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GEORGIA STONE INDUSTRIES INCORPORATED
15 BRANCH PIKE
SMITHFIELD RI 02917-1211
USA

Analysis No. TS-S&T2402122
Report Date 29 August 2024
Quarry/Fabricator Mason Quarry
Date Sampled 09 August
Where Sampled Mason, NH USA
Sample Received 15 August 2024
Sampled By Client

This is to attest that we have examined Natural Stone Material identified: Mason Granite

When examined to the applicable requirements of:

ASTM C 97-18	"Standard Test Method for Absorption and Bulk Specific Gravity of Dimensional Stone"
ASTM C 99-18	"Standard Test Method for Modulus of Rupture of Dimension Stone"
ASTM C 170-17	"Standard Test Method for Compressive Strength of Dimensional Stone"
ASTM C 880-18	"Standard Test Method for Flexural Strength of Dimension Stone"
ASTM C 241-20	"Standard Test Method for Abrasion Resistance of Dimension Stone Subjected to Foot Traffic Using a Rotary Platform Abraser" ¹

The Natural Stone identified above has the following average² properties:

Average % Absorption		0.31	(5)
Average Bulk Specific Gravity		2 634 kg/m ³	(5)
		164.4 lbs/ft ³	(5)
Modulus of Rupture	Perpendicular Dry	2 000 psi	(5)
Compressive Strength	Perpendicular Dry	20 100 psi	(5)
Flexural Strength	Perpendicular Dry	2 000 psi	(5)
Abrasion Resistance		43.6 Ha	(3)

END OF ANALYSIS

The attached Report of Test is an Integral part of this Summation Certificate.

¹NOTE: For Igneous Samples we run ASTM C 241, for Sedimentary and Metamorphic Samples we run ASTM C 1353. ²Number in Parentheses is Samples tested for the Average

Frank Strickland – MS-Geology
Director, Stone & Tile Laboratory

SUMMATION CERTIFICATE



Mason Granite as received.

TEST REPORT

TESTING APPLICANT: Georgia Stone Industries, Incorporated
 15 Branch Pike
 Smithfield, RI 02917-1211
 USA
 Phone +1 401.232.2040
 Fax
www.granitesofamerica.com

FABRICATOR/QUARRY: Mason Quarry
 Mason, NH 03054
 USA

SAMPLES RECEIVED DATE: 15 August 2024
 SAMPLE PLAN: Natural Stone cut to the sizes stated in the Standards below were received in "NEW" condition. Samples submitted by client.

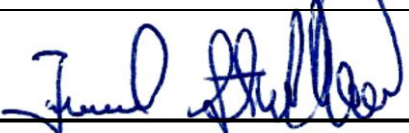
DATE OF SAMPLING: 09 August 2024
 LOCATION OF SAMPLING: Mason, NH USA
 SCOPE / PURPOSE OF TESTING: Determine Compliance with the requirements of ASTM C 615/C 615M-18
 "Standard Specification for Granite Dimension Stone"

STANDARD(S) EVALUATED: ASTM C 97-18 "Standard Test Method for Absorption and Bulk Specific Gravity of Dimensional Stone", ASTM C 99-18 "Standard Test Method for Modulus of Rupture of Dimension Stone", ASTM C 170-17 "Standard Test Method for Compressive Strength of Dimensional Stone", ASTM C 880-18 "Standard Test Method for Flexural Strength of Dimension Stone" and ASTM 241¹-21 "Standard Test Method for Abrasion Resistance of Stone Subjected to Foot Traffic"

TESTING DATE(S): 15 - 29 August 2024
 PRODUCT DESCRIPTION(S): Natural Stone identified: Mason Granite

COMPLIANCE SUMMARY:			
Natural Stone identified above has the following average ² properties: Tested Perpendicular to the Rift			
Average % Absorption	0.31		(5)
Average Bulk Specific Gravity	2 634 kg/m ³ / 164.4 lbs/ft ³		(5)
Modulus of Rupture Perpendicular Dry	2 000 psi		(5)
Compressive Strength Perpendicular Dry	20 100 psi		(5)
Flexural Strength Perpendicular Dry	2 000 psi		(5)
Abrasion Resistance	43.6 Ha		(3)
¹ NOTE: For Igneous Samples we run ASTM C 241 for Sedimentary and Metamorphic Samples we run ASTM C 1353. ² Number in Parentheses is Samples tested for the Average.			
See Test Results for Further details			

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 Frank Strickland, MS-Geology
 Director of Stone & Tile Laboratory

TEST REPORT

TABLE OF CONTENTS

ASTM C 97-18 “Standard Test Method for Absorption and Bulk Specific Gravity of Dimensional Stone”
RESULTS..... Page 4 of 15

ASTM C 99-18³ “Standard Test Method for Modulus of Rupture of Dimensional Stone”
RESULTS..... Page 6 of 15

ASTM C 170-17³ “Standard Test Method for Compressive Strength of Dimensional Stone”
RESULTS..... Page 8 of 15

ASTM C 880-18³ “Standard Test Method for Flexural Strength of Dimension Stone”
RESULTS..... Page 10 of 15

ASTM 241¹-21 “Standard Test Method for Abrasion Resistance of Stone Subjected to Foot Traffic”
RESULTS..... Page 12 of 15

CONCLUSION Page 12 of 15

PICTURE(S)..... Page 13 of 15

¹NOTE: For Igneous Samples we run ASTM C 241 for Sedimentary and Metamorphic Samples we run ASTM C 1353

TEST REPORT

ASTM C 97

“Standard Test Methods for Absorption and Bulk Specific Gravity of Dimensional Stone”

1.0 SCOPE

1.1 These test methods cover the tests for determining the absorption and bulk specific gravity of all types of dimension stone, except slate.

1.2 – 1.3 Omitted, see Standard

2.0 REFERENCED DOUCMENTS – Omitted, see Standard

3.0 TERMINOLOGY

3.1 Definitions - All definitions are in accordance with Terminology C 119.

4.0 SIGNIFICANCE AND USE

4.1 These test methods are useful in indicating the differences in absorption between the various dimension stones. These test methods also provide one element in comparing stones of the same type.

