Technical Bulletin 102



Precision CEMENTITIOUS Grouts Hot Weather Grouting

High temperatures accelerate the set time and decrease working time of cementitious grouts. The guidelines below may compensate for these conditions.

A. Pre-Conditioning

- Materials shall be pre-conditioned so that the grout mix temperature is between 40°F and 95°F (4°C and 35°C). Due to the mass of palletized material, up to 72 hours of pre-conditioning may be required. Store grout in a temperature-controlled environment.
- All surfaces in contact with cementitious grout 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.

B. Mixing & Placement

- 1. Mix grout in a shaded area out of direct sunlight using cold or iced water. Do NOT put ice directly in with grout during mixing.
- 2. Place grout when temperatures 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 grout surfaces.

C. Post-Placement

- 1. The grout temperature shall be maintained below 95°F (35°C) until the grout has been sufficiently wet cured.
- 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 grout takes initial set and continuously wet cure all exposed grout surfaces using wet rags, burlap, wet hessian, or burlene saturated with potable water for a minimum of 24 hours. Place plastic sheeting over material used for wet cure to ensure continuous wet cure. Monitor condition of material used for wet cure to ensure drying does not occur.
- 4. After initial 24-hour wet cure, grout shall be coated with an approved curing compound or wet cured for an additional 48 hours totaling 3 days.
- 5. During the curing process, protect the grout from direct sun and wind exposure.
- 6. In-service operation may begin immediately after the required grout 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-20: Guide to Hot Weather Concreting; ACI 351.4M-14 Specification for Installation of Cementitious Grouting between Foundations and Equipment Bases; ASTM C942/ C942M-21 Standard Test Method for Compressive Strength of Grouts for Preplaced-Aggregate Concrete in the Laboratory; ASTM C309-19 Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete

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