Osborne LABORATORIES, INC.
12060 CLARK STREET / SANTA FE SPRINGS, CALIFORNIA 90670
(213) 685-7981 / (213) 944-6435 / (714) 523-1941

Report to: Miracle Sealants Company
9060 Telstar Avenue, Suite 203
El Monte, Ca 91731

Subject: TABOR ABRASION AND ABSORPTION TEST ON QUARRY TILE

Laboratory Number: T6-10-090 CORRECTED REPORT revised 2/13/87

Date: October 30, 1986

Specification: ASTM C 373 and ASTM C 501

At the request of Mr. Russ Magnuson of Miracle Sealant Company we performed abrasion tests per ASTM C 501 and absorption tests per ASTM C 373 on quarry tile samples delivered to our laboratory on October 27, 1986. Three quarry tiles manufactured by Texeramics Tile, Mineral Wells, Texas of the same lot were submitted for evaluation. Two of the tiles marked S-1 and S-2 were treated with Miraseal 511 Impregnator, the third tile was untreated.

Test results are as follows:

| Procedure | Sample I.D. Untreated | Treated S-1 | Treated S-2 | Average S-1 & S-2 | Percent Improvement |
|---|---|---|---|---|---|
| 1. Absorption (% by weight) (prior abrasion test) | 2.61 | 0.99 | 1.30 | 1.14 | 56% reduction |
| 2. Abrasive Wear Index (Smaller number indicates greater wear) | 49 | 63 | 88 | 75.5 | 54% reduction |
| 3. Absorption (% by weight) after abrasion | 3.03 | 1.34 | 1.45 | 1.395 | 54% reduction |
| 4. Absorption (% by weight) of Single Surface after abrasion without boiling | 2.05 | 0.04 | 0.15 | 0.095 | 95% reduction |

continued

The improvement in absorption percentage is calculated by subtracting average treated values from the untreated value, and dividing this differences by the untreated value, and multiplying this quotient by 100.

The reduction in wear percentage is computed by dividing the difference of average treated and untreated values by the untreated value, and multiplying the quotient by 100.

The opportunity to be of service to you is sincerely appreciated. If you have any questions regarding this matter, or if we may be of further assistance, please call.

Very truly yours,
OSBORNE LABORATORIES, INC.

Karl T. Blaufuss, PE # C16501
Certificate expires June 30, 1989

KTB/crs:2
60251

SMITH-EMERY COMPANY
*The Full Service Independent Testing Laboratory, Established 1904*

File No.: 14686
Lab. No.: L-87-2786

December 17, 1987

**REVISED**

SUBJECT: A - 6 1/4" x 6 1/4" x 3/8 Unglazed Paver Tile, Salmon
B - 6 1/8" x 6 1/8" x 3/8" Unglazed paver Tile, Salmon

SPECIFICATION: ASTM C 373

SOURCE: Submitted to Laboratory by Client.

## SURFACE WATER ABSORPTION

Samples were weighed as received, then were prepared to accomodate water on top surface only. Distilled water was left to stand for 24hrs., thenwere wiped dry and samples were immediately reweighed.

| Sample No. | Dry Weight grams | Wet Weight grams | Percent Water Absorption |
|---|---|---|---|
| A. Untreated 1 | 565.6 | 576.6 | 1.94% |
| Untreated 2 | 564.2 | 577.1 | 2.29% |
| Untreated 3 | 566.2 | 577.9 | 2.07% |
| | | | ***Ave. : 2.10%*** |
| B. Treated 1 | 494.3 | 495.5 | 0.24% |
| Treated 2 | 496.8 | 498.2 | 0.28% |
| Treated 3 | 493.9 | 495.3 | 0.28% |
| | | | ***Ave. : 0.27%*** |

Respectfully Submitted,
SMITH - EMERY COMPANY
Donald W. Kaufmann, P.E.
Quality Engineer No. 3882

cc:
Miracle Sealants
9060 Telstar Ave, Suite 203
El Monte, Calif. 91731

781 East Washington Boulevard
Los Angeles, California 90021
(213) 749-3411

Hunter's Point Shipyard
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**SMITH-EMERY COMPANY**
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File No.: 26441
Lab No.: T-93-136 G

May 19, 1993

*Reference P.O. No. : 002240*

**MIRACLE SEALANTS AND ABRASIVES CO.**
**12806 Schabarum Avenue, Building A**
**Irwindale, CA. 91706**

Subject : 12" x 12" Polished Marble "White Venatino" - Treated with 511 Porous Plus

Test Method : ASTM E 96-90 Water Vapor Transmission of Materials.

