



Ensure a long concrete life

- 10 Things

ARMCON
CERTAINTY: IN CONCRETE



Ten things to ensure a long concrete life

1. **Use good quality aggregates**

Good quality aggregate must be clean, hard and strong and be free of absorbed harmful chemicals and other contaminants that can affect the hydration of the cement. Lime stone is generally accepted as being the best natural aggregate for concrete due to its natural bond.

2. **Test to ensure the correct mix design**

Concrete testing is an essential way to ensure the correct mix design.

Slump tests are one of the most common in-situ/on-site compliance tests that can be performed by operators of concrete production equipment. The test itself is designed to test consistence (or workability as its more commonly known), which is important when determining the compatibility of the concrete with its intended use, whilst indirectly checking the water content and verifying the free water/cement ratio of the concrete.

The test is used for concrete with a target slump of between 10 and 200mm, outside of these values alternative test methods should be used. The test itself is controlled by the British Standard EN 12350-2, which is used to support the main standard for concrete EN 206-1.

Cube testing is done to test the strength of the concrete this ensures the correct mix design is producing a strong enough concrete.

3. **Use reinforcing steel where needed**

When a system of steel bars or steel mesh is incorporated into the concrete the steel can support most of the concrete stresses and leave the immediately surrounding concrete comparatively free of stress meaning less cracking.

4. **Use Superplasticisers**

Armcon Superplasticiser (Armplas Super XWR) will improve the quality, strength, profitability, consistency and durability of the concrete if used in the mix.

5. Use the correct curing methods

The curing process is the key to long lasting concrete. If concrete is properly cured it leads to increased strength and lower permeability and avoids cracking where the surface dries out prematurely.

(Further details on how to cure concrete can be found in booklet: How to stack concrete paving for the best curing)

6. Seal the concrete

Armseal protective sealer minimises the risk of cracking in freshly placed concrete subject to drying conditions. It also penetrates, seals and protects new concrete surfaces to improve abrasion resistance and durability. Heavy vehicles, high traffic, extreme temperatures and weather can make your concrete show wear faster. Regular resealing can help protect your concrete.

7. Clean keep free of debris

Keep the surface free of debris by sweeping or rinsing with a garden hose.

Armclean is a quick and easy powerful chemical cleaner to remove concrete splash and build up as well as cement, rust scale, algae and most types of corrosion. Simply brush or pour onto the surface, agitate with a brush and rinse away with water.

8. Avoid salt or other de-icers

Ensure all concrete is swept and shoveled free of snow. Salt and other ice melting chemicals should not be used as they will cause damage to the concrete. New concrete is especially susceptible to this type of damage.

9. Protect from extreme temperatures

Exposure to extreme heat may cause damage. Using a torch to melt ice or welding against concrete may cause the aggregate to pop. Or use admixtures to help the concrete be protected against the elements.

10. Avoid impacts

Care should be taken to protect your concrete from impacts that may crack or scratch the concrete.