



Floorscore

FloorScore is the most recognized indoor air quality (IAQ) certification standard for hard surface flooring materials, adhesives, and underlayments.

FloorScore is an independent certification program that tests and certifies hard surface flooring and the materials they're made with to ensure they are in compliance with stringent indoor air quality emissions. The FloorScore certification leads to healthier, cleaner air.

Fire Radiant Test—ASTM 648

ASTM E648 (the same test as NFPA 253) is ASTM's Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source. This test is designed to simulate thermal radiation levels from an adjacent fire, and to rate different materials for use in different occupancies.

Coefficient Friction Test—ASTM C1028

ASTM C1028 is a standard test method for determining the static coefficient of friction of ceramic tile and other like surfaces by the horizontal dynamometer pull-meter method. Consequently, a COF close to "0" refers to slippery surfaces whereas a COF near "1" refers to high friction surfaces.

Surface Burning—ASTM E84

ASTM E84: Standard Test Method for Surface Burning Characteristics of Building Materials (often referred to as "E84") is one of the most frequently specified standard test methods for assessing the surface burning characteristics of building products.



SCS Global Services does hereby certify that an independent assessment has been conducted on behalf of:

Artistry Hardwood Floor

14418 Best Ave., Santa Fe Springs, CA, United States

For the following product(s):

Engineered Hardwood:

1/2"-3/4": Windsor Collection, Loft Collection, Heritage Collection, Norwood Collection, Sedona Collection, Santa Fe Collection, Orleans Collection, Islands Collection, Vistas Collection, Manhattan Collection, Charleston Collection, Madison Collection, Hartford Collection

The product(s) meet(s) all of the necessary qualifications to be certified for the following claim(s):

FloorScore®

Indoor Air Quality Certified to SCS-EC10.3-2014 v4.0

Conforms to the CDPH/EHLB Standard Method v1.2-2017 (California Section 01350), effective April 1, 2017, for the school classroom and private office parameters when modeled as Flooring.

Measured Concentration of Total Volatile Organic Compounds (TVOC): Less than/equal to 0.5 mg/m³ (in compliance with CDPH/EHLB Standard Method v1.2-2017)

Registration # SCS-FS-04011

Valid from: August 2, 2019 to April 30, 2020

SCS Global Services is currently the only certification body approved by the Resilient Floor Covering Institute (RFCI) to provide FloorScore® product certification; certified products are only listed on the SCS Green Products Guide, <http://www.scsglobalservices.com/certified-green-products-guide>.



A handwritten signature in black ink that reads "Stanley Mathuram".

Stanley Mathuram, PE, Vice President

SCS Global Services

2000 Powell Street, Ste. 600, Emeryville, CA 94608 USA

**TEST REPORT****DATE: 06-16-2014****TEST NUMBER: 0209182**

CLIENT	Artistry Hardwood Flooring
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TEST METHOD CONDUCTED	ASTM E648 Standard Test Method for Critical Radiant Flux of Floor Covering Systems Using A Radiant Heat Energy Source, also referenced as NFPA 253 and FTM Standard 372
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DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Loft Collection
CONSTRUCTION	9/16" 3-Ply Oak Flooring
REFERENCE	Artistry Hardwood Flooring

GENERAL PRINCIPLE

This procedure is designed to measure the critical radiant flux at flame out of horizontally mounted floor covering systems exposed to a flaming ignition in a test chamber which provides a graded radiant heat energy environment. The imposed radiant flux simulates the thermal radiation levels likely to impinge on the floors of a building whose upper surfaces are heated by flames from a fully developed fire in an adjacent room or compartment. The test result is an average critical radiant flux (watts/square cm) which indicates the level of radiant heat energy required to sustain flame propagation in the flooring system once it has been ignited. A minimum of three test specimens are tested and the results are averaged. Theoretically, if a room fire does not impose a radiant flux that exceeds this critical level on a corridor floor covering system, flame spread will not occur.

The NFPA Life Safety Code 101 specifies as Class 1 Critical Radiant Flux of .45 watts/sq cm or higher and Class 2 Critical Radiant Flux as .22 - .44 watts/sq cm.