Source : Submitted to Laboratory by Client.

**WATER VAPOR TRANSMISSION (ASTM E 96-90 Practice)**

*(Adapted : Distilled Water Method)*

Tile samples were treated and conditioned as specified, then placed over the container and sealed along the perimeter with non-absorbent material. the assembly then was immediately weighed, avoiding any contact with the water inside and the test specimen. Treated surface of the tile was exposed to the atmosphere. All weighing were done in a room maintained at 70°F (±5°F) and 50% relative humidity (±5%R.H.). Treatment was cured for 72 hours prior conducting test.

*Results :*

Weight Loss After 72 Hours : 1.20 grams *(1gram = 15.43grains)*
Area Exposed : 0.625 sq.ft.
Grain/Hour (Rate) : (1.20 x 15.43)/72 = 0.257 G/hr.
Water Vapor Transmission = Rate x Area = 0.257 x 0.625

= **0.161 Grains / Hr. * sq.ft.**

*Total weigth of assembly = 4803.5 grams*

*Respectfully Submitted,*
**SMITH-EMERY COMPANY**

Edward C. Trasoras
Registered Civil Engineer No. 44233
Registration Expires : 6-30-93

rc

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File No.: 23593
Lab. No.: T-92-069

May 5, 1992

**MIRACLE SEALANT CO.**
16011 W. Foothill Blvd.
Azusa, CA 91702

SUBJECT: 8" x 8" American Olean Tile (Treated & Untreated)

SPECIFICATION: ASTM C 1028-89

SOURCE: Submitted to Laboratory by Client

Treated By: Nashat Morcos (SECO)

TREATMENT: 511 Impregnator.

## *Report of Test*

## STATIC COEFFICIENT OF FRICTION (ASTM C 1028-89)

A block of wood with a 3" x 3" x 1/8" section of standard neolite cement liner attached was placed on the surface to be tested. A 50 pound (22kg) weight was placed on the block of wood. Using a dynamometer, the force in pounds required to cause the test assembly to slip parallel to the test surface was measured. Four measurements were taken on each of three test surfaces, each measurement perpendicular to the previous one. The twelve measurements were averaged to obtain the coefficient of friction for each test condition.

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5427 East La Palma Avenue • Anaheim, California 92807 • (714) 693-1026 • Fax: (714) 693-1034



Subject: 8" x 8" American Olean Tile (Treated & Untreated)

## A. Initial Condition

| Test Conditions | Tile Mark | N | E | S | W | Average | INDIVIDUAL STATIC COEFFICIENT OF FRICTION (fc) | |
|---|---|---|---|---|---|---|---|---|
| **Dry Neolite** | UN | 39 | 37 | 35 | 36 | *36.75* | *0.72* | *(0.72)* |
| | TR | 47 | 48 | 45 | 46 | *46.50* | *0.91* | *(0.91)* |
| **Wet Neolite** | UN | 40 | 39 | 40 | 37 | *39.00* | *0.76* | *(0.73)* |
| | TR | 40 | 42 | 40 | 41 | *40.75* | *0.80* | *(0.77)* |

## B. After Cleaning with Hillyards Renovator

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Dry Neolite** | UN | 40 | 38 | 39 | 41 | *39.50* | *0.77* | *(0.77)* |
| | TR | 48 | 49 | 48 | 48 | *48.25* | *0.94* | *(0.94)* |
| **Wet Neolite** | UN | 41 | 40 | 40 | 40 | *40.25* | *0.79* | *(0.76)* |
| | TR | 42 | 43 | 42 | 41 | *42.00* | *0.82* | *(0.79)* |

*( ) Neolite correction factor applied.*

***Respectfully Submitted,***
SMITH-EMERY COMPANY

Edward C. Trasoras
Registered Civil Engineer No. 44233
Registration Expires: 6-30-93

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File No.: 26441
Lab. No.: T-94-169 A

August 12, 1994

**MIRACLE SEALANTS & ABRASIVES COMPANY**
12803 Schabarum Ave., Bldg. A
Irwindale, CA. 91706

SUBJECT: 6-1/4" x 6-1/4" White Ceramic Tile
Mannington, Made in USA
**Not Treated**

SPECIFICATION: ASTM C 1028-89
SOURCE: Delivered by Client (7-27-94)

**STATIC COEFFICIENT OF FRICTION (ASTM C 1028-89)**

A block of wood with a 3" x 3" x 1/8" section of standard neolite cement liner attached was placed on the surface to be tested. A 50 pound (22kg) weight was placed on the block of wood. Using a dynamometer, the force in pounds required to cause the test assembly to slip parallel to the test surface was measured. Four measurements were taken on each of three test surfaces, each measurement perpendicular to the previous one. The twelve measurements were averaged to obtain the coefficient of friction for each test condition.

