid applied resin systems offer many benefits, beyond their exceptionally fast curing times and meaningful warranties. For each refurbishment, new build or repair project, our dedicated Technical Team are on hand to provide on and off-site support and advice through to completion. With Triflex, our clients receive a complete service and long term security.

VERSATILE SOLUTIONS FOR CAR PARK TRANSFORMATION.

Triflex systems are totally cold applied and with the majority being exceptionally fast curing ensure the minimum of disruption to the owner, operator and users. Our resin technologies are designed for use on all car park constructions and are compatible with virtually all substrates, including asphalt, concrete and steel and have been proven in the most challenging of trafficked environments.

We offer a variety of sophisticated solutions to deal with the widest range of applications.

- External and internal decks
- Decks above occupied premises
- Underground decks
- Internal and external stairwells
- Internal, external and underground ramps
- HGV service decks
- Markings
- Surface car parks



CREATIVE SOLUTIONS FOR ALL CAR PARK PROJECTS.

The Triflex creative car park concept gives you the opportunity to combine our range of durable, long term waterproofing, surfacing and protection systems with an almost unlimited choice of colour and design, to create an aesthetically pleasing and safe environment for all users.

Triflex colour and design options can be incorporated for:

- Corporate colour / brand matching
- Parking bays, walkways, driving lanes and markings
- Parent and toddler, disabled and electric charging bays etc.



INDEPENDENT CERTIFICATION FOR TOTAL CONFIDENCE.

With more than 10 % of our employees working in research and development, Triflex are at the forefront of car park resin and system technology. This investment in research and development is backed up by the highest levels of independent testing, including:

- + BS EN 1504-2 certification
- + OS Standard certification
- + ETAG 005 certification
- + BBA certification
- + BASt - German Federal Highway Research Institute
- + Fire testing