ABSORPTION

5.0 SAMPLING – Omitted, see Standard

NOTE: Sampling was done by the Client.

6.0 TEST SPECIMENS – Omitted, see Standard

NOTE: The test specimens were tested “As Received”. See RESULTS

7.0 PROCEDURE – Omitted, see Standard

NOTE: The specimens were tested in accordance with the requirements of this Section

8.0 CALCULATION

8.1 Calculate the weight percentage absorption for each specimen as follows:

$$\text{Absorption, weight \%} = [(B-A)/A] \times 100$$

where A = weight of the dried specimen, and
B = weight of the specimen after immersion

9.0 REPORT – Omitted, see Standard and RESULTS

TEST REPORT

BULK SPECIFIC GRAVITY

10.0 PROCEDURE – Omitted, see Standard

NOTE: The specimens were tested in accordance with the requirements of this Section

11.0 CALCULATION

11.1 Calculate the bulk specific gravity as follows:

$$\text{Bulk specific gravity} = \frac{A}{(B-C)}$$

where: A = weight of the dried specimen,
 B = weight of the soaked and surface dried specimen in air,
 C = weight of soaked specimen in water.

11.2 Calculate the results to three decimal places and round off to two. Report the Average, Maximum and Minimum values.

12.0 REPORT – Omitted, see Standard and RESULTS

13.0 PRECISION AND BIAS – Omitted, see Standard

14.0 KEYWORDS – Omitted, see Standard

RESULTS

Results – As Received						
Sample	Dry Weight	Soaked/Dried Weight	Wet Weight	% Absorption	Bulk Specific Gravity X 1 000	Bulk Specific Gravity X 62.4
A	390.08	391.35	243.22	0.0356	2 633.4	164.3
B	383.88	385.11	239.37	0.3204	2 634.0	164.4
C	381.43	382.66	237.82	0.3225	2 633.5	164.3
D	383.34	384.49	239.05	0.3000	2 637.7	164.5
E	391.41	392.60	244.06	0.3040	2 635.0	164.4

Average % Absorption – 0.3145

Average Bulk Specific Gravity – 2 634.3 kg/m³ or 164.4 lb/ft³

TEST REPORT

ASTM C 99 “Standard Test Methods for Modulus of Rupture of Dimensional Stone”

1.0 SCOPE

1.1 This test method covers the determination of the modulus of rupture of all types of dimensional stone except slate.

1.2 - 1.3 Omitted, see Standard

2.0 REFERENCED DOCUMENTS – Omitted, see Standard

3.0 TERMINOLOGY

3.1 Definitions - All definitions are in accordance with Terminology C 119.

4.0 SIGNIFICANCE AND USE

4.1 This test method is useful in indicating the differences in modulus of rupture between the various dimension stones. These test methods also provide one element in comparing stones of the same type.

5.0 APPARATUS

5.1 Testing Machine

NOTE: The equipment used is in accordance with the requirements of this Section.

6.0 SAMPLING

NOTE: Sampling was done by the Client.

7.0 TEST SPECIMENS

NOTE: The test specimens were tested “As Received”. See RESULTS

8.0 MARKING AND MEASURING SPECIMENS

NOTE: The Specimens were measured and marked in accordance with the requirements of this Section.

9.0 CONDITIONING

NOTE: The specimens were conditioned in accordance with the requirements of this Section. The specimens were tested “Dry”, Perpendicular to the Rift.

10.0 PROCEDURE

NOTE: The procedures outlined were followed without exception in accordance with the requirements of this Section.

TEST REPORT

11.0 CALCULATION

11.1 Calculate the modulus of rupture of each specimen as follows:

$$R = \frac{3WI}{2bd^2}$$

where R = modulus of rupture, psi
 W = breaking load, lbf
 l = length of span, in.
 b = width of specimen, in. and
 d = thickness of specimen, in.

12.0 REPORT – Omitted, see Standard and RESULTS

13.0 PRECISION AND BIAS – Omitted, see Standard

14. KEYWORDS – Omitted, see Standard

RESULTS

Perpendicular Dry					
Sample	Length	Width	Thickness	Load (lbf)	Modulus of Rupture (psi)
A	7.000	4.013	2.272	4 032	2 044
B	7.000	3.997	2.279	3 787	1 915
C	7.000	4.004	2.278	3 934	1 988
D	7.000	4.011	2.275	3 984	2 015
E	7.000	3.990	2.279	3 690	1 819

Average Modulus of Rupture Perpendicular - Dry – 1 956 psi

TEST REPORT

ASTM C 170

“Standard Test Methods for Compressive Strength of Dimensional Stone”

1.0 SCOPE

1.1 This test method covers the sampling, preparation of specimens, and determination of the compressive strength of dimensional stone.

2.0 REFERENCED DOCUMENTS – Omitted, see Standard

3.0 TERMINOLOGY

3.1 Definitions - All definitions are in accordance with Terminology C 119.

4.0 SIGNIFICANCE AND USE

4.1 This test method is useful in indicating the differences in compressive strength between the various dimension stones. These test methods also provide one element in comparing stones of the same type.

5.0 APPARATUS

5.1 Testing Machine NOTE: The equipment used is in accordance with the requirements of this Section.

6.0 SAMPLING

NOTE: Sampling was done by the Client.

7.0 TEST SPECIMENS

NOTE: The test specimens were tested “As Received”. See RESULTS

8.0 CONDITIONING

NOTE: The specimens were conditioned in accordance with the requirements of this Section. The specimens were tested “Dry”, Perpendicular to the Rift.

9.0 PROCEDURE

NOTE: The specimens were tested in accordance with the requirements of this Section.

10.0 CALCULATION

10.1 Calculate the compressive strength for each specimen as follows:

$$C = \frac{W}{A}$$

where C = compressive strength of the specimen, psi
W = total load, lbf on the specimen at failure, and
A = calculated area of the bearing surface in in².

Round each individual result to the nearest 100 psi.

