



# Performance Examination - Concrete

## Standard Method of Test for Temperature of Freshly Mixed Portland Cement Concrete (AASHTO T 309-15)

Candidate Name: \_\_\_\_\_ NICET ID: \_\_\_\_\_

Apparatus	Trial 1	Trial 2
<b>Container</b> Shall be large enough to provide at least 3 inches (75 mm) of concrete in all directions around the sensor of the temperature measuring device; concrete cover must also be at least three times the nominal maximum size of the coarse aggregate.		
<b>Temperature Measuring Device</b> Shall be capable of accurately measuring the temperature of freshly mixed concrete to $\pm 1$ °F ( $\pm 0.5$ °C) throughout a range of 30 °F to 120 °F (0 °C to 50 °C). The design of the temperature measuring device shall be such that it allows 3 inches (75 mm) or more immersion during operation.		
<b>Partial Immersion Liquid-in-Glass Thermometers</b> Shall have a permanent mark to which the device must be immersed without applying a correction factor.		
<b>Reference Temperature Measuring Device</b> Shall be readable and accurate to $\pm 0.5$ °F (0.2 °C) at the verification points at two temperatures at least 30 °F (15 °C) apart. A certificate or report that verifies the accuracy shall be available in the laboratory for review.		

Procedures	Trial 1	Trial 2
1. Place the Temperature Measuring Device (TMD) in the concrete so that the sensing portion is submerged a minimum of 3 in. (75 mm).		
2. Gently press concrete around the TMD so that ambient (outside) air temperature does not influence the measured temperature.		
3. Leave the TMD in the concrete for at least 2 minutes. But not more than 5 minutes.		
4. Read and record the fresh concrete temperature to the nearest 1 °F (0.5 °C). Do not remove the TMD from the concrete when reading the temperature.		
5. Report the measured temperature of the freshly mixed concrete to the nearest 1 °F (0.5 °C).		

First Attempt: Pass: \_\_\_\_\_ Fail: \_\_\_\_\_ Second Attempt: Pass: \_\_\_\_\_ Fail: \_\_\_\_\_

Comments:

---



---



---



---



---



---

Examiner Name: \_\_\_\_\_ Examiner Signature: \_\_\_\_\_ Date: \_\_\_\_\_