FLOORING SYSTEM ASSEMBLY			
SUBSTRATE	Mineral-Fiber/Cement Board	UNDERLAYMENT	Loose Laid
ADHESIVE	N/A	CONDITIONING	Minimum of 96 hours at 70 ± 5° F and 50 ± 5% relative humidity

	Distance Burned	Time To Flame Out	Critical Radiant Flux
Specimen 1	35 cm	20 minutes	0.60 watts/square cm
Specimen 2	37 cm	28 minutes	0.56 watts/square cm
Specimen 3	32 cm	24 minutes	0.66 watts/square cm

Average Critical Radiant Flux	0.61 Watts/Square Cm
Standard Deviation	0.04 Watts/Square Cm
Coefficient of Variation	6.77 %

*** NOTE: Meets or exceeds Class 1 rating as specified in NFPA Life Safety Code 101 and IBC 804.2 Classification.**

APPROVED BY:

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COMMERCIAL TESTING COMPANY

1215 South Hamilton Street • Dalton, Georgia 30720
Telephone (706) 278-3935 • Facsimile (706) 278-3936

Report Number 19-04148

Artistry Hardwood
Santa Fe Springs, California

Test Number 5394-1985-A
April 10, 2019

Coefficient of Friction

Test Method: The test was conducted in accordance with the ASTM International Test Method C1028, *Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method*. This test measures the static coefficient of friction, defined as the ratio of horizontal force applied to a body that just overcomes the friction or resistance to slipping, to the vertical component of the weight of the object or force applied to it. Static coefficient of friction is one important factor relative to slip resistance. While other factors can affect slip resistance, this method is used to determine the property of a flooring surface under controlled laboratory conditions. It should not be used to determine slip resistance under field conditions unless those conditions are fully defined. The test is conducted using a 22 kilogram weight in combination with a standard heel assembly. The weight with the heel assembly attached is placed on the flooring surface and pulled with a Chatillon Model DFG-100 dynamometer which measures the force required to set the test assembly into motion. The test result is calculated using the highest reading recorded. The standard Neolite® heel assembly is calibrated prior to each test using Standard Tile #8425, Lot Number 56H, Mexican Sand, under both dry and wet conditions. Three specimens are tested dry and three tested wet. An initial measurement is made on each specimen with the force applied parallel to the manufacturing direction. Three additional measurements are made with the force applied perpendicular to the previous measurement.

Material Tested:

Identification: Loft Collection Oak Floor
Type Material: Engineered Flooring

Test Result:

	Dry Test Conditions			Wet Test Conditions		
	1	2	3	1	2	3
1	0.66	0.67	0.67	0.67	0.65	0.64
2	0.65	0.70	0.68	0.64	0.69	0.63
3	0.67	0.69	0.63	0.67	0.67	0.80
4	0.78	0.76	0.72	0.76	0.73	0.68
Specimen Average	0.69	0.71	0.68	0.68	0.68	0.69
Overall Average	0.69			0.69		

Commercial Testing Company

(Authorized Signature)

This report is provided for the exclusive use of the client to whom it is addressed. It may be used in its entirety to gain product acceptance from duly constituted authorities. The test results presented in this report apply only to the samples tested and are not necessarily indicative of apparent identical or similar materials. Sample selection and identification were provided by the client. A sampling plan, if described in the referenced standard, was not necessarily followed. This report, or the name of Commercial Testing Company, shall not be used under any circumstance in advertising to the general public.

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Standard Method of Test for Surface Burning Characteristics of Building Materials

ASTM E84-14

Test #209182, ID: Loft Collection

Report Number 14-06293

Test Number 4552-1684
June 17, 2014

Artistry Hardwood Flooring

Commercial Testing Company

(Authorized Signature)

This report is provided for the exclusive use of the client to whom it is addressed. It may be used in its entirety to gain product acceptance from duly constituted authorities. The test results presented in this report apply only to the samples tested and are not necessarily indicative of apparent identical or similar materials. Sample selection and identification were provided by the client. A sampling plan, if described in the referenced test procedure, was not necessarily followed. This report, or the name of Commercial Testing Company, shall not be used under any circumstance in advertising to the general public.

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INTRODUCTION

This report is a presentation of results of a surface flammability test on a material submitted by Artistry Hardwood Flooring.

The test was conducted in accordance with the ASTM International fire-test-response standard E84-14, *Surface Burning Characteristics of Building Materials*, sometimes referred to as the Steiner tunnel test. ASTM E84 is an American National Standard (ANSI) and has been approved for use by agencies of the Department of Defense. The ASTM E84 test method is the technical equivalent of UL No. 723. The test is applicable to exposed interior surfaces such as walls and ceilings. The test is conducted with the specimen in the ceiling position with the surface to be evaluated face down toward the ignition source. Thus, specimens shall either be self-supporting by its own structural quality, held in place by added supports along the test surface, or secured from the back side.

This standard is used to measure and describe the response of materials, products, or assemblies to heat and flame under controlled conditions, but does not by itself incorporate all factors required for fire-hazard or fire-risk assessment of the materials, products, or assemblies under actual fire conditions.

