

Case Study

Project/customer name:	Arndale Center
Year of application:	2018
Location/country:	Eastbourne / UK
Building type:	Multi-story carpark
Authorized contractor:	Mike Thelwell Flooring
Additional project details:	Heavy-duty waterproofing with high crack-bridging and dealing with outgassing issues.

General view:



Challenge:

- Two new car park decks had been constructed on top of the existing shopping center and 6 parking levels. A heavy-duty car park waterproofing and surfacing solution should be able to cope with any crack or movement with the structure.
- Shot blasting was used to remove the weakest surface element of the concrete, so that when the system is laid it is bonded directly onto the strongest part of the concrete. Shot blasting exposes the small capillary holes within the concrete. When these capillary holes are exposed to warm temperatures, trapped air and moisture vapor within the concrete heats up, expand and rise to the surface (outgassing) causing pinholes and blisters.



Solution:

- Triflex ProPark, a heavy-duty system was specified due to being BBA approved and the system's compliance to BS EN 1504-2. This standard is given to systems with dynamic crack bridging properties and allows Triflex ProPark to accommodate high levels of movement within a structure.
- In order to achieve the best possible bond between the substrate and the waterproofing system, Triflex Cryl Primer 287 was specified to prime the concrete decks prior to Triflex ProPark being installed. Triflex Cryl Primer 287 was also specified to eliminate any potential issues with outgassing by filling in the small capillary holes.



Products used at a glance:

Triflex offers liquid PMMA* based resins (e.g. ProDetail for details or ProTect for areas):

1. Substrate
2. Primer, if necessary
3. Waterproofing layers
 - a) Triflex ProDetail (2kg / sqm)
 - b) Triflex Special Fleece
 - c) Triflex ProDetail (1 kg / sqm)
4. Finish, if wanted

* Polymethyl methacrylate



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Main benefits (European Guideline ETAG 005):

- 25 years estimated working life performance
- Fast curing time and rainproof after only 30 minutes
- Application possible till humidity of 99% and withstands surface temperature after application up to 90° C
- A liquid seamless solution that fits to any structure with complex geometry
- Adherence to any surfaces (Aluminum, steel, plastic, glass, bitumen, concrete, ...)
- Solvent free, environmental friendly and with no risk to health
- High resistance to chemicals, roots and rhizome, alkali and hydrolysis
- Cold application with no flame and flame retardant
- Highly UV resistant (1000 MJ/m² = 325 days)
- Easy to impose loads after application (for particular demands as green roofs)