



SMITH-EMERY LABORATORIES

An Independent Commercial Testing Laboratory, Established 1904

781 E. Washington Boulevard Los Angeles, California 90021 ♦ (213) 749-3411 ♦ Fax (213) 741-8626

**Revised & Reissued December 1, 2005*

November 18, 2005

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Proj. No.: 35591-1
Lab No.: T-05-193A

Client : **BLANKE CORPORATION**
ATTN: JOE LINZMEYER
3631 CLEARVIEW PARKWAY
ATLANTA GA 30340

Subject: **Ceramic Floor Tile Installation Evaluation for *PERMAT Underlayment.**
Specification : ASTM C 627
Source : Submitted to Laboratory by Client.

Sample Description

Joists: 2 x 4 s at 24 inches on center
Plywood: *3/4 inch Single Layer Plywood
Mortar: Laticrete Multi Purpose Thin Set Mortar 254 Platinum White (Blanco) mixed with water and using a 1/4 inch by 3/16 inch Trowel V-Notch
Underlayment: ***BLANKE PERMAT**
Mortar: Laticrete Multi Purpose Thin Set Mortar 254 Platinum White (Blanco) mixed with water and using a 1/4 inch by 3/16 inch Trowel U-Notch
Tiles: 12 inch x 12 inch x 3/8 inch Porcelain Tiles St. John Blanco (Ceramica Magica) Made in Italy
Grout: Laticrete Tri Poly Fortified Sanded Grout 1500 Series mixed with Laticrete Grout Admix Plus 1776 with Microban

REPORT OF TESTS

Setting

No. of Tile on Wheel Path:	12
No. of Grout Joints on Wheel Path:	12

Date Tested: Start: September 27, 2005: 9:30 AM
Finish: September 29, 2005: 10:00 AM

a.) Soft Rubber Wheels

Cycle Number:	1	2	3	4	
Total Weight per Wheel:	100 lbs.	200 lbs.	300 lbs.	300 lbs.	
Cycle Duration, hr.:	1 hour	1 hour	1 hour	1 hour	
Total No. of Revolution:	900	900	900	900	
Deflection Movement	Intl Deflection	.000	-.012	-.026	-.027
	Start of Cycle	-.009 +.009	-.021 - .023	-.033 -.010	-.034 -.011
	End of Cycle	.000	-.014	-.027	-.028

Maximum Allowable Damage

<u>Record of Damage:</u>	1	2	3	4	Maximum Allowable Damage
Chipped Tile	none	none	none	none	5%
Broken Tile	none	none	none	none	3%
Loose Tile	none	none	none	none	3%
Popped-Up Grout Joint	none	none	none	none	5%
Cracked Grout Joint	none	none	none	none	5%
Powdered Grout Joint	none	none	none	none	5%

DEC 1 2 2005



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b.) Hard Rubber Wheels

Cycle Number:	5	6	7	8	
Total Weight per Wheel:	100 lbs.	200 lbs.	300 lbs.	300 lbs.	
Cycle Duration, hr.:	1 hour	1 hour	1 hour	1 hour	
Total No. of Revolution:	900	900	900	900	
Deflection Movement	Intl Deflection	-.027	-.014	-.025	-.029
	Start of Cycle	-.005 +.007	-.027 +.007	-.044 -.002	-.046 -.002
	End of Cycle	-.000	-.015	-.029	-.030

Maximum Allowable Damage

Record of Damage:

	5	6	7	8	Maximum Allowable Damage
Chipped Tile	none	none	none	none	5%
Broken Tile	none	none	none	none	3%
Loose Tile	none	none	none	none	3%
Popped-Up Grout Joint	none	none	none	none	5%
Cracked Grout Joint	none	none	none	none	5%
Powdered Grout Joint	none	none	none	none	5%

c.) Steel Wheels

Cycle Number:	9	10	11	12	13	14	
Total Weight per Wheel (lbs):	50	100	150	200	250	300	
Cycle Duration, (min)	30	30	30	30	30	30	
Total No. of Revolution:	450	450	450	450	450	450	
Deflection Movement	Intl Deflection	.000	-.009	-.019	-.027	-.027	-.027
	Start of Cycle	-.009 +.009	-.021 -.023	-.033 -.010	-.034 -.011	-.034 -.011	-.034 -.011
	End of Cycle	.000	-.014	-.027	-.028	-.028	-.028

Maximum Allowable Damage

Record of Damage:

	9	10	11	12	13	14	Maximum Allowable Damage
Chipped Tile	none	none	none	none	none	none	5%
Broken Tile	none	none	none	none	none	none	3%
Loose Tile	none	none	none	none	none	none	3%
Popped-Up Grout Joint	none	none	none	none	none	none	5%
Cracked Grout Joint	none	none	none	none	none	none	5%
Powdered Grout Joint	none	none	none	none	none	none	5%

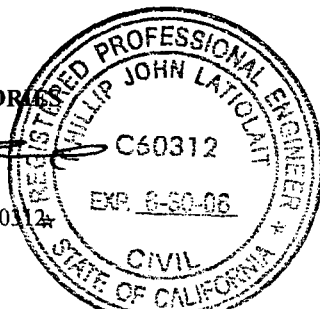
With these results, the floor system can be classified as **HEAVY INDUSTRIAL** (passing 1 to 14th cycle) as per TCA Installation Handbook.

Remarks: Since this is a simulated 2nd floor 3/4" EGP Plywood installation, concern about real application such as Heavy Equipment (forklift) usage might not produce the same results. Smith-Emery is limited to the results of the tested

Respectfully Submitted,

SMITH - EMERY LABORATORIES

P. John Latiolait
Registered Civil Engineer No.: C60312
Registration Expires: 6-30-06



- Materials Tested Comply With Specifications.
- Materials Tested Did Not Comply With Specifications.
- No Established Criteria for Acceptable Limits.
- For Information Purposes Only

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