



SOLAR TESTING LABORATORIES, INC.

1125 Valley Belt Road, Brooklyn Heights, OH 44131
 (216) 741-7007 Fax (216) 741-7011

NORLITE CORPORATION C330 EVALUATION

STL File No. A08507x12
 Report No.

November 24, 2008

Samples of Norlite were delivered to this laboratory 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)			
	3/4 Norlite	3/8 Norlite	Norlite Block Mix	Norlite Fines
1"	100.0 (100)	---	---	---
3/4"	100.0 (90-100)	---	---	---
1/2"	73.6	100.0 (100)	---	---
3/8"	33.5 (10-50)	99.3 (80-100)	100.0 (100)	100.0 (100)
#4	5.3 (0-15)	36.9 (5-40)	94.9 (85-100)	100.0 (85-100)
#8	2.4	12.2 (0-20)	70.4	89.3
#16	1.7	6.7 (0-10)	44.2 (40-80)	46.3 (40-80)
#30	1.5	4.6	27.1	24.4
#50	1.2	3.7	15.6 (10-35)	13.5 (10-35)
#100	1.0	3.0	8.6 (5-25)	8.6 (5-25)
#200	0.8 (0-10)	2.5 (0-10)	5.1	6.5

Fineness Modulus	6.80	5.34	3.39	3.18
Loose Unit Weight (Dry), pcf	41.90 (55 max)	44.90 (55 max)	55.00 (70 max)	53.00 (70 max)
Loose Unit Weight (Damp), pcf	46.80	50.00	59.50	51.20
Organic Impurities	---	---	Lighter than standard (Standard)	Lighter than standard (Standard)
% Loss, Sodium Sulfate Soundness (5 Cycles)	1.10	1.70	2.40	2.30
% Loss on Ignition (Dry Basis)	0.00 (5 max)	0.00 (5 max)	0.20 (5 max)	0.11 (5 max)
% Clay Lumps	0.12 (2 max)	0.15 (2 max)	0.00 (2 max)	0.00 (2 max)
Staining Index	0.00	20.00	0.00	0.00

Description	3/4 Norlite and Concrete Sand	3/8 Norlite and Concrete Sand
Concrete Mix Proportions (Mix Design)		
Cement Type 1, lb.	564	564
Lafarge Brugmann Sand, lb.(SSD)	1510	1560
3/4 Norlite, lb. (SSD)	862	---
3/8 Norlite, lb. (SSD)	---	800
Euco Air, oz/cwt	0.50	0.25
Water, lb./gal.	245/29.4	312/37.5
Slump, in	3.25	3.50
Air, %	5.25	5.75
Oven –dry Weight (ASTM C567), pcf	108.40	109.50
Approximate Equilibrium Weight (ASTM C567), pcf	111.40	112.50
Measured Equilibrium Weight (ASTM C567), pcf	Will report when completed	Will report when completed
Specification (Maximum), (28 day), pcf	115.00	115.00
Compressive Strength, psi		
7-Day Test	3,037	4,081
7-Day Test	3,226	3,734
7-Day Test	3,151	3,619
Average of 3 Tests	3,138	3,811
28-Day Test	5,034	4,698
28-Day Test	5,193	4,834
28-Day Test	5,221	4,829
Average of 3 Tests	5,149	4,787
Specification (Minimum), psi	4,000	4,000
56-Day Test	5,404	5,541
56-Day Test	5,530	5,403
56-Day Test	5,089	5,217
Average of 3 Tests	5,341	5,387
Tensile Splitting Strength (ASTM C496), psi		
28-Day Test	427	389
28-Day Test	352	356
28-Day Test	345	290
28-Day Test	337	386
28-Day Test	399	315
28-Day Test	477	378
28-Day Test	334	348
28-Day Test	287	406
Average of 8 Tests	370	359
Specification (Minimum), pcf	330	330
Modulus of Elasticity (ASTM C469)		
Average of 2 Cylinders	2,423,000	2,510,000
Shrinkage (ASTM C330), %		
35 Days (Specification: 0.07 Maximum)	0.041	0.030

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

SOLAR TESTING LABORATORIES, INC.

George J. Ata, P.E., President