



## Concrete Curing Advice

All ready-mixed concrete should be cured and protected from the elements. This includes wind, rain and even sunlight, as any of these can damage the surface.

Cracking can be a very common problem in summer months, concrete may develop cracks for many reasons. However, the risk can be minimized by adopting good site practice.

The most common are plastic shrinkage and drying shrinkage cracks. The possibility of these kinds of cracking developing can be reduced by applying good curing techniques as follows:

- 1) A Plastic layer under the concrete which minimizes moisture being drawn downwards out of the concrete in warmer and dryer conditions
- 2) Covering the concrete when placed and starting to go off minimizes the risk of wind, sun etc driving off surface moisture and causing cracking

(ie anything that can be done to prevent moisture from evaporating upwards or being drawn downwards)

### Cold weather working:

If the temperature of supplied concrete is likely to fall below 5C additional precautions should be applied when placing. Suppliers inform customers if the temperature is likely to be below this level and it is then the customers responsibility to protect and insulate any concrete supplied

Surfaces that will be in contact with the freshly placed concrete, including sub-grade materials, should be at a temperature of at least 2C.



Please note this document is purely for advice, Grange Quarry cannot be held responsible for site curing practices



Grange Quarry Ltd are able to produce heated concrete, which can be supplied to site at temperatures above 10C, even in the coldest weather. However, the concrete should still be placed and insulated as quickly as possible to avoid heat loss.

### **Hot weather working:**

High ambient temperatures will increase the temperature of the fresh concrete, resulting in more rapid hydration of the cement, leading to accelerated hardening.

Ambient temperatures of 20C should not cause a significant problem. However, precautions should be taken when temperatures approach 30C. Rapid evaporation of moisture from exposed surfaces may cause cracking and suitable curing techniques should be used

Here are some precautions:

- Specify alternative cement types to CEM I, as these can offer slower hardening characteristics. Grange Quarry Ltd offers GGBS blended cement as an alternative
- Do not add water to the fresh concrete – apply more men to the job.
- Order the concrete at a suitable consistence/workability (higher than you would normally, due to workability loss through evaporation).
- Apply a curing membranes above and beneath the concrete in order to avoid a wind/sun combination (resulting in cracking).
- Place, compact and finish as quickly as possible.



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