TEST REPORT

11.0 REPORT – Omitted, see Standard and RESULTS

12.0 PERCISION AND BIAS – Omitted, see Standard

13.0 KEYWORDS – Omitted, see Standard

RESULTS

Perpendicular – Dry					
Sample	Length	Width	Thickness	Load (lbf)	Compressive Strength (psi)
A	2.006	1.997	2.264	75 343	18 808
B	1.999	1.978	2.268	90 866	22 981
C	1.999	2.001	2.264	74 022	18 506
D	2.017	2.003	2.267	81 618	20 202
E	2.000	2.027	2.264	80 545	19 868

Average Compressive Strength Perpendicular Dry – 20 078 psi

TEST REPORT

ASTM C 880

“Standard Test Method for Flexural Strength of Dimension Stone”

1.0 SCOPE

1.1 This test method covers the procedure for determining the flexural strength of stone by use of a simple beam using quarter-point loading.

1.2 Stone test shall be made when pertinent for the situation when the load is perpendicular to the bedding plane and when the load is parallel to the bedding plane.

1.3 As required, the flexural tests shall also be conducted under wet conditions.

1.4 Omitted, see Standard

2.0 REFERENCE DOCUMENTS – Omitted, see Standard

3.0 TERMINOLOGY

3.1 Definitions - All definitions are in accordance with Terminology C 119.

4.0 SIGNIFICANCE AND USE

4.1 This test method is useful in indicating the differences in flexural strength between the various dimension stones. This test method also provides one element in comparing stones of the same type.

5.0 APPARATUS

5.1 Testing Machine – Omitted, see Standard

NOTE: The equipment used is in accordance with the requirements of this Section.

6.0 SAMPLING – Omitted, see Standard

NOTE: Sampling was done by the Client.

7.0 TEST SPECIMENS – Omitted, see Standard

NOTE: The test specimens were tested “As Received”. See RESULTS

8.0 CONDITIONING – Omitted, see Standard

NOTE: The specimens were conditioned in accordance with the requirements of this Section. The specimens were tested “Dry”, Perpendicular to the Rift.

9.0 PROCEDURE – Omitted, see Standard

NOTE: The specimens were tested in accordance with the requirements of this Section.

TEST REPORT

10.0 CALCULATION

10.1 Calculate the flexural strength, σ , as follows:

$$\sigma = \frac{3WL}{4bd^2}$$

where: σ = flexural strength (psi)
 W = maximum load (lbf)
 L = span, (inches)/10d
 b = width of specimen (inches); $b \geq 1.5d$
 d = depth of specimen (inches)

11.0 REPORT – Omitted, see Standard and RESULTS

12.0 PRECISION AND BIAS – Omitted, see Standard

13.0 KEYWORDS – Omitted, see Standard

RESULTS

Perpendicular - Dry					
Sample	Length	Width	Thickness	Load (lbf)	Flexural Strength (psi)
A	13.0500	4.0070	1.3050	1 426	2 045
B	12.9800	3.9990	1.2980	1 344	1 942
C	12.9900	4.0060	1.2990	1 377	1 985
D	13.0600	4.0040	1.3060	1 360	1 951
E	13.0900	4.0030	1.3090	1 311	1 877

Average Flexural Strength Perpendicular - Dry – 1 960 psi

TEST REPORT

ASTM C 241¹

“Standard Test Method for Abrasion Resistance of Stone Subjected to Foot Traffic”

1.0 SCOPE

1.1 This test method covers the determination of the abrasion resistance of all types of stones for floors, steps, and similar uses where the wear is caused by the abrasion of foot traffic.

1.2 – 1.3 Omitted, see Standard

2.0 REFERENCED DOCUMENTS – Omitted, see Standard

3.0 TERMINOLOGY

3.1 3.1 Definitions—All definitions are in accordance with Terminology C 119.

4.0 SIGNIFICANCE AND USE

4.1 This test method is useful in indicating the differences in abrasion resistance between the various building stones. This test method also provides one element in comparing stones of the same type.

5.0 APPARATUS

5.1 NOTE: The Test Equipment used is in accordance with the Specifications found in the Section

6.0 SAMPLING

6.1 NOTE: Sampling was done in accordance with the requirements of this Section. Sampling and Sample preparation was done by the Client.

7.0 TEST SPECIMENS

7.1 NOTE: The test specimens were tested “As Received”. Sample preparation was done by the Client. See RESULTS

8.0 CONDITIONING

8.1 NOTE: Conditioning of the Test Specimens was followed without exception as described in this Section.

9.0 PROCEDURE

NOTE: The Test Procedure was followed without exception as described in this Section. See RESULTS

10.0 CALCULATION

10.1 Calculate the abrasion resistance of each specimen as follows:

$$Ha = \frac{10G(2000 + Ws)}{2000Wa}$$

where:

G = bulk specific gravity of the sample

Ws = average weight of the specimen (original weight plus final weight divided by 2)

Wa = loss of weight during the grinding operation.

TEST REPORT

11.0 REPORT – Omitted, see Standard and RESULTS

12.0 PERCISION AND BIAS – Omitted, see Standard

13.0 KEYWORDS – Omitted, see Standard

RESULTS

Results						
Sample	Before Abrasion Weight	After Abrasion Weight	Weight Loss	Ws	Bulk Density	Abrasive Hardness Value (Ha)
A	147.37	146.69	0.68	147.03	2.6343	41.59
B	136.93	136.30	0.63	136.62		44.67
C	137.49	136.86	0.63	137.18		44.68

The tests were conducted at 38% Relative Humidity @ 74 °F

Average Abrasive Hardness Value = 43.6 Ha

¹NOTE: For Igneous Samples we run ASTM C 241 for Sedimentary and Metamorphic Samples we run ASTM C 1353. For Manufactured Stone we used the best suited of the 2 Standards

CONCLUSION:

The Natural Stone identified above has the following average² properties:

