



Hot Weather Concreting

Hot weather and windy conditions can lead to a number of unique problems in regard to properly placing, curing and finishing concrete. Consideration of the combined, synergistic effects of temperature, solar radiation, relative humidity and wind evaporation will determine exactly which special steps and techniques should be employed to insure the best results. Shamrock Materials offers many special materials to assist you in coping with hot weather conditions. Please call us for specifics.

Hot Weather Conditions

Each job location and environment is unique, but the following factors and thresholds should all be considered during hot weather.

- Temperature - above 75 degrees F
- Wind - above 10 mph
- Relative Humidity - below 20%
- Solar Radiation - strong direct sun over more than 1 hour

Effect on Concrete

- Faster Setting Time
- Accelerated Slump Loss
- Increased Tendency for Retempering
- Requires More Rapid Finishing
- High Rate of Evaporation
- Plastic and Drying Shrinkage Cracking
- Increased Water Demand for Cooling and To Offset Evaporation

Special Procedures

- Be Prepared To Work More Quickly
- Avoid Delays in Staging and Placing
- Be Aware of Heat, Evaporation and Sun
- Have Special Materials On-Hand

CONFILM Spray-on Evaporation Retardant

Burlap - for wet curing

Special Tips & Techniques

ORDERING

- Discuss adding DELVO retarder to your mix to provide additional working time.
- Discuss adding POLYHEED admixture to your mix to control slump and workability.
- Schedule Just-In-Time Delivery.

BEFORE PLACING

- Have adequate work crews and equipment ready to go.
- Spray forms, reinforcing steel and subgrade with water periodically to keep them cool.
- If necessary, erect windbreakers or sun blocks.

DURING PLACING

- Discharge concrete as soon as the trucks arrive at the job site.
- Vibrate or screed without delay.
- To reduce plastic shrinkage apply CONFILM spray-on type evaporation retardant immediately after screeding and between troweling.
- Don't over-vibrate or over-finish the surface.

AFTER PLACING

- Cure immediately with proper curing compound after finishing to prevent moisture evaporation from the concrete.
- For color concrete use Scofield Color Cure.
- Protect from traffic and direct sunlight.
- Test cylinders and beams must be covered immediately with damp burlap and kept at 60 to 80 F (16 to 27 C) to prevent serious strength reductions from exposure to sun and wind.
- After 24 hours, carefully move specimens to prescribed curing facilities and store until time of test.