Test Data Summary

Complete test results available at omniblock.com > support > testing

ASTM C 90-06 Standard Specification for Loadbearing Concrete Masonry Units

Unit Strength Method per Section 1.4.B.2.b of Specifications for Masonry Structures
(ACI 530.1-05 / ASCE 6-05 / TMS 602-05)
Net Area Compressive Strength 8x8x16 tested at 2890 psi
Net Area Compressive Strength when Type M or S mortar is used: 2050 psi
Both values can be compared directly to the specified compressive strength of masonry f'_m
If these values exceed f'_m compliance has been documented

ASTM C 140 Standard Test Methods for Sampling and Testing

Physical Property	Required Values	Tested Values
Minimum Faceshell Thickness (t_{fs})	1.25 min.	1.30 in.
Minimum Web Thickness (t_w)	1.00 min.	1.56 in.
Equivalent Web Thickness	2.25 min.	2.40 in.
Equivalent Thickness	-----	4.42 in.
Variance from Specification Dimensions	.125 max.	.112 in.
Gross Cross-Sectional Area	-----	119.9 in^2
Percent Solid	-----	57.7 %

ASTM E 90 Sound Transmission

Outdoor / Indoor Transmission Class (OITC) tested 42

ACI 216.1-97 / TMS 0216.1-97 Std Method for Determining Fire Resistance of Masonry Assemblies

The calculated fire rating resulted in 2.7 hours

ASTM C 578-95 Standard Specification for Preformed Cellular Polystyrene Thermal Insulation

The tested material met all the required values for all tests as identified in ASTM Standard C 578

ASTM C 518 Thermal Transmission Properties by Means of Heat Flow Meter Apparatus

The average R value of 3.914 exceeds the minimum of 3.60 at 75° F mean temperature for TYPE I material

ASTM Standard D 1621 Compressive Properties of Rigid Cellular Plastics

The average values of 15.62 psi and 16.65 psi for the two inserts exceed the minimum of 10.0 psi for TYPE I material

ASTM Standard C 203 Breaking Load and Flexural Properties of Block-Type Insulation

The average value of 32.92 psi flexural strength exceeds the minimum requirement of 25.0 psi for TYPE I material

ASTM Standard D 2863 Oxygen Index

The average tested value passed the minimum requirement for TYPE I material

ASTM E 96-95 Water Vapor Transmission of Materials

TYPE I maximum permeability per C 578 is 5.0 perms / The average value of 4.836 meets this requirement

ASTM C 272-91 Water Absorption for Core Materials of Structural Sandwich Constructions

TYPE I allowable increase in volume per ASTM C 578 is 4.0% max. The average value of 1.67 meets this requirement

ASTM D 2126-94 Response of Rigid Cellular Plastics to Thermal and Humid Aging

TYPE I allowable change in dimensions per ASTM C 578 is 2% max. The tested material meets this requirement

ASHRAE / IES Standard 90.1 Envelope System Performance

The equivalent R value of 24.6 was attained for the 8" insulated concrete block system

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