Average % Absorption		0.31	(5)
Average Bulk Specific Gravity		2 634 kg/m ³	(5)
		164.4 lbs/ft ³	(5)
Modulus of Rupture	Perpendicular	Dry	2 000 psi
Compressive Strength	Perpendicular	Dry	20 100 psi
Flexural Strength	Perpendicular	Dry	2 000 psi
Abrasion Resistance		43.6 Ha	(3)

¹NOTE: For Igneous Samples we run ASTM C 241 for Sedimentary and Metamorphic Samples we run ASTM C 1353. ²Number in Parentheses is Samples tested for the Average

END OF ANALYSIS

TEST REPORT

Requirements for Granite According to ASTM C 615

Physical Property	Test Requirement	Test Method(s)
Average % Absorption (Max.)	0.40	C 97
Average Density lbs/ft ³ (kg/m ³) (Min.)	160.0 (2 560)	C 97
Modulus of Rupture psi (MPa) (Min.)	1 500 (10.34)	C 99
Compressive Strength psi (MPa) (Min.)	19 000 (131)	C 170
Abrasion Resistance (Min.)	25 Ha	C 241 / C 1353
Flexural Strength psi (MPa) (Min.)	1 200 (8.27)	C 880



Mason Granite as received.

TEST REPORT



Sample during ASTM C 99 testing.

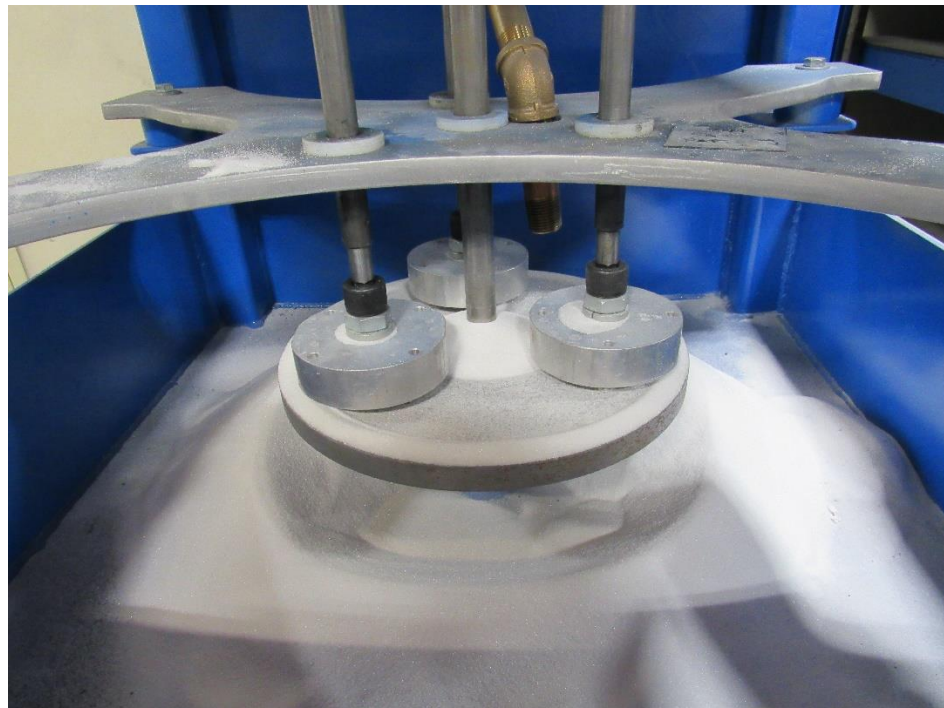


Picture of sample ready for ASTM C 880 testing

TEST REPORT



Sample during ASTM C 170 testing



ASTM C 241 abrasion test



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GEORGIA STONE INDUSTRIES INCORPORATED
15 BRANCH PIKE
SMITHFIELD RI 02917-1211
USA

Analysis No. TS-S&T2402127
Report Date 11 September 2024
Quarry/Fabricator Mason Granite
Date Sampled 09 August 2024
Where Sampled Mason, NH USA
Sample Received 15 August 2024
Sampled By Client

This is to attest that we have examined Natural Stone Material identified: Mason Granite, with Sanded finish.

When examined to the applicable requirements of:

ANSI A326.3-2021 "American National Standard Test Method for Measuring DCOF of Hard Surface Floor Materials"

The material has the following average properties:

DCOF – Wet 0.83 Average

END OF ANALYSIS

The attached Report of Test is an integral portion of this Summation Certificate.

Frank Strickland – MS-Geology
Director, Stone & Tile Laboratory



Mason Granite with Sanded Finish



TESTING APPLICANT: Georgia Stone Industries Incorporated
15 Branch Pike
Smithfield RI 02917-1211
USA

Phone: +1 802 505 2503
Fax: +1
www.Granitesofamerica.com

FABRICATOR/QUARRY: Mason Quarry
Mason, NH USA

SAMPLES RECEIVED DATE: 15 August 2024

SAMPLE PLAN: Natural Stone cut to the sizes stated in the Standards below were received in "NEW" condition. Samples submitted by client.

DATE OF SAMPLING: 09 August 2024

LOCATION OF SAMPLING: Mason, NH USA

SCOPE / PURPOSE OF TESTING: To determine the Dynamic Coefficient of Friction Wet value of Natural Stone Material.

STANDARD(S) EVALUATED: ANSI A326.3-2021 "American National Standard Test Method for Measuring DCOF of Hard Surface Floor Materials"

TESTING DATE(S): 15 August – 11 September 2024

PRODUCT DESCRIPTION(S): Natural Stone Material identified: Mason Granite, with Sanded finish

SUMMARY STATEMENT: Natural Stone Material identified above cut to shape as required by the standard(s) listed above:

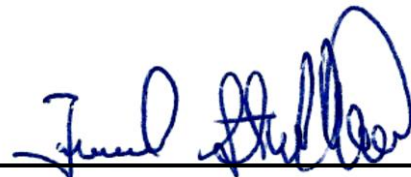
DCOF – Wet

0.83 Average

See test results for further details

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Form: TEI-TS-S&T002 Revision 05/2020