EXTERNAL DECKS AND RAMPS

For in situ structures and refurbishment of pre-cast structures

Triflex DeckFloor

For new build pre-cast structures

Triflex ProDeck

For high risk structures / at very high risk of cracking

Triflex ProPark

INTERNAL DECKS AND RAMPS

For all concrete structures

Triflex DeckCoat

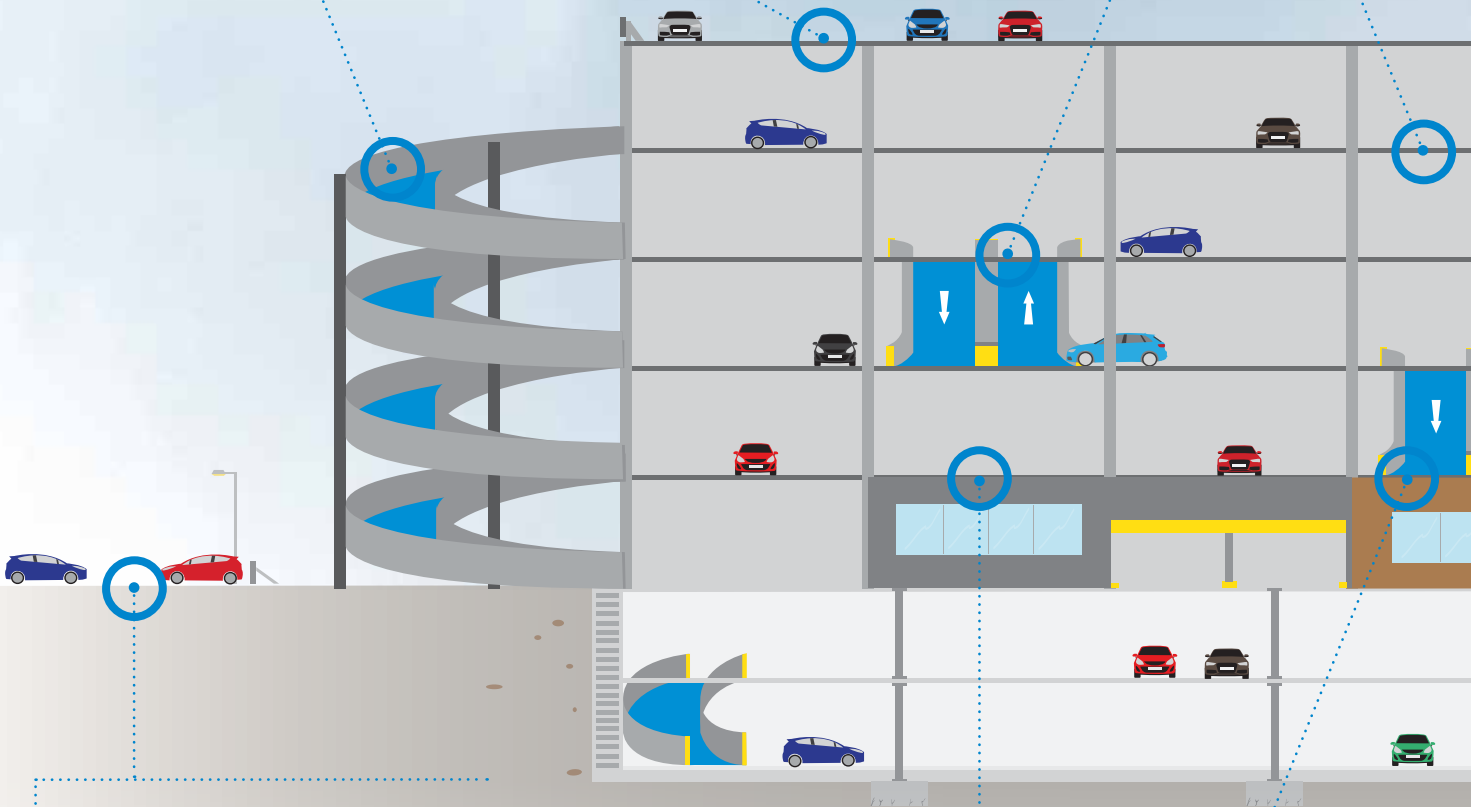
Triflex CPS-C+

For all concrete and asphalt covered decks

Triflex DeckFloor

For high risk structures / at very high risk of cracking

Triflex ProDeck



SURFACE CAR PARKS

Markings and coatings

Line markings

Driving lane

Walkways

Parking bays

INTERNAL DECKS AND RAMPS ABOVE OCCUPIED PREMISES

For all structures including insulated and pre-cast

Triflex DeckFloor

For high risk structures / at very high risk of cracking

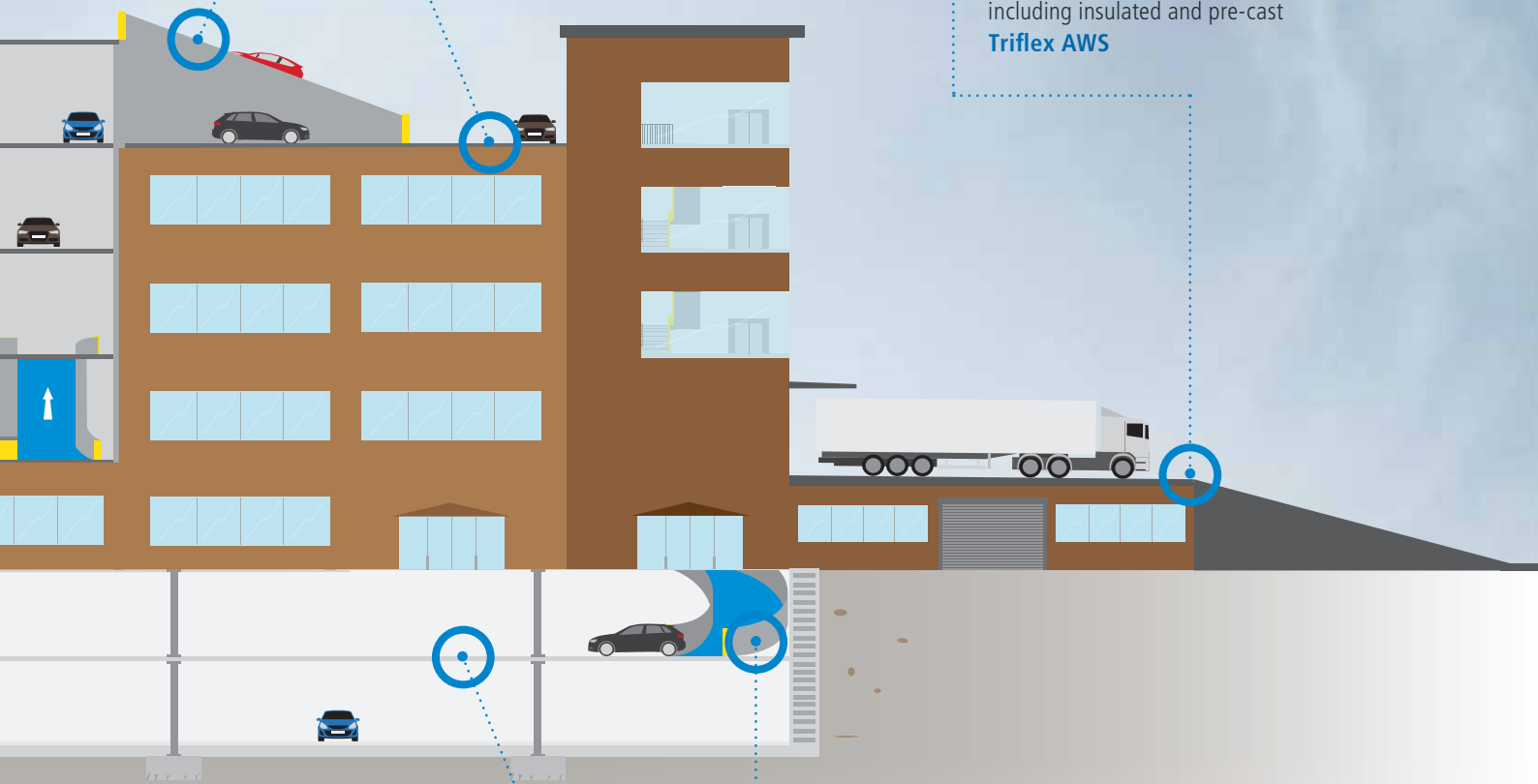
Triflex ProDeck

EXTERNAL DECKS AND RAMPS ABOVE OCCUPIED PREMISES

For all structures including insulated and pre-cast
Triflex ProPark

HGV SERVICE DECKS

For all structures including insulated and pre-cast
Triflex AWS



UNDERGROUND DECKS AND RAMPS

For all concrete structures
Triflex CPS-C+
Triflex CPS-I+

DEDICATED RANGE OF CAR PARK SOLUTIONS.

