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## Pouring and placing waterproof concrete in hot weather conditions - when using Triton TT Admix

Earlier this year we published our advice on handling waterproof concrete in very cold conditions to prevent it cracking and weakening. Now we offer our advice on pouring and curing concrete in very high temperatures to help you obtain a good, crack free, waterproof result with little chance of water ingress once ground water returns to the outside of the structure.

Across the world, concrete can be poured very successfully in extremely hot environments. Today's 30° temperature is far below the regular 40 – 50° seen in places such as Dubai. The protection methods are however just the same - although we would rarely consider the use of ice in the water in the UK within the concrete mix!

A high ambient temperature increases the overall temperature of fresh concrete, resulting in more rapid hydration of the cement and leading to accelerated setting (earlier 'going off'). Rapid evaporation of moisture from exposed surfaces may cause plastic shrinkage cracking and crazing over the surface, therefore greater care needs to be taken with curing in warm or hot conditions than under normal (lower) ambient conditions.

Higher temperatures effectively accelerate the early age 'set' timing so concrete will start to stiffen up sooner than usual and, once poured in areas such as across a concrete slab, the first signs of early age damage occurring is the crazing or cracking of the surface. This is referred to as 'plastic shrinkage cracking' and will look a little like crazy paving across the surface. This is a sure sign that the water in the top surface of the concrete is evaporating too quickly and needs to be addressed to help stop deeper cracks emanating from these shallow early cracks.

A good precaution to help avoid early age cracking is to protect the concrete from excessive external heat by applying a liquid curing agent to the fresh concrete slab. This helps seal in the moisture as does covering the finished slab as soon as possible with white coloured or opaque plastic sheeting or even using winter frost blankets, all secured down well at the edges to avoid warm breezes across the surface of the slab underneath.

As we move into warmer weather conditions, when we are asked for advice on placing Triton TT Admix concrete in hot weather, we advise that with some pre-planning around protecting the concrete during and after placing, it should not add any additional time to the project, but will save a lot of time and cost later trying to fix shrinkage or cracking that could have been avoidable.

Our technical team is always available to advise on the best methods of placing and curing waterproof concrete during all weather conditions and temperatures - so please don't hesitate to get in touch with us if you need to at: [sales@tritonsystems.co.uk](mailto:sales@tritonsystems.co.uk)

Further information about our Type B (waterproof concrete) waterproofing systems is also available on our website here:

<https://www.tritonsystems.co.uk/category/products/waterproofing-products/watertight-concrete-system/>

ENDS

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