

This Research Report is issued under the fixed designation RR: C15-1000. You agree not to reproduce or circulate or quote, in whole or part, this document outside of ASTM International Committee/Society activities, or submit it to any other organization or standards body (whether national, international or other) except with the approval of the Chairman of the Committee having jurisdiction and the written authorization of the President of the Society. If you do not agree to these conditions, please immediately destroy all copies of this document. *Copyright ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428. All rights reserved.*

1 July 2014

**Committee C15 on Manufactured Masonry Units  
Subcommittee C15.04 on Research**

**Research Report: C15-1000**

**Interlaboratory Study to Establish Precision Statements for ASTM  
C1781-14, Test Method for Surface Infiltration Rate of Permeable Unit  
Pavement Systems**

**Technical contact:**

Craig Walloch,  
Acm Chemistries Inc  
P O Box 920430  
Norcross, GA 30010  
US  
CWALLOCH@ACMCHEM.COM

ASTM International  
100 Barr Harbor Drive  
West Conshohocken, PA 19428-2959

**1. Introduction:**

Interlaboratory Study 1012 was conducted to establish a precision statement for C1781, Test Method for Surface Infiltration Rate of Permeable Unit Pavement Systems. This work was conducted at Middle Tennessee State University and was analyzed under ASTM ILS # 1012. In this study, test pads of permeable unit pavement systems were constructed with 14 different concrete paver types and each of the 14 different pavement systems were tested with three different sized drainage aggregates meeting the grading requirements of Size Numbers 8, 9 and 10 in accordance with ASTM C33-13, Standard Specification of Concrete Aggregates [12] (which are identical to those in ASTM D448, Standard Classification for Sizes of Aggregate for Road and Bridge Construction [13]). A total of 42 different paver unit/drainage aggregate systems were tested.

**2. Test Method:**

The Test Method used for this ILS is C1781-14. To obtain a copy of C1781, go to ASTM's website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service by phone at 610-832-9585 (8:30 a.m. - 4:30 p.m. Eastern U.S. Standard Time, Monday through Friday) or by email at [service@astm.org](mailto:service@astm.org).

**3. Participating Laboratories:**

The following laboratories participated in this interlaboratory study:

2 Operators from:  
Middle Tennessee State University  
Po Box 19  
Murfreesboro, TN 37132  
United States

**4. Description of Samples:**

There were 42 different paver unit/drainage aggregate systems used for this study. Each system was supplied, prepared and distributed by Glenn Herold of Oldcastle - Belgard. Below is a list of the samples with the corresponding supplier:

Set #1- #10 Stone in Joints

Set #1- #8 Stone in Joints

Set #1- #9 Stone in Joints

Set #10- #10 Stone in Joints

Set #10- #8 Stone in Joints

Set #10- #9 Stone in Joints

Set #11- #10 Stone in Joints

Set #11- #8 Stone in Joints

Set #11- #9 Stone in Joints

Set #12- #10 Stone in Joints

Set #12- #8 Stone in Joints

Set #12- #9 Stone in Joints

Set #13- #10 Stone in Joints

Set #13- #8 Stone in Joints

Set #13- #9 Stone in Joints

Set #14- #10 Stone in Joints

Set #14- #8 Stone in Joints

Set #14- #9 Stone in Joints

Set #2- #10 Stone in Joints

Set #2- #8 Stone in Joints

Set #2- #9 Stone in Joints

Set #3- #10 Stone in Joints

Set #3- #8 Stone in Joints

Set #3- #9 Stone in Joints

Set #4- #10 Stone in Joints

Set #4- #8 Stone in Joints

Set #4- #9 Stone in Joints

Set #5- #10 Stone in Joints

Set #5- #8 Stone in Joints

Set #5- #9 Stone in Joints

Set #6- #10 Stone in Joints

Set #6- #8 Stone in Joints

Set #6- #9 Stone in Joints