PURPOSE

The purpose of the test is to provide only the comparative measurements of surface flame spread and smoke development of materials with that of select grade red oak and fiber-reinforced cement board, Grade II, under specific fire exposure conditions. The test exposes a nominal 24-foot long by 20-inch wide test specimen to a controlled air flow and flaming fire adjusted to spread the flame along the entire length of a red oak specimen in 5½ minutes. During the 10-minute test duration, flamespread over the specimen surface and density of the resulting smoke are measured and recorded. Test results are calculated relative to red oak, which has an arbitrary rating of 100, and fiber-reinforced cement board, Grade II, which has a rating of 0.

The test results are expressed as Flame Spread Index and Smoke Developed Index. The Flame Spread Index is defined in ASTM E 176 as “a number or classification indicating a comparative measure derived from observations made during the progress of the boundary of a zone of flame under defined test conditions.” The Smoke Developed Index, a term specific to ASTM E84, is defined as “a number or classification indicating a comparative measure derived from smoke obscuration data collected during the test for surface burning characteristics.” There is not necessarily a relationship between the two measurements.

The method does not provide for measurement of heat transmission through the surface tested, the effect of aggravated flame spread behavior of an assembly resulting from the proximity of combustible walls and ceilings, or classifying a material as noncombustible solely by means of a Flame Spread Index.

The zero reference and other parameters critical to furnace operation are verified on the day of the test by conducting a 10-minute test using 1/4-inch fiber-reinforced cement board, Grade II. Periodic tests using NOFMA certified 23/32-inch select grade red oak flooring provide data for the 100 reference.

TEST SAMPLE

The test sample, selected by the client, was identified as **Test #209182, ID: Loft Collection**, engineered wood flooring planks measuring 6.2 inches wide by 0.551-inch in thickness. The planks were assembled into four decks, three measuring 24-½ inches wide by 86.6 inches in length and one measuring 24-½ inches wide by 28.2 inches long. The decks were assembled as specified in ASTM E 2579, *Standard Practice for Specimen Preparation and Mounting of Wood Products to Assess Surface Burning Characteristics*, Section 8.2, Solid Boards, Lumber, Timber, Fingerjoined Lumber, Glulam, Laminate Wood, Laminated Veneer Lumber and Parallel Strand Lumber Products. Four planks were used to assemble each deck, without joints, using steel batten strips 1-inch wide by 3/16-inch thick. The battens were attached 12 inches from the ends of each deck and at 24-inch intermediate intervals using 1/2-inch long Number 10 wood screws, two per board. After assembly, the decks were transferred to storage racks and conditioned 11 days in an atmosphere with the temperature maintained at 71 ± 2°F and the relative humidity at 50 ± 5 percent. For testing, the panels were placed end-to-end on the ledges of the tunnel furnace and the test conducted with no auxiliary support mechanism.

TEST RESULTS

The test results, calculated on the basis of observed flame propagation and the integrated area under the recorded smoke density curve, are presented below. The Flame Spread Index obtained in E84 is rounded to the nearest number divisible by five. Smoke Developed Indices are rounded to the nearest number divisible by five unless the Index is greater than 200. In that case, the Smoke Developed Index is rounded to the nearest 50 points. The flame spread and smoke development data are presented graphically at the end of this report.

Test Specimen	Flame Spread Index	Smoke Developed Index
Fiber-Reinforced Cement Board, Grade II	0	0
Red Oak Flooring	100	100
Test #209182, ID: Loft Collection	95	85

OBSERVATIONS

Specimen ignition over the burners occurred at 0.73 minute. Surface flame spread was observed to a maximum distance of 19.50 feet beyond the zero point at 5.18 minutes. The maximum temperature recorded during the test was 1,028°F.

CLASSIFICATION

The Flame Spread Index and Smoke Developed Index values obtained by ASTM E84 tests are frequently used by code officials and regulatory agencies in the acceptance of interior finish materials for various applications. The most widely accepted classification system is described in the National Fire Protection Association publication NFPA 101 *Life Safety Code*, where:

Class A	0 – 25 Flame Spread Index	0 – 450 Smoke Developed Index
Class B	26 – 75 Flame Spread Index	0 – 450 Smoke Developed Index
Class C	76 – 200 Flame Spread Index	0 – 450 Smoke Developed Index

Class A, B, and C correspond to Type I, II, and III respectively in other codes. They do not preclude a material being otherwise classified by the authority of jurisdiction.

ASTM E 84 TEST DATA

Client: Artistry Hardwood Flooring
Test Number: 4552-1684
Material Tested: Test #209182 ID: Loft Collection
Date: June 17, 2014

Test Results:

Time to Ignition = 00.73 minutes
Maximum Flamespread Distance = 19.50 feet
Time to Maximum Spread = 05.18 minutes

Flame Spread Index = 95
Smoke Developed Index = 85

