

SOFSURFACES INC.

TEST REPORT

SCOPE OF WORK

ASTM E648-17A STANDARD TEST METHOD FOR CRITICAL RADIANT FLUX OF FLOOR-COVERING SYSTEMS USING A RADIANT HEAT ENERGY SOURCE ON DURASAFE PREMIUM SERIES, PLAYGROUND SAFETY TILE; COLOR BROWN

PROJECT NUMBER

104021170SAT-001B

TEST DATE

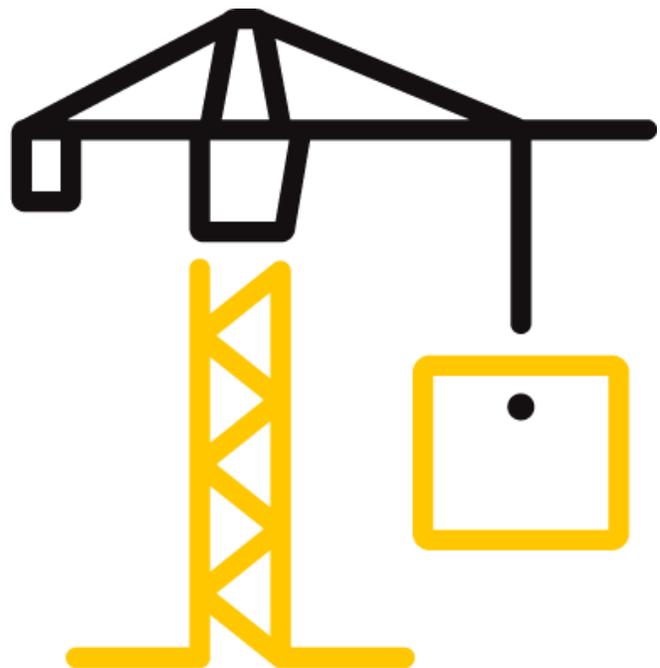
08/05/19

ISSUE DATE

08/13/19

PAGES

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Project No.: 104021170SAT-001B

Date: 08/13/19

REPORT ISSUED TO

SOFSURFACES INC.

4393 Discovery Line

Petrolia ON Canada, N0N 1R0

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted by SOFSURFACES INC., 4393 Discovery Line, Petrolia ON Canada, N0N 1R0 to perform testing in accordance with ASTM E648-17A Standard Test Method for Critical Radiant Flux of Floor-Covering Systems using a Radiant Heat Energy Source, on their DuraSafe Premium Series, Playground Safety Tile; Color Brown. Results obtained are tested values and were secured by using the designated test method. Testing was conducted at the Intertek B&C test facility in Elmendorf, TX. This report does not constitute performance certification of this product nor an opinion or endorsement by this laboratory.

SECTION 2

TEST METHOD

The specimen was evaluated in accordance with the following:

ASTM E648-17A, *Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source*

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For INTERTEK B&C:

COMPLETED BY:	Theodore Salazar
TITLE:	Technician 3
SIGNATURE:	
DATE:	08/13/19

REVIEWED BY:	Servando Romo
TITLE:	Project Engineer
SIGNATURE:	
DATE:	08/14/19

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SECTION 3

TEST SPECIMEN DESCRIPTION

SAMPLE ID	DuraSafe Premium Series
DESCRIPTION & THICKNESS	Playground Safety Tile; Color Brown
SPECIMEN PREPARATION	The samples were sent directly by the client. Samples were not independently selected for testing by Intertek.
RECEIVED DATE	07/25/2019 (Samples received in good condition)
INTERTEK SAMPLE TRACKER NUMBER	SAT1907251133-001
SAMPLE COND.	69.8±5.4°F and 50±5% relative humidity
ENVIRONMENTAL COND.	73-79°F and 56-67% r.h.

SECTION 4

LIST OF OBSERVERS

NAME	COMPANY
Theodore Salazar	Intertek B&C

SECTION 5

TEST OVERVIEW & PROCEDURE

This procedure provides a way of measuring critical radiant flux (the level of incident radiant heat energy on a floor covering system at the most distant flame-out point, reported as W/cm²) of horizontally mounted floor-covering systems exposed to a flaming ignition source while being exposed to radiant heat energy from a panel with approximately a 30° angle from the horizontal. The radiant flux ranges from 1.03 W/cm² at the 100 mm mark to 0.13 W/cm² at the 900 mm mark.

At least three specimens shall be tested. The specimens are conditioned at 69.8 ± 5.4°F and a relative humidity of 50 ± 5 % for a minimum of 48 hours. Following the ASTM E648-17A calibration procedures, the first specimen was loaded into the test chamber. After a 5 minute pre-heat time, the pilot flame was placed into contact with the specimen at the 0 mm mark. This pilot flame is to remain in contact with the specimen for 5 minutes, then removed. If the specimen does not propagate flame during the 5 minute pilot flame contact, then the test is terminated. For specimens that do propagate flame, the test is continued until the flame goes out. The distance to the farthest flame-out point is noted, which is then used to determine the

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critical radiant flux, based on a radiant heat energy flux profile curve of the apparatus obtained during calibration.

SECTION 6
TEST RESULTS

Specimen	1	2	3
Maximum Distance (mm)	750	580	560
Time to Max. Distance (min.)	127:04	88:16	136:17
Critical Radiant Flux (W/cm ²)	0.18	0.28	0.30
Time to All Flame Out (min.)	127:04	88:16	136:17

Run No.	Smoking	Discolored	Ignition
1	2:03	5:02	5:06
2	2:26	5:02	5:06
3	2:21	5:09	5:16

Average Critical Radiant Flux
(W/cm²)= 0.25

Standard deviation = 0.06

Coefficient of variation = 25.42

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SECTION 7**REQUIREMENTS FOR CLASSES**

ASTM E648 does not have a pass/fail criteria. In most cases the codes that require this testing will indicate criteria for the critical radiant heat flux as categorized by Class I or Class II. The requirements for these classes will depend on the code that is applicable for the product and/or installation.

For example, NFPA 101 Life Safety Code (2015 edition) states that:

10.2.7.3* Interior floor finishes shall be classified in accordance with 10.2.7.4, based on test results from NFPA 253, Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source, or ASTM E 648, Standard Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source.

10.2.7.4.1 Class I Interior Floor Finish. Class I interior floor finish shall have a critical radiant flux of not less than 0.45 W/cm², as determined by the test described in 10.2.7.3.

10.2.7.4.2 Class II Interior Floor Finish. Class II interior floor finish shall have a critical radiant flux of not less than 0.22 W/cm², but less than 0.45 W/cm², as determined by the test described in 10.2.7.3.

The requirements for the above mentioned classes will depend on the code that is applicable for the product and/or installation.

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**SECTION 8
PHOTOGRAPHS**



Photo No. 1



Photo No. 2

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Photo No. 3



Photo No. 4



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SECTION 10
REVISION LOG

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