Frank Strickland – MS-Geology
Director, Stone & Tile Laboratory

TABLE OF CONTENTS

ANSI A326.3-2021

“American National Standard Test Method for Measuring Dynamic Coefficient of Friction of Hard Surface Floor Materials”

1.0 SCOPE.....	Page 3 of 8
2.0 DEFINITION OF TERMS	Page 3 of 8
3.0 SPECIFICATION.....	Page 3 of 8
4.0 PRODUCT USE CATEGORIES	Page 4 of 8
5.0 APPARATUS	Page 6 of 8
6.0 REAGENTS AND MATERIALS	Page 5 of 8
7.0 TESTFOOT RECONDITIONING PROCEDURE	Page 5 of 8
8.0 VALIDATION PROCEDURE.....	Page 5 of 8
9.0 TEST PROCEDURE – DYNAMIC COF WITH 0.05% SLS WATER	Page 5 of 8
10.0 DRY DYNAMIC COEFFICIENT OF FRICTION (DCOF) – IF DESIRED	Page 6 of 8
11.0 REPORT	Page 6 of 8
12.0 DISCUSSION OF WET DCOF METHOD PRECISION.....	Page 6 of 8
APPENDIX A (INFORMATIVE).....	Page 6 of 8
RESULTS.....	Page 6 of 8
CONCLUSION	Page 6 of 8
PICTURE(S).....	Page 7 of 8

1.0 SCOPE

This standard describes the test method for measuring dynamic coefficient of friction (DCOF) of hard surface flooring materials. This method can be used in the laboratory or in the field.

This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of the standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

2.0 DEFINITION OF TERMS

Coating: A surface application, usually polymer-based, which is applied after firing (for ceramic manufactured products), after fabrication (for non-ceramic manufactured products), or after installation of hard surface flooring materials onsite, typically to protect and/or to enhance the surface. Grout release agents, grout sealers, or products which are not intended to be permanent applications are not considered to be coatings.

Dynamic Coefficient of Friction (DCOF): Sometimes called kinetic coefficient of friction. This is the ratio of the force necessary to keep a surface already in motion sliding over another surface divided by the weight (or normal force) of the sliding object. Different contaminants such as dirt, water, soap, oil, or grease can change this value.

3.0 SPECIFICATION

3.1 DCOF \geq 0.42: Unless otherwise declared by the manufacturer, hard surface flooring materials suitable for level interior spaces expected to be walked on when wet with water shall have a measured wet DCOF value of 0.42 or greater when tested using SBR testfoot material and SLS solution as per this standard. However, hard surface flooring materials with a measured wet DCOF value of 0.42* or greater are not necessarily suitable for all projects. The specifier shall determine materials appropriate for specific project conditions, considering by way of example, but not in limitation, type of use, traffic, expected contaminants, expected maintenance, expected wear, and manufacturers' guidelines and recommendations.

3.2 DCOF $<$ 0.42: When tested using SBR testfoot material and SLS solution as per the procedure in this standard, hard surface flooring materials with a measured wet DCOF value of less than 0.42* (including by way of example, but not in limitation, polished surfaces), unless otherwise declared by the manufacturer, shall only be installed when the surface will be kept dry when walked upon and proper safety procedures will be followed when cleaning the hard surface flooring materials. Hard surface flooring not intended to be walked upon when wet shall have a dry DCOF value of 0.42* or greater when tested per Section 10.0 of this Standard

3.3 Coatings: Hard surface flooring materials which have a coating applied after firing (for ceramic manufactured products), after fabrication (for non-ceramic manufactured products), or after installation of flooring materials onsite shall only be used in areas that can be kept dry, unless otherwise declared by the coating's manufacturer. If testing data is required after a coating is applied, use the test method specified by the manufacturer, or the dry testing procedure in this standard if no test method is suggested by the manufacturer of the coating.

3.4 Manufacturer-Declared Product Use Classification: Manufacturer shall declare product use classification based on manufacturing parameters, internal quality control criteria, their experience with similar surfaces, and the criteria in this standard for all surfaces classified under Sections 4.1.3, 4.1.4 and 4.1.5, mosaic surfaces, and flooring where surface structure (e.g. three-dimensionally patterned or profiled surfaces) results in misleading DCOF measurements due to test device constraints. Optionally, surfaces classified under Section 4.1.2 shall also be permitted to be manufacturer-declared. Hard surface flooring manufacturer shall define internal product selection criteria (for example, but not in limitation,

DCOF limit values established using this test method or other test methods, internal reference standards and practices, and/or the presence of abrasive grain and/or surface structure) for each product where the manufacturer-declared product use classification is not based on DCOF criteria developed per this standard. Regardless of declared product use classification, specifier shall determine materials appropriate for specific project conditions, considering by way of example, but not in limitation, type of use, traffic, expected contaminants, expected maintenance, expected wear, and manufacturers' guidelines and recommendations.

INFORMATIVE NOTES: Omitted, see Standard

4.0 PRODUCT USE CATEGORIES

4.1 Product Use Classification: Hard surface flooring products shall be classified into one or more of the product use categories provided in Table 1 and described in Sections 4.1.1 through 4.1.5

4.1.1 Interior, Dry: Product shall be kept dry, level, and free of contaminants when in use.

INFORMATIVE NOTE: Omitted, see Standard

4.1.2 Interior, Wet: See Section 3.1. Product shall have a minimum measured wet DCOF value of 0.42 or greater when tested per this standard or be manufacturer-declared for this category base on manufacturing parameters, internal quality control criteria, and manufacturer experience with similar surfaces (see Section 3.4). Attributes to consider for products manufacturer-declared for this category include, but are not limited to, product size, texture, structure and drainage.

INFORMATIVE NOTE: Omitted, see Standard

4.1.3 Interior, Wet Plus: See Section 3.4. Product shall be manufacturer-declared for this category based on manufacturing parameters, internal quality control criteria, and manufacturer experience with similar surfaces. Attributes to consider include, but are not limited to, product size, texture, structure, and drainage. Products meeting Interior, Wet Plus criteria may require frequent maintenance to keep clean.