All Triflex systems are solvent free, and as the majority offer exceptionally rapid cure times even at low temperatures, critical works can be completed and opened to traffic sooner, minimising access restrictions, disruption to users and loss of income. Our systems are compatible with virtually all existing substrates, including concrete, asphalt and steel. With over 1 million m² of failed asphalt overlaid in the UK, we have a proven track record of significantly reducing costs, disruption and risks compared to asphalt removal.

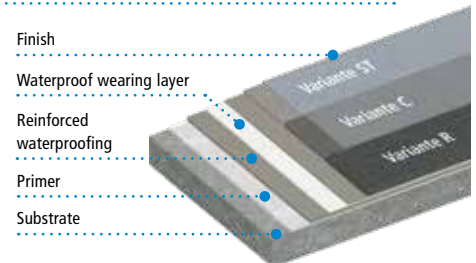
Triflex ProPark®



EN1504-2 | OS10



- Full-surface reinforced waterproofing system based entirely on polymethyl methacrylate (PMMA)
- Withstands high mechanical loads
- Shear-resistant design
- Seamless
- System-integrated detail solutions
- Full-surface adhesion and impermeable
- Resilient
- Enhanced dynamic crack-bridging, Class 4.2 (-20 °C)
- Cold-applied
- Fast-curing
- Ready for vehicle traffic after approx. 3 hours
- Chemical-resistant
- Weather-resistant (UV, IR, etc.)
- Non-slip
- Variety of colours available
- Class OS 10 General Building Supervisory Authority Test Certificate acc. to Building Regulations List A, Part 2, No. 2.24

