

**Bureau of Materials**  
 Illinois Modified ASTM C 1107/C 1107M-17  
 Effective Date: January 1, 2007  
 Revised Date: [October 5, 2018](#)

Standard Method of Test  
 for  
**Packaged Dry, Hydraulic-Cement Grout (Nonshrink)**

**Modifications apply only when testing material according to Article 1024.01 of the Standard Specifications for Road and Bridge Construction ([April 1, 2016](#)).**

<b>ASTM Section</b>	<b>Illinois Modification</b>
Table 1	Add the following requirements for “Tests at Standard Conditions”: <ul style="list-style-type: none"> <li>• Initial Set according to C 953, min 60.0 minutes</li> <li>• Relative Dynamic Modulus of Elasticity <a href="#">according to Illinois Modified AASHTO T 161, Procedure B-Nonshrink Grout</a>, min 80 percent</li> </ul> Delete the following requirements for “Tests at Standard Conditions”: <ul style="list-style-type: none"> <li>• <a href="#">Highest water to solids ratio, maximum flow, or most fluid consistency</a></li> <li>• <a href="#">Temperature</a></li> <li>• <a href="#">Yield</a></li> </ul>
6.1	Replace as follows: Specimens shall be made from freshly mixed “flowable” grout as defined under <a href="#">Section 3</a> . Terminology, <a href="#">shall be made from a maximum two batches</a> , and shall meet the requirements prescribed in Table 1, except for the following: <ul style="list-style-type: none"> <li>• 1-day Compressive Strength, minimum, shall be 3000 psi (20.7 MPa)</li> <li>• 3-day Compressive Strength requirements shall not apply</li> <li>• 7-day Compressive Strength , minimum, shall be 6000 psi (41.4 MPa)</li> <li>• 28-day Compressive Strength , minimum, shall be 8000 psi (55.2 MPa)</li> </ul>
6.2	<a href="#">Replace as follows:</a> <a href="#">Specimens shall be made at 73.5 +/- 3.5°F from freshly made grout.</a>
6.3	Delete this section.
6.4	<a href="#">Replace as follows:</a> <a href="#">Specimens for testing shall be stored continuously at 73.5 +/- 3.5°F.</a>
7	Replace as follows: Empty 3 to 5 packages of nonshrink grout into mixer and dry mix for approximately 90 seconds or until there are no clumps in the material and the material appears to be well mixed. Use this material for testing.
8	Delete all sections except for 8.1.2.
9.1	Replace as follows: The amount of water recommended by the manufacturer on the package to achieve a mixture of “flowable” consistency as defined under <a href="#">Section 3</a> . Terminology shall be used to determine conformance with the requirements of this specification.

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<b>ASTM Section</b>	<b>Illinois Modification</b>
10	Replace as follows: Mix the material in a mortar-mixing apparatus as specified in Practice C 305, according to the following procedure: <ul style="list-style-type: none"> <li>• Mix dry material for 30 seconds</li> <li>• Add the entire volume of water within 5 seconds</li> <li>• Mix for 25 seconds</li> <li>• Stop mixer, scrape bowl sides for 15 seconds</li> <li>• Mix for an additional 2 minutes and 45 seconds</li> <li>• Measure flow according to ASTM C 827</li> </ul>
11.1.1	Replace as follows: Determine the consistency of the flowable grout mixture in accordance with Test Method C827.
11.1.2, 11.1.3, 11.2, and 11.2.1	Delete sections.
11.3	Delete section.
11.4.2	Delete section.
11.5.1	Delete section.
11.5.3	Replace as follows: Place a rigid, nonreactive cover plate over the cube mold. Use paraffin to seal the edges of the cover plate to the mold. The plate shall overlap the cube mold a minimum ¼ in. (6 mm). Place a minimum 5.0 lb. weight (2.2 kg mass) on the surface of the cover plate. Immediately place test specimens in the moist room.
11.5.4	Delete section.
11.5.5	Replace as follows: For compressive strength specimens, remove specimens from molds at 24 +/- ½ h after molding. Three cubes shall be tested at each age – 1, 7, and 28 days. All test specimens for a given test age shall be tested for compressive strength within the permissible tolerances prescribed by Test Method C109.
11.6 New Section	<i>Resistance to Freezing and Thawing</i> —Test specimens shall consist of prisms made, cured, and tested according to Illinois Modified AASHTO T 161, entitled Resistance of Nonshrink Grout to Rapid Freezing and Thawing, Procedure B.