

Bureau of Materials and Physical Research

Illinois Modified ASTM C 596-09

Effective Date: January 1, 2007

Revised Date: [September 07, 2012](#)

Standard Method of Test
for

Drying Shrinkage of Mortar Containing Hydraulic Cement

Modifications apply only when testing material according to Article 1001.01(d)(3) of the [Standard Specifications for Road and Bridge Construction \(January 1, 2012\)](#).

ASTM Section¹	Illinois Modification
6.3	Revise as follows: Drying room – The air in the room shall be maintained at a temperature of $73 \pm 3^{\circ}$ F ($23 \pm 2^{\circ}$ C) and a relative humidity of 50% minimum.
10.2.1 New Section	When testing rapid hardening hydraulic cement, mix according to following the procedure: <ul style="list-style-type: none">• Thoroughly mix the dry materials (cement and sand) together in a dry mixer bowl.• Place the bowl in the mixer, set the paddle in place, and mix the dry materials at slow speed (140 ± 5 revolutions/minute) for 10 seconds.• With the mixer operating at slow speed, add the entire quantity of mixing water within 10 seconds.• Stop the mixer, change to medium speed (285 ± 10 revolutions/minute), and continue mixing for 1 minute, timing from the first addition of water.• Stop the mixer and 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 15 seconds.
11.1.3	Revise after the first sentence as follows: Then place the specimens in air storage for 7 days. Obtain a length comparator reading for each specimen.

¹ Reference ASTM C 596-01