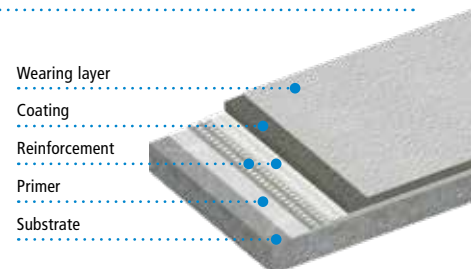


Triflex ProDeck

EN1504-2 | OS11b



- Waterproof thick coating based entirely on polymethyl methacrylate (PMMA)
- Cracks are avoided through force redistribution
- Withstands high mechanical loads
- Shear-resistant design (does not delaminate)
- Seamless
- System-integrated detail solution
- Full-surface adhesion and impermeable
- Dynamic crack-bridging
- Cold-applied
- Fully reinforced with special fabric
- Fast-curing
- Ready for vehicle traffic after approx. 3 hours
- Chemical-resistant
- Weather-resistant (UV, IR, etc.)
- Non-slip
- Variety of colours available
- Meets the requirements of Class OS 11b under DIN V 18026 and the German Committee on Reinforced Concrete's guidelines for the protection and repair of concrete components.

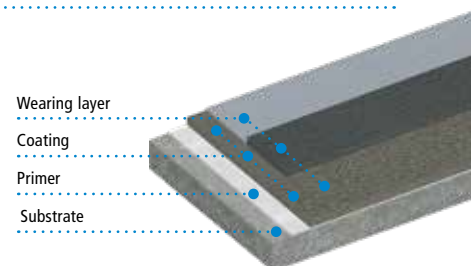


Triflex DeckFloor

EN1504-2 | OS8 | OS13



- Waterproof thick-layer system based entirely on polymethyl methacrylate (PMMA).
- Withstands high mechanical loads
- Shear-resistant design
- Seamless
- System-integrated detail solutions
- Full-surface adhesion and impermeable
- Flexible
- Statically crack-bridging
- Cold-applied
- Fast-curing
- Ready for vehicle traffic after approx. 3 hours
- Chemical-resistant
- Weather-resistant (UV, IR, etc.)
- Non-slip
- Variety of colours available
- Meets the requirements of Class OS 13 under DIN V 18026 and the German Committee on Reinforced Concrete's guidelines for the protection and repair of concrete components (OS 13 DAfStb Rili SIB 2005 – Repair Guideline)*



* The Triflex DeckFloor system is currently (2012) undergoing approval.

Triflex DeckCoat

EN1504-2 | OS8 

- Waterproof thin-layer system based entirely on polymethyl methacrylate (PMMA).
- Withstands mechanical loads
- Seamless
- System-integrated detail solutions
- Full-surface adhesion and impermeable
- Rigid
- Cold-applied
- Fast-curing
- Ready for vehicle traffic after approx. 2 hours
- Chemical-resistant
- Weather-resistant (UV, IR, etc.)
- Non-slip
- Variety of colours available
- Approved to OS 8 in accordance with Guideline SIB 2005 from DAfStb*

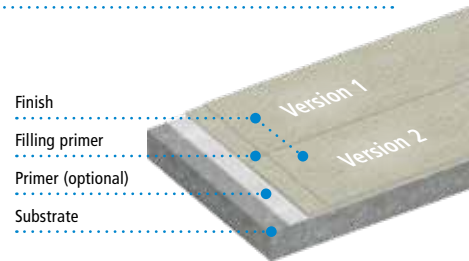


* Test certificate has been applied for.

Triflex CPS-C+

EN1504-2 | OS8 

- Waterproof thin coating made of epoxy resin (EP)
- Mechanically strong
- Solvent-free
- Specially designed for indoor use
- Cold-applied
- Chemical-resistant
- Surface design to specification
- Meets the requirements of Class OS 8 under DIN V 18026 and the Repair Guideline (Rili SIB) 2001, supplementary sheet 2005
- Fire classification Bfl-s1 in compliance with DIN EN 13501-1



