
# Hot Weather Concrete Guide

Special care must be taken when placing concrete in Hot weather conditions. If early age concrete is allowed to bake in direct sunlight this can cause potential defects and failure in concretes. These failures can range from cracking to losses in 28-day strengths.

## Definition of hot weather concreting

Hot weather concreting is defined as placing concrete in temperatures above 30c. The British standard states temperatures of 30C and above inclusive of concrete temperature approximately 5C will give a mean temperature of 35C and placement of concrete should be strongly considered. At these temperatures customers must sign responsibility for the concrete and its aftercare.

## Loss of consistency

Stiffening due to high temperatures or Water loss by evaporation can cause problems by making it difficult to fully compact concrete. This also increases the risk of cold joints forming and makes surface finishing complicated and, on some occasions, impossible.

Mixes should be discharged as soon as possible after mixing to minimize loss in consistency and site delays must be kept to a minimum.

## Moisture Loss

Rapid moisture loss from the surface of freshly placed concrete exposed to the elements can cause shrinkage cracking to occur. Concrete should be cured adequately by means of curing agents or polythene sheeting to reduce evaporation. Curing agents of 80% and above are recommended.

## Problems created by Hot Weather

- Loses workability
- Shorter setting times
- Increased risk of plastic shrinkage
- Thermal Cracking
- Increased risk of cold joints.

## Minimizing the effects of hot weather

- Schedule concrete for cooler parts of the day.
- Increase workability with admixtures and retarders.
- Protect against moisture loss with efficient curing techniques.
- Reduce placing times with adequate manpower.
- Protect yourself stay hydrated work as a team.