PRI Construction Materials Technologies LLC

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Laboratory Test Report

Report for:	Leonel Aarón Borja Alemán Aircrete Mexico Calle 3, Número 7 Parque, Industrial PLATAH Villa of Tezontepec Hidalgo, 43880
Product Name(s):	Aircrete (AAC)
Project No.:	2351T0007.02
Date(s) Tested:	Sept. 28th, 2021 - April 15th, 2022
Test Methods:	ASTM C1693
Results Summary:	See Results Table herein

Purpose: Evaluate the compressive strength, dry bulk density, and compression modulus of elasticity of Aircrete Mexico's, autoclaved aerated concrete per the methods described in ASTM C1693 Standard Specification for Autoclaved Aerated Concrete (AAC).

Test Methods: Testing was conducted in accordance with ASTM C1693-11(2017) Standard Specification for Autoclaved Aerated Concrete (AAC). Test methods assigned or referenced include ASTM E4 Standard Practices for Force Calibration and Verification of Testing Machines.

Sampling: The following materials were received by PRI via client drop-off.

Product	Source	Date	Sampling
Aircrete (AAC)	Villa of Tezontepec Hidalgo, Mexico	Aug. 19th, 2021 Feb. 14th, 2022	Aircrete Mexico

Sample Description:

Manufacturing Date:	August 5th, 2021
Age:	25 days Density/Modulus of Elasticity, 253 days Compression
Finishing Type:	Without Finishing
Curing:	Autoclave Process
Mixing:	General Mixture contained in Appendix A

Testing Location: Testing was conducted at PRI-CMT located in Tampa, FL. Verification of testing instrumentation was performed by either an ISO accredited calibration laboratory or by a PRI-CMT representative in compliance with PRI-CMT In-House quality control program governed by ISO/IEC 17025-17.

Test Results: Conditions at beginning of testing 22°C (73°F) with 50% Rh.

Table 1: ASTM C1693

Physical Properties	Test Method	Results					Requirment[1]
Compressive Strength 3 Samples 4"x4"x4"; Test @ 73.4±3.6°F & 50±5%RH;	ASTM C1693 Sec. 6	1	2	3	**Avg.**	St. Dev.	
Moisture Content (%)		6.3	6.1	5.4	**5.9**	0.5	Report
Compressive Strength (psi)		640	600	530	**590**	56	Report
Dry Bulk Density (lb/ft^3) 3 Samples Condition 48hrs @ 100C; Test @ 73.4±3.6°F & 50±5%RH	ASTM C1693 Sec. 7	1	2	3	**Avg.**	St. Dev.	
Dry Bulk Density (lb/ft^3)		30.0	30.5	29.7	**30.4**	0.7	Report
Compressive Modulus of Elasticity 3 Samples 4"x4"x8"; Test @ 73.4±3.6°F & 50±5%RH;	ASTM C1693 Sec. 8	1	2	3	**Avg.**	St. Dev.	
Length (in)		3.95	3.94	3.98	**3.97**	0.02	Report
Depth (in)		3.99	3.99	3.94	**3.95**	0.02	Report
Ultimate Load (lb$_f$)		12822	12880	9538	**11747**	1913	Report
E_c - Modulus of Elasticity (psi)		404651	231815	344294	**326920**	87718	Report

Notes: 1: Samples met requirements for an AAC-4 Strength Class.

Statement of Attestation:

The material was evaluated in accordance with ASTM C1693-11(2017) Standard Specification for Autoclaved Aerated Concrete (AAC). The laboratory test results presented in this report are representative of the material supplied.

Signed: _____

Timothy Efaw - Manager

Date: 05/10/2022

Signed: _____

Zachary Priest – PE Director

Date: 05/16/2022

Report Issue History:

Issue #	Date	Pages	Revision Description (if applicable)
Original	04/15/2022	2	NA
Revision 1	05/09/2022	All	Added Sample Description
Revision 2	05/10/2022	All	Added PE Seal

APPENDIX FOLLOWS…

General Mixture – (Provided by Client)

Mixture parameters	
Density of design (490 kg/m3)	kg/m3
Cement	108
Lime (available CaO ˜87 scada)	81.4
Gypsum	25.3
Additive (lt)	0.46
Fresh mud (.= 1,7kg/m3)	371
Silica sand on fresh sludge	244.8
Return sludge (20,3%) (.= 1,4kg/m3) dry	124.4
Total water	379.7
Aluminum 19F 75% / 7004 25%	0.3
Soap	0.07

END OF REPORT