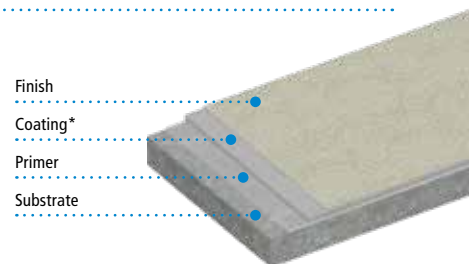
Version 1: thin coating with layer thickness ≥ 1.5 mm* in accordance with DIN EN 13813

Version 2: thin coating with layer thickness ≥ 2.5 mm* in accordance with DIN EN 1504-2 / DIN V 18026

Triflex CPS-I+

EN1504-2 | OS8 

- Single-layer system with a EP/PUR base
- Seamless
- System-integrated detail solutions
- Mechanically strong
- Full-surface adhesion
- Elastic
- Dynamic crack-bridging in accordance with DIN EN 1062-7, Class B 3.2 (-20 °C)
- Cold-applied
- Chemical-resistant
- Non-slip
- Variety of colours available
- Fire classification Bfl-s1 in compliance with DIN EN 13501-1
- Meets the requirements of Class OS 11b as per the Repair Guideline (Rili SIB) 2001, in accordance with DIN EN 1504-2 / DIN V 18026

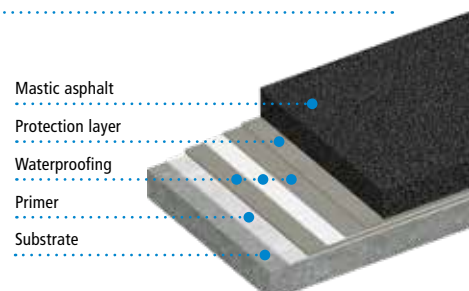


* Triflex Than RG 568+ as crack-bridging wearing/dressing layer.

Triflex AWS



- Full-surface reinforced waterproofing system with a polymethyl methacrylate (PMMA) base
- Hydrolysis-resistant
- Seamless
- Cold-applied
- Fast-curing
- Full-surface adhesion and impermeable
- Root- and rhizome-resistant (in line with FLL specifications)
- Can be used in substrate temperatures of down to -5 °C
- Resistant to the thermal demands of the mastic asphalt (approx. +250 °C)
- ETA certification with CE marking



Car park waterproofing and surfacing

Triflex ProDeck system

Together more benefits ...

Certified to the highest standards.

Fully certified to the highest European standards and classifications, including:

- EN 1504-2 – including B3.2 (-20 °C) crack bridging ability
- OS11b certified / OS11a tested (dynamic crack bridging)
- BBA – British Board of Agrément for details
- ETA – European Technical Approval for details and local overbanding

Unique, high tensile strength, fully reinforced membrane.

Our unique technology incorporating the Triflex ProMesh membrane distributes loads evenly across the entire surface, preventing the formation of cracks. Where additional reinforcement is required, the locally applied reinforced membrane has been tested for cyclic crack bridging up to 2.0 mm at -10 °C

Best value solutions.

The unique system construction is designed to be quick and easy to apply and offer best value for a fully reinforced, dynamic crack bridging car park waterproofing and surfacing system

Fully warranted.

Meaningful insurance backed warranties demonstrate our confidence in the performance of our solutions

Tough and durable.

The systems incorporate an aggregate filled wearing course and heavy duty seal coat designed for the highest trafficked, highest space change rate car parks

High levels of anti-skid.

With low slip potential in both wet and dry conditions, safety is maximised

Totally cold liquid applied technology.

With no risk from hot works, installation can be completed whilst the car park remains open to the public

Rapid curing systems - even at low temperatures.

Works can be completed all year round, and critical areas can be completed overnight and opened to traffic the following day

Maximum design options.

With systems available in a wide range of standard and bespoke colours and finishes, there is no limitation in design



Car park waterproofing and surfacing

Triflex ProDeck system

Together more security ...



