

TEST REPORT

DATE: 2-18-04

TEST NO.: 31951

FOR: L/M Cultured Marble
3421 W. 48th Place
Chicago, IL 60632

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Plant Contact:
Bob McCarthy

Background: L/M Cultured Marble submitted one Surestone 2000 Lavatory for evaluation, Per ANSI Z124.3-1995. Delivered by ULI Personnel on 2-10-04 in good condition. All testing and sample preparation performed by Universal personnel with no outside services required. The following information is provided:
Order Entry Log Date: 2-10-04 Log # 302643 Mfg: L/M Cultured Marble

Product Identification: Surestone 2000 Lavatory

Test Instructions: Test to Comply with requirements of ANSI Z124.3-95.

Scope & Purpose: Testing to determine if product meets minimum requirements of standard for Plastic Lavatory Units, for acceptability of a lavatory as a plumbing fixture.

Preparation: ANSI Z124.3-1995
3.1 Unit washed with liquid detergent and water, rinsed and dried.
4.1 Installed to simulate permanent installation. 5.2 Stain Resistance Test
5.1 Colorfastness Test 5.4 Cigarette Test
5.5 Chemical Resistance Test 6.1.2 Thermal Shock Resistance

Test Procedures: ANSI Z124.3-95
Section 2: Para. 2.1 through 2.6 Section 3: Para. 3.1 through 3.4
Section 4: Para. 4.2 through 4.4 Section 5: Para. 5.1 through 5.5
Section 6: Para. 6.1.2

Test Results: The results of testing are provided in the attached data report.

CONCLUSION: The Surestone 2000 Lavatory, 20" X 15-3/4" Tested, Meets Requirements Per ANSI Z 124.3-95, Per Paragraphs Tested.

Note: "We certify that all portions of each test performed were under continuous, direct supervision of this laboratory."

Chester Gabriel, Technician

Charles Stanley, Director

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STANDARD ANSI Z124.3-1995 PLASTIC LAVATORY UNITS

Section 2 GENERAL REQUIREMENTS

- 2.1 Materials: Surestone 2000 **COMPLIES**
- 2.2 Dimensional Tolerances: Finished Size: 20" X 15-3/4" Drain: 1-1/2" **COMPLIES**
- 2.3 Units For Testing: Selected by client for testing **COMPLIES**
- 2.4 Installation Instructions: **N/A**
- 2.5 Care and maintenance instructions: **N/A**
- 2.6 Identification: **N/A**

Section 3 WORKMANSHIP AND FINISH

- 3.1 Unit Preparation: The unit was washed with liquid detergent and water solution, rinsed with clear water, dried.
- 3.2 Inspection of unit surface: Inspected with the unaided eye from a distance of 1 and 2 feet with a light source of 150 ± 50 foot candles.
- 3.3 Surface Test: No defects were found. **COMPLIES**
- 3.3.1 The entire finished surface of unit was rubbed with a 50% solution of tap water and black washable ink, rinsed and dried.
- 3.3.2 The unit was inspected for cracks, chipped areas and blisters. None were found.
- 3.4 Subsurface Test: **COMPLIES**
- 3.4.1 Any finish surfaces which demonstrates visual surface irregularities or distortions or which fails the surface test per 3.3 shall be subjected to the standard dirt test.
- 3.4.2 Test method: One area inside bowl (nominal functional area), conditioned by rubbing for 25 cycles with normal hand pressure using a 600 grit wet silicone carbide abrasive paper, rinsed with water, dried and soiled by applying 5 grams of standard dirt to area and rubbed with a dampened chamois skin and heavy thumb pressure in circular motion for 25 cycles. Dirt allowed to dry for 1 hour and then washed by rubbing clean with a dampened chamois and standard liquid detergent before visual inspection.
- 3.4.3 Requirement: There shall be no visible voids larger than 1/16" in diameter below the original finish surface. Maximum allowable number of voids smaller than 1/16" for the conditioned area is 4. There were no visible voids observed

Section 4 STRUCTURAL INTEGRITY OF COMPLETE UNIT

- 4.1 Unit installed to simulate permanent installation. (Drain Connections)
- 4.2 Drain fitting connection: **COMPLIES**
A 25 lb. weight was applied by means of a 24" long lever arm connected to the drain fitting. The load was left in place for one minute in each of the radial positions, two of which were 180° apart and inspected for cracks. The load test was repeated with the lavatory filled to the flood level of rim with water and checked for leaks. There were no cracks found and the unit did not leak.

