

## Method of Test for Temperature of Freshly Mixed Portland Cement Concrete

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### 1. Scope:

This test method covers the determination of temperature of freshly mixed Portland cement concrete.

### 2. Apparatus:

2.1 Temperature measuring device. A temperature measuring device capable of measuring the temperature of the freshly mixed concrete to  $\pm 1^\circ\text{F}$ , having a range from 30 to 120°F. The design shall be such that it allows 3" or more of immersion during operation.

2.2 Container. The container shall be made of non-absorptive material and large enough to provide at least 3" of concrete in all directions around the sensor of the temperature measuring device.

### 3. Procedure:

3.1 Place the temperature measuring device in the freshly mixed concrete so that the temperature sensing portion is submerged a minimum of 3". Gently press the concrete around the temperature measuring device at the surface of the concrete so that ambient air temperature does not affect the reading.

3.2 Leave the temperature measuring device in the freshly mixed concrete for a minimum of 2 minutes or until the temperature reading stabilizes, record temperature.

3.3 Complete the temperature measurement of the freshly mixed concrete within 5 minutes after obtaining the sample. For volumetric mixed concrete complete within 10 minutes after obtaining sample.

**NOTE: Samples of volumetric mixed (Low slump) concrete shall be placed in a covered container for 5 minutes prior to testing.**

### 4. Report:

4.1 Record the measured temperature of the freshly mixed concrete to the nearest 1°F.

### 5. References:

ASTM C1064