Certified to the highest standards

- Full System
- Including B3.2 (-20 °C) Dynamic crack bridging
- (see CE table opposite)

CE EN1504

German Standard DafStb Rili-SIB 2001

- OS11b
- OS11a (dynamic crack bridging only)

CE EN1504

ETA - European Technical Approval

- (04/0019) Triflex ProDetail®
- Including testing of cyclic crack bridging

CE

| | |
|--|-------------------------------|
| CE | |
| 0770 | |
| Triflex GmbH & Co. KG Karlstraße 59, 32 423 Minden Germany | |
| 13 | |
| 13-2333-01-14 | |
| EN 1504-2: ZA.1d, ZA.1f and ZA.1g | |
| Car park waterproofing and surfacing system | |
| ProDeck | |
| Abrasion resistance | ≤ 3000 mg |
| Permeability to CO ₂ | Sd > 50 |
| Water vapour permeability | Class II |
| Permeability to water | < 0,1 kg/(m ² ·√h) |
| Adhesion strength by pull off test | ≥ 1,5 N/mm ² |
| Resistance to thermal shock / thermal compatibility | ≥ 1,5 N/mm ² |
| Resistance to severe chemical attack | Class I, 3 d without pressure |
| Crack bridging ability | B 3.2 (-20 °C) |
| Reaction to fire after application | C _{ii} -s1 |
| Skid resistance | Class III |
| Impact resistance | Class I |

Car park waterproofing and surfacing

Triflex ProDeck system

Together more choice ...

Finish colours



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



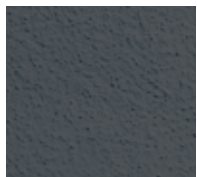
4006 Traffic Purple



5017 Traffic Blue



6024 Traffic Green



7043 Traffic Grey



9010 White



Other and special
colours on request

Note:

Texture is indicative only. There will be minor variations between the colours shown here and actual colours due to printing technology and the materials used.

Markings

Triflex have a dedicated range of durable marking and coating solutions for multi-storey and surface car parks with performance that far surpasses traditional materials. Our cold liquid applied systems are available in a wide range of colours, and are suitable for car park line marking, signage, parking bay and driving lane coating, colour demarcation and blacking out.

Car park studio

The online Triflex creative car park studio is an easy, free to use tool that allows you to demonstrate the transformation that can be achieved with our systems.



Visit:

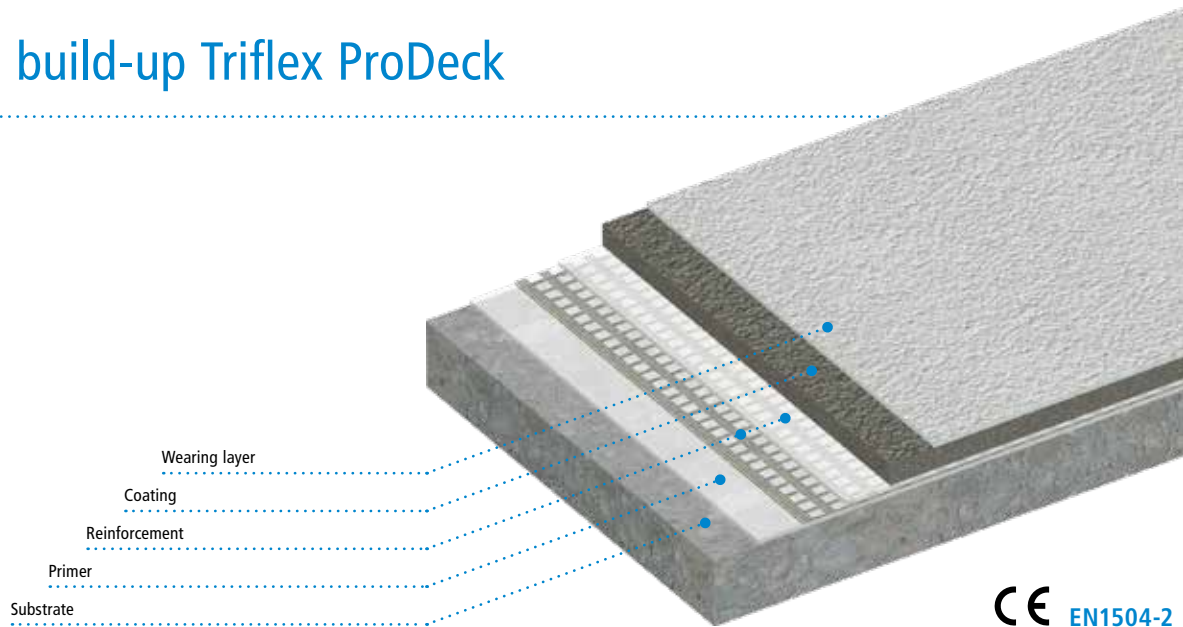
[www.triflex.com/
parkhaus-studio](http://www.triflex.com/parkhaus-studio)



