



Concrete Repair & Foundation Installations Hot Weather

High temperatures accelerate the set time and decrease working time of concrete materials. The following guidelines should be used for elevated temperature placement.

A. Environmental Conditioning

Temperature is a critical factor in the installation of concrete materials. The temperature of the environment and the materials being used must be controlled throughout the installation and curing process using tenting, shading, portable air conditioners, ice water, etc. as required.

B. Product Pre-Conditioning

1. Materials shall be conditioned as necessary so that the mixed material is between 50 °F and 95 °F (10 °C and 35 °C). Due to the mass of palletized material, up to 72 hours of pre-conditioning may be required. Store material in a temperature-controlled environment.
2. All surfaces in contact with the material shall be pre-conditioned and maintained below 95 °F (35 °C) for 8 - 24 hours. Presoaking of surfaces, mixing equipment, and transport equipment (wheelbarrows, etc.) with cold or iced water will facilitate cooling of surfaces.

C. Mixing & Placement

1. Mix material in a shaded area out of direct sunlight using cold or iced water. Do **NOT** put ice directly in with the product during mixing.
2. Place material when temperatures are within the Five Star® Technical Data Sheet product specific guidance or are decreasing, at night or early morning. Provide protection from direct sunlight and wind to reduce the rapid drying and evaporation of water from exposed substrate surfaces.

D. Post-Placement

1. Installed product temperature shall be maintained below 95°F (35°C) and protected from wind, rain, and vibration until the material reaches final set.
2. Field test samples, as needed, shall be maintained at the same installation temperature conditions to monitor strength development.
3. Begin wet cure immediately after product takes final set and continuously wet cure all exposed material surfaces using wet rags, burlap, wet hessian, or burlene saturated with potable water. Place plastic sheeting over material used for wet cure to protect against evaporation. Monitor condition of material used for wet cure (i.e. rags) to ensure drying does not occur. Consult Five Star® Technical Data Sheet for product specific curing time requirements.
4. In-service operation may begin immediately after the required product compressive strength has been reached.

For additional information, contact your Five Star® Technical Sales Representative.

Five Star Products follows standard industry practices. For more information, refer to ACI 305R-16: *Guide to Hot Weather Concreting*; ASTM C109/C109M-20b *Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-In. or [50 Mm] Cube Specimens)*; ASTM C309-19 *Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete*.

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