



# SOLAR TESTING LABORATORIES, INC.

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## HYDRAULIC PRESS BRICK COMPANY C330 EVALUATION

STL File No. A02597x12  
 Report No. 0005

October 31, 2002

Samples of "C" (1/2-inch x #4), "A" (4 x 0), "B" (3/8-inch x #8) and "B X" (3/8-inch by 0) Haydite were obtained from the Hydraulic Press Brick plant in Brooklyn, Indiana, for material analyses in accordance with Specifications ASTM C330, C331, and C332. The test results are as follows:

### AGGREGATE ANALYSIS

Sieve Size	% Passing (Passing Specification)			
	"A" Haydite	"BX" Haydite	"B" Haydite	"C" Haydite
3/4"	---	---	---	100.00 (100)
1/2"	---	100.00 (100)	100.00 (100)	96.67 (90-100)
3/8"	100.00 (100)	100.00 (90-100)	100.00 (80-100)	74.30 (40-80)
#4	99.00 (85-100)	85.00 (65-90)	30.50 (5-40)	12.40 (0-20)
#8	81.50	64.90 (35-65)	9.80(0-20)	2.50(0-10)
#16	59.60 (40-80)	46.70	6.00(0-10)	1.40
#30	38.20	31.30	4.70	1.00
#50	21.60 (10-35)	18.40 (10-25)	4.00	0.70
#100	12.90 (5-25)	10.40 (5-15)	3.40	0.60
Fineness Modulus	2.87	3.43	5.42	6.10
Loose Unit Weight (Dry), pcf	56.40 (70 max)	56.40 (65 max)	41.60 (55 max)	37.60 (55 max)
Loose Unit Weight (Damp), pcf	50.00	53.20	42.40	40.00
Rodded Weight (Dry), pcf	63.00	62.80	43.80	41.20
Rodded Weight (Damp), pcf	59.40	60.80	48.40	43.00
Organic Impurities	Lighter than standard (Standard)	Lighter than standard (Standard)	---	--
% Loss, Sodium Sulfate Soundness (5 Cycles)	3.40	3.00	1.40	1.04
% Loss on Ignition (Dry Basis)	0.29 (5 max)	0.79 (5 max)	0.17 (5 max)	0.21 (5 max)
% Clay Lumps	0.39 (2 max)	0.39 (2 max)	0.16 (2 max)	0.15 (2 max)
Staining Index	0.00	0.00	0.00	0.00

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Description	"C" Haydite and Concrete Sand	"A" and "C" Haydite	"B" Haydite and Concrete Sand
<b>Concrete Mix Proportions Mix Design)</b>			
Cement Type I, Sack	6.00	6.00	6.00
Jefferson Sand, ft <sup>3</sup>	14.00	---	14.00
"A" 4 x 0 Haydite, ft <sup>3</sup>	---	18.00	--
"B" 3/8" x #8 Haydite, ft <sup>3</sup>	---	---	17.50
"C" 1/2" x #4 Haydite, ft <sup>3</sup>	17.50	14.00	--
MB Micro Air, oz/cwt	0.50	0.25	0.50
Water, gal/bag	5.30	6.52	4.92
Slump, in	2.70	2.50	2.50
Air, %	7.00	6.00	6.00
Equilibrium Weight (ASTM C567), pcf	104.90	88.60	107.90
Air Dr Weight (28-Day), pcf	107.40	90.10	111.10
Specification (Maximum), pcf	115.00	110.00	115.00
<b>Compressive Strength, psi</b>			
7-Day Test	3,715	2,834	3,302
7-Day Test	3,015	2,544	3,435
7-Day Test	3,694	2,706	3,447
<b>Average of 3 Tests</b>	<b>3,475</b>	<b>2,695</b>	<b>3,395</b>
28-Day Test	4,842	3,934	4,625
28-Day Test	4,664	3,792	4,514
28-Day Test	4,615	3,884	4,457
<b>Average of 3 Tests</b>	<b>4,707</b>	<b>3,870</b>	<b>4,532</b>
<b>Tensile Splitting Strength (ASTM C496), psi</b>			
28-Day Test	315	333	274
28-Day Test	374	272	241
28-Day Test	377	283	359
28-Day Test	361	242	459
28-Day Test	386	208	371
28-Day Test	302	329	331
28-Day Test	407	259	327
28-Day Test	316	285	390
<b>Average of 8 Tests</b>	<b>355</b>	<b>276</b>	<b>344</b>
<b>Modulus of Elasticity (ASTM C469)</b>			
<b>Average of 2 Cylinders</b>	<b>2,350,000</b>	<b>2,030,000</b>	<b>2,350,000</b>
<b>Shrinkage (ASTM C330)%</b>			
35 Days (Specification: 0.07% Maximum)	0.055	0.043	0.061

These test results meet ASTM C330 specifications for lightweight aggregates. If you have any questions, please feel free to contact our office.

TECHNICIAN: DONALD HOLLENBAUGH

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