



FROEHLING & ROBERTSON, INC.

Engineering • Environmental • Geotechnical

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April 26, 2013

REVISED PUMICE LIGHTWEIGHT AGGREGATE TEST REPORT

PROJECT NO.: 60N-0636
CONTROL NO.: 60-13-116888
CLIENT: Allied Concrete Products
 3900 Shannon Street
 Chesapeake, Virginia 23324
 Attn: Peter Schmidt
PROJECT: Pumice Certification
STANDARDS: ASTM C331-10 and AASHTO M195-10

Dear Peter:

Froehling & Robertson, Inc. is pleased to submit the results of laboratory testing on a sample of Pumice. The sample was delivered to our Richmond, Virginia office by Mr. Peter Schmidt of Allied Concrete Products. The test results are shown in the tables below.

SIEVE ANALYSIS

SIVE SIZE (mm)	% RETAINED	C331 SPECIFICATIONS
3/8" (9.5)	0	0 - 2
#4 (4.75)	9.0	0 - 10
#8 (2.36)	28.9	15 - 35
#16 (1.18)	21.3	15 - 35
#30 (600 μ)	13.3	5 - 20
#50 (300 μ)	8.6	5 - 15
#100 (150 μ)	5.4	5 - 15

PHYSICAL PROPERTIES

TESTS	RESULTS	C331 SPECIFICATIONS
Organic Impurities – Color (C40)	0	≤3 (Standard)
Clay Lumps - % (C142)	2.0	≤2.0
Loss on Ignition - % (C311)	4.4	≤5.0
Popouts: C151	None	None
Dry Loose Unit Wt. - lbs/ft ³ (kg/m ³) (C29)	52.0 (832)	≤70 (1,120)
Dry Rodded Unit Wt. - lbs/ft ³ (kg/m ³) (C29)	57.0 (912)	---
Shrinkage @ 28 Days - % (C157)	0.041	≤0.10
Shrinkage @ 100 Days - % (C157)	0.057	---
Stain Test - Index: C641	No Stain	<60



The above results meet the requirements of ASTM C331-10 and AASHTO M195-10.

Should you have any questions about these test results or require additional information or testing, please contact us at your convenience.

Respectfully Submitted,
FROEHLING & ROBERTSON, INC.

Robert A. Hill, III, P.E.
Branch Manager

RAH:jlc