**A. As Received**

| *Test Conditions* | *Tile No.* | *N* | *E* | *S* | *W* | *Average* | *Individual Static Coefficient of Friction (fc)* | *After Neolite Correction Factor* |
|---|---|---|---|---|---|---|---|---|
| **Dry Neolite** | 1 | 38 | 38 | 37 | 38 | *37.33* | *0.73* | *(0.74)* |
| | 2 | 36 | 38 | 35 | 38 | | | |
| | 3 | 39 | 37 | 36 | 38 | | | |
| **Wet Neolite** | 1 | 26 | 24 | 26 | 25 | *25.25* | *0.49* | *(0.46)* |
| | 2 | 25 | 24 | 26 | 26 | | | |
| | 3 | 26 | 24 | 25 | 26 | | | |

**B. After Cleaning with Hillyards Renovator**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Dry Neolite** | 1 | 38 | 36 | 38 | 36 | *36.75* | *0.72* | *(0.73)* |
| | 2 | 35 | 37 | 38 | 36 | | | |
| | 3 | 38 | 36 | 37 | 36 | | | |
| **Wet Neolite** | 1 | 26 | 24 | 26 | 26 | *25.25* | *0.49* | *(0.46)* |
| | 2 | 25 | 26 | 24 | 26 | | | |
| | 3 | 25 | 26 | 25 | 24 | | | |

*Respectfully Submitted,*
**SMITH-EMERY COMPANY**

Edward C. Trasoras
Registered Civil Engineer, No. 44233
Registration Expires: 6-30-97
*ECT/rl*

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File No. : 26441
Lab. No. : T-94-169 B

August 12, 1994

**MIRACLE SEALANTS & ABRASIVES COMPANY**
12805 Schabarum Street
Irwindale, CA. 91706

SUBJECT : 6-1/4" x 6-1/4" White Ceramic Tile
Mannington, Made in USA
**Treated** ( 511 Impregnator )

SPECIFICATION : ASTM C 1028-89
SOURCE : Delivered by Client ( 7-27-94 )

**STATIC COEFFICIENT OF FRICTION (ASTM C 1028-89)**

A block of wood with a 3" x 3" x 1/8" section of standard neolite cement liner attached was placed on the surface to be tested. A 50 pound (22kg) weight was placed on the block of wood. Using a dynamometer, the force in pounds required to cause the test assembly to slip parallel to the test surface was measured. Four measurements were taken on each of three test surfaces, each measurement perpendicular to the previous one. The twelve measurements were averaged to obtain the coefficient of friction for each test condition.

**A. As Received**

| Test Conditions | Tile No. | N | E | S | W | Average | Individual Static Coefficient of Friction (fc) | After Neolite Correction Factor |
|---|---|---|---|---|---|---|---|---|
| Dry Neolite | 1 | 46 | 48 | 46 | 45 | 46.67 | 0.91 | (0.92) |
| | 2 | 46 | 47 | 46 | 48 | | | |
| | 3 | 48 | 48 | 47 | 45 | | | |
| Wet Neolite | 1 | 26 | 27 | 26 | 28 | 26.08 | 0.51 | (0.48) |
| | 2 | 28 | 26 | 26 | 25 | | | |
| | 3 | 26 | 25 | 25 | 25 | | | |

**B. After Cleaning with Hillyards Renovator**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Dry Neolite | 1 | 48 | 46 | 45 | 45 | 45.75 | 0.89 | (0.90) |
| | 2 | 44 | 45 | 46 | 46 | | | |
| | 3 | 46 | 47 | 46 | 45 | | | |
| Wet Neolite | 1 | 29 | 28 | 29 | 29 | 27.92 | 0.54 | (0.51) |
| | 2 | 28 | 28 | 27 | 28 | | | |
| | 3 | 28 | 28 | 27 | 26 | | | |

*Respectfully Submitted,*
**SMITH-EMERY COMPANY**

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