



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
Container 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.		
Temperature Measuring Device Shall be capable of accurately measuring the temperature of freshly mixed concrete to ± 1 °F (± 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.		
Partial Immersion Liquid-in-Glass Thermometers Shall have a permanent mark to which the device must be immersed without applying a correction factor.		
Reference Temperature Measuring Device Shall be readable and accurate to ± 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: _____

Exam Administration: Remote _____ In-Person _____

Comments:

Examiner Name: _____ Examiner Signature: _____ Date: _____