INFORMATIVE NOTE: Omitted, see Standard

4.1.4 Exterior, Wet: See Section 3.4. Product shall be manufacturer-declared for this category based on manufacturing parameters, internal quality control criteria, and manufacturer experience with similar surfaces. Attributes to consider include, but are not limited to, product size, texture, structure, and additionally in wet applications, drainage. Products meeting Exterior, Wet criteria may require frequent maintenance to keep clean.

INFORMATIVE NOTE: Omitted, see Standard

4.1.5 Oil and Grease: See Section 3.4. Product shall be manufacturer-declared for this category where oil, grease, and/or fats may be present, based on manufacturing parameters, internal quality control criteria, and manufacturer experience with similar surfaces. Attributes to consider include, but are not limited to, product size, texture, structure, and additionally in wet applications, drainage. Products meeting Oils/Greases may require frequent maintenance to keep clean.

INFORMATIVE NOTE: Omitted, see Standard

Table 1: Product Use Classification

Classification	Reference Category	Criteria
Interior, Dry	ID	≥ 0.42 dry DCOF* (per Section 10.1)
Interior, Wet	IW	≥ 0.42 wet DCOF* (per Section 9.1) or Manufacturer-Declared
Interior, Wet Plus	IW+	Manufacturer-Declared
Exterior, Wet	EW	Manufacturer-Declared
Oils/Greases	O/G	Manufacturer-Declared

5.0 APPARATUS

5.1 Testing Device – Omitted, see Standard

NOTE: Testing was conducted with a BOT 3000E

5.2 SBR Testfoot – Omitted, see Standard

NOTE: The SBR Testfoot was in accordance with the Requirements of this Section.

5.3 Testfoot Reconditioning Tool – Omitted, see Standard

NOTE: The SBR Testfoot was reconditioned as required using the Testfoot Reconditioning Tool described in this Section.

5.4 ANSI A326.3 Validation Surface – Omitted, see Standard

NOTE: The Validation Surface was used as necessary as described in this Section.

6.0 REAGENTS AND MATERIALS – Omitted, see Standard

NOTE: The Reagents and Materials described in the Section were used in the Testing.

7.0 TESTFOOT RECONDITIONING PROCEDURE – Omitted, see Standard

NOTE: The SBR Testfoot used in testing was Reconditioned in accordance with the Procedure found in this Section as Required.

8.0 VALIDATION PROCEDURE – Omitted, see Standard

NOTE: The Testing was Validated prior to recording values as outlined in this Section.

9.0 TEST PROCEDURE – DYNAMIC COF WITH 0.05% SLS WATER

9.1 Laboratory Test – Omitted, see Standard

NOTE: The Unit Under Test was evaluated as detailed in this Section. See RESULTS

9.2 Field Test – Omitted, see Standard

NOTE: Not Applicable to the Evaluation of the Unit Under Test

10.0 DRY DYNAMIC COEFFICIENT OF FRICTION (DCOF) – IF DESIRED – Omitted, see Standard

NOTE: Not Applicable to the Evaluation of the Unit Under Test

11.0 REPORT – Omitted, see Standard and RESULTS

12.0 DISCUSSION OF WET DCOF METHOD PRECISION – Omitted, see Standard

APPENDIX A (INFORMATIVE) – Omitted, see Standard

RESULTS: Mason Granite with Sanded Finish – Overall Average

0°	180°	270°	90°
0.81	0.83	0.83	0.84

0°	180°	270°	90°
0.800.76	0.83	0.82	0.84

0°	180°	270°	90°
0.83	0.83	0.83	0.83

DCOF – Wet 0.83

NOTE: Prior to testing the equipment was tested for accuracy using Reference tile. The equipment was within +1% of the stated value of the Reference tile. Sample Standard Deviation 0.012

CONCLUSION:

The material has the following average properties:

DCOF – Wet 0.83 Average

END OF ANALYSIS



Mason Granite Sanded surface as received.



Sample during testing



|||||
GEORGIA STONE INDUSTRIES INCORPORATED
15 BRANCH PIKE
SMITHFIELD RI 02917-1211
USA

Analysis No. TS-S&T2402128
Report Date 11 September 2024
Quarry/Fabricator Mason Granite
Date Sampled 09 August 2024
Where Sampled Mason, NH USA
Sample Received 15 August 2024
Sampled By Client

This is to attest that we have examined Natural Stone Material identified: Mason Granite, with Flamed finish.

When examined to the applicable requirements of:

ANSI A326.3-2021 "American National Standard Test Method for Measuring DCOF of Hard Surface Floor Materials"

The material has the following average properties:

DCOF – Wet 0.71 Average

END OF ANALYSIS

The attached Report of Test is an integral portion of this Summation Certificate.

Frank Strickland – MS-Geology
Director, Stone & Tile Laboratory



Mason Granite with Flamed Finish

TESTING APPLICANT: Georgia Stone Industries Incorporated
15 Branch Pike
Smithfield RI 02917-1211
USA

Phone: +1 802 505 2503
Fax: +1
www.Granitesofamerica.com

FABRICATOR/QUARRY: Mason Quarry
Mason, NH
USA

SAMPLES RECEIVED DATE: 15 August 2024

SAMPLE PLAN: Natural Stone cut to the sizes stated in the Standards below were received in "NEW" condition. Samples submitted by client.

DATE OF SAMPLING: 09 August 2024

LOCATION OF SAMPLING: Mason, NH USA

SCOPE / PURPOSE OF TESTING: To determine the Dynamic Coefficient of Friction Wet value of Natural Stone Material.