Car park waterproofing and surfacing

Triflex ProDeck system

System build-up Triflex ProDeck



System properties

- Waterproof thick coating based entirely on polymethyl methacrylate (PMMA)
- Cracks are avoided through force redistribution
- For ventilated intermediate decks
- Withstands high mechanical loads
- Shear-resistant design (does not delaminate)
- Seamless
- System-integrated detail solution
- Full-surface adhesion and impermeable
- Dynamic crack-bridging
- Cold-applied
- Fully reinforced with special fabric
- Fast-curing
- Ready for vehicle traffic after approx. 3 hours
- Chemical-resistant
- Weather-resistant (UV, IR, etc.)
- Non-slip
- Variety of colours available
- Meets the requirements of Class OS 11b under DIN V 18026 and the German Committee on Reinforced Concrete's guidelines for the protection and repair of concrete components.

Compatible with:

- Concrete
- Screeds
- Polymer modified concrete / repair materials
- Asphalt
- Polymer modified asphalt
- Existing membranes
- Steel
- Structural plastics

Chemically resistant to:

- Petrol
- Diesel
- Brake fluid
- Engine oil
- Battery acid
- De-icing salts
- De-icing chemicals
- Water

Resistant to:

- Hydrolysis (standing water and ponding)
- Fire
- Thermal shock
- Impact, static and dynamic loads
- UV
- chloride and carbon dioxide ingress

Maximum period before:

- Pedestrian traffic – 1 hour
- Vehicle traffic – 3 hours

Highly certified:

- EN 1504-2
- German OS standards
- ETAG 005 (detail and locally applied reinforced membrane only)

Car park waterproofing and surfacing

Together more service...

All of our clients receive the same level of technical service, support and backup right through to the delivery of the finished project. To assist our clients in the selection and design of the most effective solutions for their car park projects, the Triflex Technical Team offer a comprehensive range of technical services completely free of charge.

Service

- Site surveys
- Recommendations on the most suitable system for the project
- Testing – on and off site
- Specification production
- Provision of project specific CAD details
- System / product samples
- On-site samples
- Rendered visualisations (a charge may apply)
- Warranties



On-site support

- Site visit reports
- Attendance at site meetings
- Testing and monitoring
- Provision of Health and Safety data Warranties



Need further assistance?

- Contact the Triflex Technical Team for more information or to discuss a specific project
- +49 571 38780-708
- international@triflex.com



