



Case Study

Triton supplied:

2000 kg Triton TT Super Admix

400 LM Triton TT Waterstop

100 x cartridges Triton TT Swellseal Mastic



Ground level slab

NEW BUILD UNDERGROUND CAR PARK WATERPROOFED TO BS 8102 2009 STANDARD

A waterproof concrete basement has been constructed to the rear of a London police station. The basement is to be used as a car park and plant room. The basement is of steel sheet piled construction, with the concrete liner walls and floor made watertight by the inclusion of Triton's TT Super Admix within the RC structure. Triton's TT Waterstop and TT Swellseal Mastic were used to waterproof all concrete construction joints interfaces, and penetrations, such as service ducts/tie bars etc.

The ground level slab (see in-situ form work at the far end of photograph above) incorporates a minimum 1M band of concrete waterproofed with TT Super Admix around the entire perimeter and this external podium detail will be further waterproofed at a later stage using Triton's TT Vapour Membrane and Platon Double Drain membrane, as per the detail drawing TT/IP 040.1 which can be found on the Technical Drawings page at www.tritonsystems.co.uk



Site overview



Triton's TT Super Admix is a unique chemical treatment for the waterproofing and protection of concrete and is designed to be used as an admix at the time of batching. The active chemicals react with fresh concrete to generate a non-soluble crystalline formation which seals the concrete itself against the penetration of water or liquid, protecting it from the deterioration effect of harsh environmental conditions, and is closely monitored by Triton from inception stage through to concrete mix design and placement stages, for warranty purposes.

TT Waterstop is pre-formed in a ready to use roll which swells up to 350% when in contact with water when fully encapsulated by poured concrete, the expansive forces form a seal against concrete surfaces to resist hydrostatic pressure and to stop water from entering a sub-structure. It returns to its original size if the concrete and substrate is completely dry but re-expands to seal the potential leaking joints when water or moisture is re-introduced. A built in delay means it will activate approximately two days after constant exposure to water and will withstand up to a 40 metre head of pressure.

Triton's TT Swellseal Mastic is a gun applied, single-component hydro-reactive expansion sealant for waterproofing joints in concrete and is commonly used to facilitate the installation of TT Waterstop. It will swell up to 100% when in contact with water to create a durable seal, with long lasting adhesive and hydro-swelling properties.

The intended application of TT Vapour Membrane is a ready blended, liquid applied elastomeric type coating, which once cured, provides a flexible waterproof and ground gas proof barrier.

Platon Double Drain (cavity drain membrane) provides a tough, drained protective covering to the cured TT Vapour Membrane surface. Double Drain is designed for both horizontal and vertical external use and incorporates a Geotextile filter fabric layer which dramatically reduces the chance of soil, fines and clay from entering the membrane cavities and obstructing the all-important drainage elements, as both of these products need to be applied to a suitable fall / falls toward their intended and maintainable drainage points for these types of applications.

Main contractor: Wates Construction – www.wates.co.uk

Concreteting contractor: Toureen Mangan – www.toureenmangan.co.uk

Concrete supplier: Hanson – www.heidelbergcement.com/uk/en/products/concrete/index.htm

NBS Specification:

Triton TT Super Admix – J10

TT Swell Mastic, TT Waterstop – E40

TT Vapour Membrane – J40

Platon Double Drain – J30

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