STANDARD(S) EVALUATED: ANSI A326.3-2021 "American National Standard Test Method for Measuring DCOF of Hard Surface Floor Materials"

TESTING DATE(S): 15 August - 11 September 2024

PRODUCT DESCRIPTION(S): Natural Stone Material identified: Mason Granite, with Flamed finish

SUMMARY STATEMENT: Natural Stone Material identified above cut to shape as required by the standard(s) listed above:

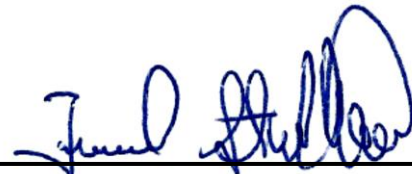
DCOF – Wet

0.71 Average

See test results for further details

Unless specifically noted, all portions of the following tests were conducted by and/or under the continuous direct supervision of TEI-Testing Services, LLC® personnel. The paragraph numbers in the report correspond with the paragraph numbers of the standard(s) above. Paragraphs which do not apply to this particular application or are for laboratory use only have been omitted. No deviations from the standard(s) were made unless specifically noted. If applicable, uncertainty measurements are noted in the applicable test paragraph. This report is the confidential property of the Client and TEI-Testing Services, LLC. This report may not be reproduced except in full, without the expressed written consent of TEI-Testing Services, LLC. NOTE: The values in this report are the values obtained under standard test conditions and thus may be used for purposes of demonstrating compliance or for comparison with other units tested under the same standard. Statement of Risk: Client understands and agrees that declarations of conformity are made by directly comparing the measurement results against the test limits given in the standard without consideration to factors that may contribute to measurement uncertainty, and accepts the shared risk that arises from this approach. Testing Engineers International, Inc. or its subsidiaries assume no responsibility for variations in quality, composition, appearance, performance, or other feature of similar subject matter produced by persons or under conditions over which Testing Engineers International, Inc. or its subsidiaries have no control. This certificate gives the characteristics of the sample(s) submitted for testing only. It does not constitute a recommendation for, endorsement of, or certification of the product or material tested. Testing Engineers International, Inc. and its subsidiaries make no warranty, expressed or implied except that the test has been performed and a report prepared based upon the sample or samples provided by the client. Extrapolation of data from the sample or samples relating to the batch or lot from which it was obtained may not correlate and should be interpreted accordingly with extreme caution. It does not and may not be used to certify the characteristics of the product, nor to imply that the product in general meets the requirements of any standard, nor its acceptability in the marketplace. © 2020 by TEI-Testing Services, LLC. TEI-Testing Services is a wholly owned LLC of Testing Engineers International, Inc.

Form: TEI-TS-S&T002 Revision 05/2020



Frank Strickland – MS-Geology
Director, Stone & Tile Laboratory

TABLE OF CONTENTS

ANSI A326.3-2021
“American National Standard Test Method for Measuring
Dynamic Coefficient of Friction of Hard Surface Floor Materials”

1.0 SCOPE.....	Page 3 of 8
2.0 DEFINITION OF TERMS	Page 3 of 8
3.0 SPECIFICATION.....	Page 3 of 8
4.0 PRODUCT USE CATEGORIES	Page 4 of 8
5.0 APPARATUS	Page 6 of 8
6.0 REAGENTS AND MATERIALS	Page 5 of 8
7.0 TESTFOOT RECONDITIONING PROCEDURE	Page 5 of 8
8.0 VALIDATION PROCEDURE.....	Page 5 of 8
9.0 TEST PROCEDURE – DYNAMIC COF WITH 0.05% SLS WATER	Page 5 of 8
10.0 DRY DYNAMIC COEFFICIENT OF FRICTION (DCOF) – IF DESIRED	Page 6 of 8
11.0 REPORT	Page 6 of 8
12.0 DISCUSSION OF WET DCOF METHOD PRECISION.....	Page 6 of 8
APPENDIX A (INFORMATIVE).....	Page 6 of 8
RESULTS.....	Page 6 of 8
CONCLUSION	Page 6 of 8
PICTURE(S).....	Page 7 of 8

1.0 SCOPE

This standard describes the test method for measuring dynamic coefficient of friction (DCOF) of hard surface flooring materials. This method can be used in the laboratory or in the field.

This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of the standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

2.0 DEFINITION OF TERMS

Coating: A surface application, usually polymer-based, which is applied after firing (for ceramic manufactured products), after fabrication (for non-ceramic manufactured products), or after installation of hard surface flooring materials onsite, typically to protect and/or to enhance the surface. Grout release agents, grout sealers, or products which are not intended to be permanent applications are not considered to be coatings.

Dynamic Coefficient of Friction (DCOF): Sometimes called kinetic coefficient of friction. This is the ratio of the force necessary to keep a surface already in motion sliding over another surface divided by the weight (or normal force) of the sliding object. Different contaminants such as dirt, water, soap, oil, or grease can change this value.

3.0 SPECIFICATION

3.1 DCOF \geq 0.42: Unless otherwise declared by the manufacturer, hard surface flooring materials suitable for level interior spaces expected to be walked on when wet with water shall have a measured wet DCOF value of 0.42 or greater when tested using SBR testfoot material and SLS solution as per this standard. However, hard surface flooring materials with a measured wet DCOF value of 0.42* or greater are not necessarily suitable for all projects. The specifier shall determine materials appropriate for specific project conditions, considering by way of example, but not in limitation, type of use, traffic, expected contaminants, expected maintenance, expected wear, and manufacturers' guidelines and recommendations.

3.2 DCOF $<$ 0.42: When tested using SBR testfoot material and SLS solution as per the procedure in this standard, hard surface flooring materials with a measured wet DCOF value of less than 0.42* (including by way of example, but not in limitation, polished surfaces), unless otherwise declared by the manufacturer, shall only be installed when the surface will be kept dry when walked upon and proper safety procedures will be followed when cleaning the hard surface flooring materials. Hard surface flooring not intended to be walked upon when wet shall have a dry DCOF value of 0.42* or greater when tested per Section 10.0 of this Standard

3.3 Coatings: Hard surface flooring materials which have a coating applied after firing (for ceramic manufactured products), after fabrication (for non-ceramic manufactured products), or after installation of flooring materials onsite shall only be used in areas that can be kept dry, unless otherwise declared by the coating's manufacturer. If testing data is required after a coating is applied, use the test method specified by the manufacturer, or the dry testing procedure in this standard if no test method is suggested by the manufacturer of the coating.