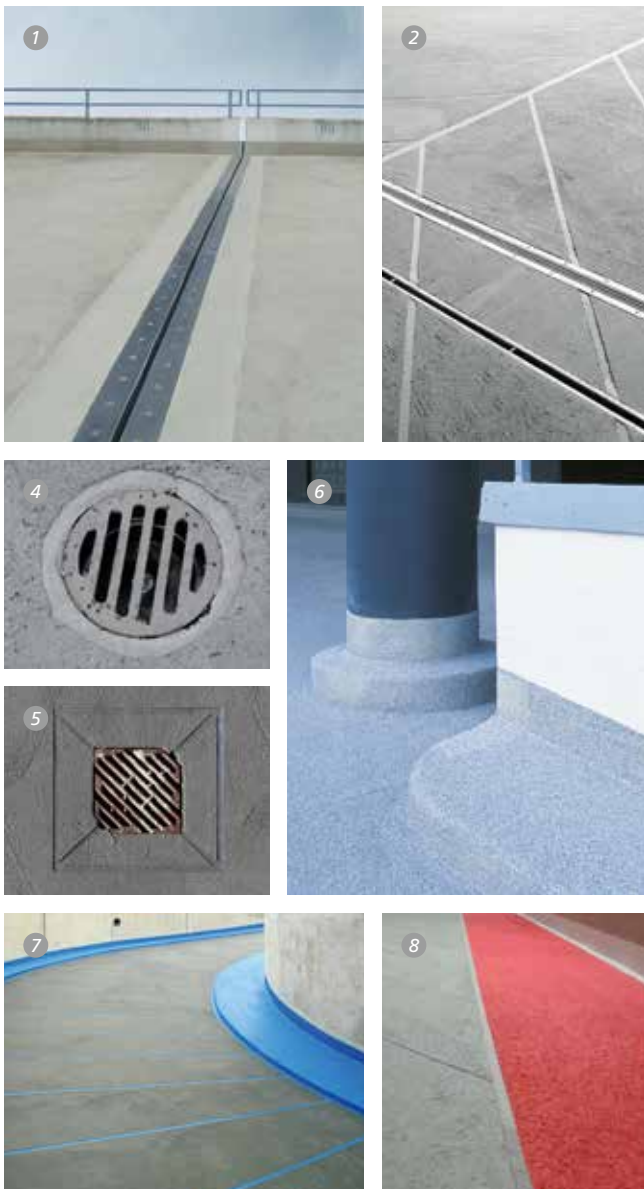
Tried-and-tested and robust

Triflex ProDetail for multi-storey car parks.

Fire safety as per DIN 13501-1.
Triflex ProDetail is also available
as an **S1-Variant!**

Strengths

- + Can be applied on any substrate geometry
- + Simple refurbishment in the joint area
- + Heat resistant up to +250 °C for use under mastic asphalt
- + Application without a flame on wooden frames and plastic sections
- + Can withstand high mechanical loads, also suitable for roll overs
- + Can be simply recoated even after extended periods
- + Can be used on mastic asphalt
- + Resistant to de-icing salt, petrol and oil



Application examples:

- 1 Joint suitable for vehicle traffic
- 2 Joint profile
- 3 Multi-storey car park column
- 4 5 Gully
- 6 Car park column and walkway
- 7 8 Detail waterproofing on ramps

Delivering solutions together.

TOGETHER MORE SUCCESS.

As Europe's leading specialist manufacturer of cold liquid applied waterproofing, surfacing and protection systems and a pioneer in advanced resin technologies, Triflex have a solution to solve every problem. For more than 40 years Triflex have been researching and developing solutions designed to protect and repair the built environment. With an impressive track record across the globe and dedicated technical support, we offer our clients a complete service with long term security.

Solutions

Our aim is to ensure that our clients arrive at the most practical, efficient and best value solution for their project. We do not sell products - we offer solutions to solve problems.

Service

Our clients receive the highest level of technical service, support and back-up right through to the delivery of the finished project. From site surveys and testing to bespoke specifications and CAD details, our free of charge services offer complete peace of mind.



DELIVERING
SOLUTIONS
TOGETHER.

On-site support

Prior to and once your project commences, we offer full on-site support. Whether you require testing, monitoring, site visit reports or simply advice, we are on hand to ensure that your project is delivered to the highest standard.

Delivery

We only sell our car park solutions directly to our network of specially trained authorised contractors, ensuring that quality is not compromised at any stage of the process.

Thoroughly impressive.



Unbeatably versatile.

New builds, refurbishments, minor repairs, wall junctions and door sills, gullies, ventilators, joints, beams, green areas, various substrates etc.: with Triflex ProDetail you have the ideal, customised and long-lasting solution for all waterproofing requirements.



Extremely durable.

Triflex ProDetail is certified in the highest performance categories and has performed successfully in extensive tests and in long-term practical use. The expected service life in accordance with ETAG 005 is 25 years.



Extremely waterproof down to the smallest detail.

Joints, beams, joint details, structural movement where components meet and cracks: Triflex ProDetail comes into its own when handling complicated details. The flexible material together with the fleece reinforcement ensures seamless and jointless waterproofing.



Can be applied at temperatures down to -5°C .

Additional revenue regardless of the weather conditions and time of year.

Resistant to weather, UV and hydrolysis.

Long-lasting functional solutions which ensure great reliability.

Can be applied at substrate temperatures of up to $+50^{\circ}\text{C}$.

All year round, maximum scope for installation.

Triflex

Delivering solutions together.

International

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