Bureau of Materials and Physical Research
Illinois Modified AASHTO T106M/T106-12
Effective Date: January 1, 2007
Revised Date: September 07, 2012

Standard Method of Test
for
Compressive Strength of Hydraulic Cement Mortar
(Using 50-mm or 2-in. Cube Specimens)

Modifications apply only when testing material according to Article 1001.01(d)(2) of the Standard Specifications for Road and Bridge Construction (January 1, 2012).

<table>
<thead>
<tr>
<th>AASHTO Section¹</th>
<th>Illinois Modification</th>
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<tbody>
<tr>
<td>10.1.1</td>
<td>Revise the second sentence as follows: Use a water-cement ratio of 0.485 for all portland cements, 0.460 for all air-entraining portland cements, and 0.427 for all rapid hardening cements, unless otherwise specified by the manufacturer.</td>
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<tr>
<td>10.1.2</td>
<td>Add as follows: When testing rapid hardening cement, there shall be nine (9) test specimens made with the following proportions: 750 g cement, 2060 g sand, and 320 ml water.</td>
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| 10.2.1           | Add as follows: When testing rapid hardening cement, mix according to the following procedure:  
  • Thoroughly mix the dry materials (cement and sand) together in a clean container.  
  • Place all the mixing water in the mixing bowl.  
  • With the mixing bowl and paddle in place and the mixer operating at a slow speed (140 ± 5 revolutions/minute), add the entire quantity of dry materials within 10 seconds. Continue the mixing for 2 minutes, timing from the addition of the dry materials.  
  • Stop the mixer, scrape down the sides of the mixing bowl with a rubber scraper for 15 seconds.  
  • Finish by mixing at medium speed (285 ± 10 revolutions/minute) for 45 seconds. |
| 10.5.1 New Section | When testing rapid hardening cement, the specimens shall be tested at 3 hours, 6 hours and 24 hours. Specimens for the 3-hour test shall be removed from the molds at 2 ¾ hr ± 10 min and kept on the shelves of the moist room until they are 3 hours old. Specimens for the 6-hour shall be removed from the molds at 5 ½ hr ± 20 min and kept on the shelves of the moist room until they are 6 hours old. Specimens for the 24-hour test shall be removed from the molds at 22 ± 2 hours and kept on the shelves of the moist room until they are 24 hours old. |

¹ Reference ASTM C 109/C 109M-02