3.4 Manufacturer-Declared Product Use Classification: Manufacturer shall declare product use classification based on manufacturing parameters, internal quality control criteria, their experience with similar surfaces, and the criteria in this standard for all surfaces classified under Sections 4.1.3, 4.1.4 and 4.1.5, mosaic surfaces, and flooring where surface structure (e.g. three-dimensionally patterned or profiled surfaces) results in misleading DCOF measurements due to test device constraints. Optionally, surfaces classified under Section 4.1.2 shall also be permitted to be manufacturer-declared. Hard surface flooring manufacturer shall define internal product selection criteria (for example, but not in limitation, DCOF limit values established using this test method or other test methods, internal reference standards

and practices, and/or the presence of abrasive grain and/or surface structure) for each product where the manufacturer-declared product use classification is not based on DCOF criteria developed per this standard. Regardless of declared product use classification, specifier shall determine materials appropriate for specific project conditions, considering by way of example, but not in limitation, type of use, traffic, expected contaminants, expected maintenance, expected wear, and manufacturers' guidelines and recommendations.

INFORMATIVE NOTES: Omitted, see Standard

4.0 PRODUCT USE CATEGORIES

4.1 Product Use Classification: Hard surface flooring products shall be classified into one or more of the product use categories provided in Table 1 and described in Sections 4.1.1 through 4.1.5

4.1.1 Interior, Dry: Product shall be kept dry, level, and free of contaminants when in use.

INFORMATIVE NOTE: Omitted, see Standard

4.1.2 Interior, Wet: See Section 3.1. Product shall have a minimum measured wet DCOF value of 0.42 or greater when tested per this standard or be manufacturer-declared for this category base on manufacturing parameters, internal quality control criteria, and manufacturer experience with similar surfaces (see Section 3.4). Attributes to consider for products manufacturer-declared for this category include, but are not limited to, product size, texture, structure and drainage.

INFORMATIVE NOTE: Omitted, see Standard

4.1.3 Interior, Wet Plus: See Section 3.4. Product shall be manufacturer-declared for this category based on manufacturing parameters, internal quality control criteria, and manufacturer experience with similar surfaces. Attributes to consider include, but are not limited to, product size, texture, structure, and drainage. Products meeting Interior, Wet Plus criteria may require frequent maintenance to keep clean.

INFORMATIVE NOTE: Omitted, see Standard

4.1.4 Exterior, Wet: See Section 3.4. Product shall be manufacturer-declared for this category based on manufacturing parameters, internal quality control criteria, and manufacturer experience with similar surfaces. Attributes to consider include, but are not limited to, product size, texture, structure, and additionally in wet applications, drainage. Products meeting Exterior, Wet criteria may require frequent maintenance to keep clean.

INFORMATIVE NOTE: Omitted, see Standard

4.1.5 Oil and Grease: See Section 3.4. Product shall be manufacturer-declared for this category where oil, grease, and/or fats may be present, based on manufacturing parameters, internal quality control criteria, and manufacturer experience with similar surfaces. Attributes to consider include, but are not limited to, product size, texture, structure, and additionally in wet applications, drainage. Products meeting Oils/Greases may require frequent maintenance to keep clean.

INFORMATIVE NOTE: Omitted, see Standard

Table 1: Product Use Classification

Classification	Reference Category	Criteria
Interior, Dry	ID	≥ 0.42 dry DCOF* (per Section 10.1)
Interior, Wet	IW	≥ 0.42 wet DCOF* (per Section 9.1) or Manufacturer-Declared
Interior, Wet Plus	IW+	Manufacturer-Declared
Exterior, Wet	EW	Manufacturer-Declared
Oils/Greases	O/G	Manufacturer-Declared

5.0 APPARATUS

5.1 Testing Device – Omitted, see Standard

NOTE: Testing was conducted with a BOT 3000E

5.2 SBR Testfoot – Omitted, see Standard

NOTE: The SBR Testfoot was in accordance with the Requirements of this Section.

5.3 Testfoot Reconditioning Tool – Omitted, see Standard

NOTE: The SBR Testfoot was reconditioned as required using the Testfoot Reconditioning Tool described in this Section.

5.4 ANSI A326.3 Validation Surface – Omitted, see Standard

NOTE: The Validation Surface was used as necessary as described in this Section.

6.0 REAGENTS AND MATERIALS – Omitted, see Standard

NOTE: The Reagents and Materials described in the Section were used in the Testing.

7.0 TESTFOOT RECONDITIONING PROCEDURE – Omitted, see Standard

NOTE: The SBR Testfoot used in testing was Reconditioned in accordance with the Procedure found in this Section as Required.

8.0 VALIDATION PROCEDURE – Omitted, see Standard

NOTE: The Testing was Validated prior to recording values as outlined in this Section.

9.0 TEST PROCEDURE – DYNAMIC COF WITH 0.05% SLS WATER

9.1 Laboratory Test – Omitted, see Standard

NOTE: The Unit Under Test was evaluated as detailed in this Section. See RESULTS

9.2 Field Test – Omitted, see Standard

NOTE: Not Applicable to the Evaluation of the Unit Under Test

10.0 DRY DYNAMIC COEFFICIENT OF FRICTION (DCOF) – IF DESIRED – Omitted, see Standard

NOTE: Not Applicable to the Evaluation of the Unit Under Test

11.0 REPORT – Omitted, see Standard and RESULTS

12.0 DISCUSSION OF WET DCOF METHOD PRECISION – Omitted, see Standard

APPENDIX A (INFORMATIVE) – Omitted, see Standard

RESULTS: Mason Granite with a Flamed Finish – Overall Average

0°	180°	270°	90°
0.72	0.69	0.72	0.68

0°	180°	270°	90°
0.70	0.71	0.73	0.74

0°	180°	270°	90°
0.70	0.69	0.68	0.71

DCOF – Wet 0.71

NOTE: Prior to testing the equipment was tested for accuracy using Reference tile. The equipment was within +1% of the stated value of the Reference tile. Sample Standard Deviation 0.012

CONCLUSION:

The material has the following average properties:

DCOF – Wet 0.71 Average

END OF ANALYSIS



Mason Granite Flamed surface as received.



Sample during testing