

**Intertek**

**TEST REPORT**

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

Monarch Plank Prefinished Engineered Hardwood Flooring;  
ID: MONL5895SG

Project No. 101878070SAT-002A

November 24, 2014

EVALUATION CENTER  
Intertek Testing Services NA Inc.  
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Prepared for:  
Galleher Corp.  
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Santa Fe Springs, CA 90670

## TEST REPORT

**Sample Received:** October 29, 2014  
(This specimen was received in good condition.)

**Test Date:** November 04, 2014

**Sample Conditioning:** 69.8±5.4°F and 50±5% relative humidity

### Sample Identification

Monarch Plank Prefinished Engineered Hardwood Flooring; ID: MONL5895SG

### Description (according to client information)

Monarch Plank Prefinished Engineered Hardwood Flooring; Color: La Mer St. Germain;  
Top Layer: European Oak; Base: Birch plywood, Coating: Natural Oil

### Sample Preparation

The samples were sent directly by the client. Samples were not independently selected for testing by Intertek.

**Environmental Conditions:** 72-76°F and 60-61% r.h.

**This Test Witnessed by:** n/a

### Test Overview

This procedure provides a way of measuring *critical radiant flux* (the level of incident radiant heat energy on floor-covering systems at the most distant flame-out point, reported as W/cm<sup>2</sup>) of horizontally mounted attic floor insulation 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 1.08 W/cm<sup>2</sup> at the 100 mm mark to 0.12 W/cm<sup>2</sup> at the 900 mm mark.

### Test Procedure

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 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 critical

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

**Test Results**

ASTM E 648

<b>Specimen</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>Maximum Distance (mm)</b>	403	359	500
<b>Time to Max. Distance (min.)</b>	27:30	22:45	39:02
<b>Critical Radiant Flux (W/cm<sup>2</sup>)</b>	0.50	0.58	0.34
<b>Time to All Flame Out(min.)</b>	27:30	22:45	39:02

*\*\*Data below 100mm is not available. (Radiant Flux at 100mm =1.03 W/cm sq.)  
It is not part of the test standard procedure to record radiant flux values below 100mm.  
\*No ignition*

**Observations (min: sec)**

<b>Run No.</b>	<b>Smoking</b>	<b>Discolored</b>	<b>Ignition</b>
<b>1</b>	1:36	5:15	5:20
<b>2</b>	1:49	5:07	5:16
<b>3</b>	2:35	5:15	5:22

**Average Critical Radiant Flux  
(W/cm<sup>2</sup>)= 0.47**

**Standard deviation = 0.12**

**Coefficient of variation = 25.64**

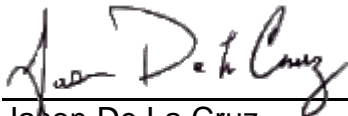
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Theodore Salazar  
Technician Team Leader

November 24, 2014

Reviewed and approved:



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Jason De La Cruz  
Project Engineer

November 24, 2014

**REVISION SUMMARY**

<b>DATE</b>	<b>SUMMARY</b>
11/24/2014	Original Issue. No Revisions.