Plastic shrinkage cracking occurs when the concrete evaporation rate is high and the surface of the concrete dries and shrinks before it has set. Plastic shrinkage cracks are more likely to occur as the evaporation rates approach or exceed 0.20 lbs/square foot/hour. It is important to recognize when weather conditions are conducive to plastic shrinkage cracking before placement and take precautions to minimize its occurrence. Continue to monitor site conditions at least every 30 minutes until specified curing procedures have been applied.

Plastic Shrinkage Cracking Can Be Minimized By Reducing The Evaporation Rate

- Erect wind breaks to reduce wind speed.
- Apply evaporation reducers.
- Provide sun shades or cover concrete with wet burlap or tarps between finishing operations.
- Schedule placement in the evening or early morning to avoid hot, dry, windy conditions.
- Use fog sprays upwind from the site to reduce the evaporation rate.
- Cool concrete using chilled water, chipped ice, etc. Even in cool weather, using hot concrete can increase evaporation rate.

(See ACI 305.1-06 Specification for Hot Weather Concreting for details)

Kestrel 5200 Quick Start Guide:

1. Turn on unit and scroll to 0.03 then press ➡.

2. Measure the concrete mix temperature with a probe or IR laser and adjust the value for Mix Temp to the correct value, then press ⚙ to return to the measurement screen.

3. Place the Kestrel in the vane mount on the tripod approximately 20” above the surface of the concrete. Shade the unit from direct sunlight without blocking the wind. (For best accuracy, let the unit acclimate in the shade for 15 minutes prior to taking readings.)

4. To measure a 6-10 second average of the evaporation rate (as recommended by the ACI) scroll right to and press ➡ to Start and then Stop the average.

For more information go to www.KestrelJobsite.com
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