

To: United Brick & Tile
Division of Sioux City Brick & Tile Company
Attn: Kurt Hansen
PO Box 160
Adel, IA 50003

Date: August 27, 2010
Rev. Date: September 14, 2010
Project: TCT004225P
Report No.: TCT004225P rev

Revision: Addition of Flashed Utility Group listing.

REPORT OF TESTS ON: Clay Brick – Mountain Shadow (Smooth); 12" Utility RDB
SUBMITTED BY: _____
MARKED: _____
SAMPLED: _____
DATE RECEIVED: 08/17/2010
DATE TESTED: 08/17/2010 to 08/27/2010 BY: MJ

The specimens tested are representative of the following group:

Flashed Utility Group:	Badlands*	Black Hills*	Black Walnut*	Coppertone*
	Doeskin*	Ebonite*	Fine Art*	Grand Canyon*
	Gunsmoke 1	Mountain Shadow*	Ponderosa 1	Russet 1
	Sienna*	Toasted Fine Art*	Toasted Grand Teton*	
	Vintage Brown*	Prairie Sunset	Western Black Walnut 1	
	Tahoe 1			

* denotes various textures

1 indicates FBS

The above specimens were tested in accordance with Standard Methods of Testing Brick, ASTM C67-07a, for compliance with ASTM C-216-07a.

Compressive Strength:

Sample No.	Width, In.	Depth, In.	Gross Area, sq.in.	Gross Load, Lbs.	Compressive Strength	
					PSI	Mpa
1	3.64	3.68	13.40	224,500	16,750	115
2	3.64	3.74	13.61	197,700	14,530	100
3	3.63	3.73	13.54	231,100	17,070	118
4	3.62	3.69	13.36	179,700	13,450	93
5	3.63	3.83	13.90	246,700	17,750	122
Average	---	---	---	---	15,910	110

Absorption:

Sample No.	Cold Water Immersion 24 Hr. % Absorption	% Absorption, 5 Hr. Boiling	Saturation Coefficient
1	3.0	3.6	0.85
2	2.9	3.4	0.85
3	2.8	3.3	0.87
4	3.2	3.7	0.88
5	2.9	3.3	0.86
Average	3.0	3.5	0.86

ASTM Efflorescence Test:

Sample No.	Sample Rating
6	Not Effloresced
7	Not Effloresced
8	Not Effloresced
9	Not Effloresced
10	Not Effloresced
Average	Not Effloresced

Initial Rate of Absorption (Suction):

Sample No.	Initial Rate of Absorption (Suction) Gain in Weight (gms) Corrected to Basis of 30 Sq. In. Flatwise Area (193.55 CM ²)
1	2.1
2	1.9
3	1.9
4	1.9
5	2.1
Average Open Area: 10.09 In. ² / (65.10 CM ²) – 76.2% of Gross Area	

Length:

Sample No.	Average Length		Deviation From Group Average	
	Inches	MM	Inches	MM
1	11.64	295.7	-0.04	-1.016
2	11.62	295.1	-0.06	-1.524
3	11.63	295.4	-0.05	-1.270
4	11.68	296.7	-0.00	-0.00
5	11.64	295.7	-0.04	-1.016
6	11.73	297.9	+0.05	+1.270
7	11.72	297.7	+0.04	+1.016
8	11.75	298.5	+0.07	+1.778
9	11.72	297.7	+0.04	+1.016
10	11.66	296.2	-0.02	-0.508
Group Average	11.68	296.7	---	---

Width:

Sample No.	Average Height		Deviation From Group Average	
	Inches	MM	Inches	MM
1	3.64	92.5	+0.01	+0.254
2	3.64	92.5	+0.01	+0.254
3	3.63	92.2	+0.00	+0.000
4	3.62	91.9	-0.01	-0.254
5	3.63	92.2	-0.00	-0.000
6	3.65	92.7	+0.02	+0.508
7	3.64	92.5	+0.01	+0.254
8	3.66	93.0	+0.03	+0.762
9	3.62	91.9	-0.01	-0.254
10	3.61	91.7	-0.02	-0.508
Group Average	3.63	92.3	---	---

Height:

Sample No.	Average Width		Deviation From Group Average	
	Inches	MM	Inches	MM
1	3.58	90.9	-0.02	-0.508
2	3.58	90.9	-0.02	-0.508
3	3.59	91.2	-0.01	-0.254
4	3.59	91.2	-0.01	-0.254
5	3.59	91.2	-0.01	-0.254
6	3.62	91.9	+0.02	+0.508
7	3.60	91.4	+0.00	+0.00
8	3.62	91.9	+0.02	+0.508
9	3.59	91.2	-0.01	-0.254
10	3.59	91.2	-0.01	-0.254
Group Average	3.60	91.3	---	---

Distortion (Warpage):

Sample No.	Maximum Distortion	
	Inches	MM
1	0.03	0.762
2	0.04	1.016
3	0.03	0.762
4	0.03	0.762
5	0.02	0.508
6	0.04	1.016
7	0.03	0.762
8	0.04	1.016
9	0.04	1.016
10	0.02	0.508

Out of Square:

Sample No.	Inches	MM
1	0.03	0.762
2	0.05	1.270
3	0.03	0.762
4	0.05	1.270
5	0.03	0.762
6	0.06	1.524
7	0.03	0.762
8	0.05	1.270
9	0.03	0.762
10	0.06	1.270

The above brick **COMPLY** with the physical test requirements of ASTM C216-07a, Grade / Type SW/FBX.

Respectfully submitted,
STORK Twin City Testing,



Michael D. Jordt
Senior Engineering Technician

MJ:lam
1 pc above