

Bureau of Materials and Physical Research

Illinois Laboratory Test Procedure

Effective Date: January 1, 2007

Sand Penetration Test of Penetrating Emulsified Prime (PEP)

This test procedure applies to Article 1032.06(d) of the Standard Specifications for Road and Bridge Construction (January 1, 2007).

1.0 GENERAL

1.1 This procedure covers the testing required to perform the Sand Penetration Test on Penetrating Emulsified Prime (PEP) according to Article 1032.06(d).

2.0 REFERENCE SAND

2.1 The standard reference sand for this test shall be a natural silica type, composed almost entirely of naturally rounded grains of nearly pure quartz, and shall be graded as follows:

Sieve	No. 80 (180 μ m)	No. 100 (150 μ m)	No. 140 (106 μ m)	No. 200 (75 μ m)
Percent Passing	99 \pm 1	97 \pm 3	50 \pm 5	2 \pm 2

3.0 PROCEDURE

3.1 Dampen 312.5 g of reference sand with 5.0 g of water.

3.2 Place the moistened sand into a cylindrical metal container having a nominal capacity of 8 oz (235 ml), and compress at 100 psi (690 kPa).

3.3 Measure 5 g of prime into the container of compacted sand and record the time for penetration in seconds.

3.4 Remove a cross section of the sand and record the depth of penetration in millimeters.