Bureau of Materials and Physical Research
Illinois Modified AASHTO T 161-08, Procedure B
Effective Date: January 1, 2007
Revised Date: October 26, 2012

Standard Method of Test
for
Resistance of Polymer Concrete to Rapid Freezing and Thawing, Procedure B

Modifications apply only when testing material according to Check Sheet #17, Special Provision for Polymer Concrete, of the Supplemental Specifications and Recurring Special Provisions (January 1, 2012).

AASHTO Section	***Illinois Modification***
2.1	Revise as follows: AASHTO R 39 (Illinois Modified)
3.5 New Section	The Illinois Department of Transportation shall use only Procedure B when testing polymer concrete. All procedures/requirements not specifically dedicated to Procedure A shall also be applied when running Procedure B.
4.6	Delete the paragraph and replace with the following: Tempering Tank – with suitable provisions for maintaining the temperature of the test specimens in water, such that when removed from the tank and tested for fundamental transverse frequency the specimens will be within a temperature range of 23° ± 0.5° C (73° ± 1° F). The use of the specimen chamber in the freezing-and-thawing apparatus by stopping the apparatus at the end of the thawing cycle and holding the specimens in it shall not be considered as serving this requirement. A separate tank meeting the above requirements shall be provided.
4.7 New Section	*Tamping Rod*—A round, straight, steel rod with a 5/8 in. ± 1/16 in. (16 mm ± 2 mm) diameter and at least 12 in. (300 mm) in length, having the tamping rod end or both ends rounded to a hemispherical tip having a diameter of which is 5/16 in. (8mm).
7.1.1 New Section	*Polymer Concrete*—A nonreactive release agent should be used to coat each mold. Three sonic (ASTM C 215) beams shall be made for testing this material. Mix a sufficient amount of the components in the proportions and in the manner specified by the manufacturer of the materials. Fill the molds in two equal lifts and tamp both lifts 30 times with the tamping rod. Add additional material as necessary, working down into the previously placed portion, and finish the surface flush with the top of the mold.
7.3	Delete the section.
7.4	Delete the section.
8.1	Delete the paragraph and replace with the following: *Polymer Concrete*— Cure polymer concrete test specimens for 3 days at 23 ± 2° C (73° ± 4° F). At this time the specimens may be removed from the mold and tested. Polymer concretes will only be tested for surface deteriorations including: pop outs, bulges, and crumbling.
8.2	Delete the section.

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AASHTO Section[1]	***Illinois Modification***
8.3	Delete the paragraph and replace with the following: Start freezing and thawing tests by placing the specimens in the thawing water at the beginning of the thawing phase of the cycle. Remove the specimens from the apparatus, in a thawed condition, at intervals of approximately 50 cycles of exposure to the freezing-and-thawing cycles, test for fundamental transverse with the specimens at the temperature of 23° ± 0.5° C (73° ± 1° F), determine the mass of each specimen, and return them to the apparatus. To ensure that the specimens are completely thawed and at the specified temperature, place them in the tempering tank for a sufficient time for this condition to be attained throughout each specimen. Data have shown that 1.5 to 2 hours is sufficient to stabilize specimens in the tempering tank. Protect the specimens against loss of moisture while out of the apparatus and turn them end-for-end when returned. Return the specimens either to random positions in the apparatus or to positions according to some predetermined rotation scheme that will ensure that each specimen that continues under test for any length of time is subjected to conditions in all parts of the freezing apparatus. Continue each specimen in the test until it has been subjected to 300 cycles. Replace all failed beams with dummy beams.
Note 6	Delete the note.
8.5 New Section	For polymer concrete test specimens any deterioration such as pop outs, bulges, crumbling, etc. will constitute a failure.
9.1	Delete the section.
9.2	Delete the section.
9.3	Delete the section.
10.2.1	Delete the section.
10.2.2	Delete the section.
10.2.3	Delete the section.
10.2.4	Delete the section.
10.2.5	Delete the section.
10.2.6	Delete the section.
10.2.7	Delete the section.
10.4	Delete the section.
10.5.3	Delete the section.
10.6.1	Delete the section.
10.6.2	Delete the section.
10.6.3	Delete the section.
Note 10	Delete the note.
11.	Delete the whole section.