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Section 4 Continued:

- 4.3 Point Impact Loads: **COMPLIES**
A 1 - 1/2" steel ball, weighing 1/2 lb. was dropped from a height of 20", 3 times, striking in three different points on flat areas of top of unit and 3 times in different places inside of bowl. Unit inspected for cracks and chips. None were found.
- 4.4 Loads on lavatory tops: **COMPLIES**
A 300 lb. load was applied to unit in two areas, left and right side of bowl, left in place for 2 minutes and removed. After ten minutes, the load reapplied for 1 minute and removed and residual deflection was measured after ten minutes. Residual deflection results: **0.000"**. Unit was inspected for cracks after inking and rinsing. None were found.

Section 5 PHYSICAL CHARACTERISTICS OF MATERIALS

- 5.1 Colorfastness Test: 5.1.1 Test Method: **COMPLIES**
Two samples were cut from unit. One sample was tested for 200 hours in an Atlas Weatherometer per ASTM D 2565. Black panel temperature maintained at 145 ±9°F. The other samples retained as control specimen.
- 5.1.2 Requirements: The tested specimen was compared to the control specimen for change in color or surface texture using the same light source as specified in paragraph 3.2. There was no significant change in color or surface texture.

- 5.2 Stain Resistance Test: **COMPLIES**
- 5.2.1 Two drops of the following reagents listed were placed on 2 sets of samples. One sample with reagents was covered and the other left uncovered for a period of 16 hours. Samples were cleaned and rated. The unit received a rating of **43** out of a maximum allowable rating of 50.

<u>Covered</u>	<u>Reagent</u>	<u>Uncovered</u>
2	Black crayon	2
2	Black liquid shoe polish	3
3	Blue washable ink	2
3	Lipstick	3
4	Hair dye	3
4	Iodine solution	4
4	Gentian violet solution	4

- 5.3 Wear and Cleanability: **N/A**

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Section 5 CONTINUED:

- 5.4 Cigarette Test: **COMPLIES**
Three lighted cigarettes different brands, were placed on samples removed from unit, 1" from edge and allowed to burn for 2 minutes. Cigarettes were removed and samples allowed to cool. The burned areas were wiped with a clean cheesecloth and sanded to remove stains. There was no ignition or progressive glow during or after contact with the cigarettes and polishing restored the samples to their original finish appearance. Serviceability of unit was not impaired.
- 5.5 Chemical Resistance Test: **COMPLIES**
Two drops of each of the following reagents, Naphtha, Ethyl alcohol, Amyl acetate, Household ammonia, Citric acid, Urea, Hydrogen peroxide, Sodium hypochlorite, Phenol solution, Toluene, Ethyl acetate, Lye, and Acetone, were placed on specimens removed from unit. One set of specimens with the reagents were covered, the other set of specimens were left un-covered, for a period of 16 hours. The excess reagents were removed and the specimens held 24 hrs. at $74.3^{\circ} \pm 3.6^{\circ}\text{F}$ and 50% humidity. The specimens were then cleaned and rated. The surface finish of the specimens were unaffected and polishing brought back the original appearance.

Section 6 ADDITIONAL MATERIAL TESTS

- 6.1.2 Thermal Shock Resistance Test: **COMPLIES**
Lavatory was set up where water at $150^{\circ}\text{F} \pm 3^{\circ}\text{F}$ would impinge on bowl surface where water would normally strike for 1.5 minutes, drain for 30 seconds, followed by water at $50^{\circ} \pm 3^{\circ}\text{F}$ for 1.5 minutes and drain for 30 seconds. This procedure constitutes one complete cycle. This test was continued for 500 cycles. There was no cracking, crazing, blistering, de-lamination or spalling of lavatory.