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Testing of Decking in Accordance with CSFM Test Procedure 12-7A-4, *Part A*, and *the San Diego County Modification to the SFM 12-7A-4 Part B Requirements*

Covered Products:
IPE Hardwood Decking, $\frac{3}{4}$ " x 5.3"

Report# 09008

WFCi Project# 09008

Conducted for:

Sabra International
300 71 St Street, Suite 430
Miami Beach, FL 33141-3038

TESTING COMPLETED: FEBRUARY 26, 2009

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Testing • Research • Investigation • Consulting • Modeling • Animation • Litigation

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INTRODUCTION

This report documents the successful testing of **IPE decking** fire tested in accordance with the requirements described in the 2007 California Building Code, Chapter 7A [for SFM], *"Materials and Construction Methods for Exterior Wildfire Exposure"*, Section 704A.4.1.1 *Decking Surfaces, Item 3a, and San Diego County Building Code, Section 26.3.6.2.1.*

This test is used to measure and describe the properties of materials, products or assemblies in response to heat and flame under controlled laboratory conditions and is not intended to be used to describe or appraise the fire hazard or fire risk of the materials, products or assemblies.

SUMMARY OF THE TEST METHOD

The decking product evaluated in this project was tested in accordance with the 2007 California Building Code, Chapter 7A [for SFM], *"Materials and Construction Methods for Exterior Wildfire Exposure"*, Section 704A.4.1.1 *Decking Surfaces, Item 3a, and San Diego County Building Code, Section 26.3.6.2.1.* The San Diego County requirements are described in the following:

26.3.6.2.1 Testing of Alternative Decking Materials

Alternative decking materials may be approved when tested to demonstrate passing of the performance requirements of State Fire Marshal standard 12-7A-4. The decking surface shall pass the tests in both Parts A and B of SFM 12-7A-4, however, the burning brand exposure test of Part B may be conducted with a Class "B" sized brand as specified in ASTM E-108 or UL-790.

The Conditions of Acceptance of State Fire Marshal standard 12-7A-4 shall be modified to read as follows:

Part A: Underflame Test

1. Peak heat release rate of less than or equal to 25 kW/ft² (269 kW/m²)
2. Absence of sustained flaming at the conclusion of the 40-minute observation period.
3. Absence of structural failure of any deck board.
4. Absence of falling particles that are still burning when reaching the floor.

Part B: Burning Brand Test

1. Absence of sustained flaming at the conclusion of the 40-minute observation period.
2. Absence of structural failure of any deck board.
3. Absence of falling particles that are still burning when reaching the floor.

SAMPLE DESCRIPTION

The hardwood deck boards were received at WFCi and tested on February 26, 2009. Information provided by the client represented that the boards consisted of IPE hardwood, and the deck boards are described as follows:

Square edge, 3/4" thick x 5-5/16" wide, 1.74 lb/lineal foot (63.2 lb/cu.ft), dark brown color.

The deck boards were tested at a moisture content of 9.8%, as measured by the ASTM D4442 'oven dry' method. The specimen was not subjected to accelerated weathering.

Care was taken to maintain an edge to edge spacing of the deck planks at 3/16". The resulting top deck surface area was **4.54 sq.ft.**

TESTING

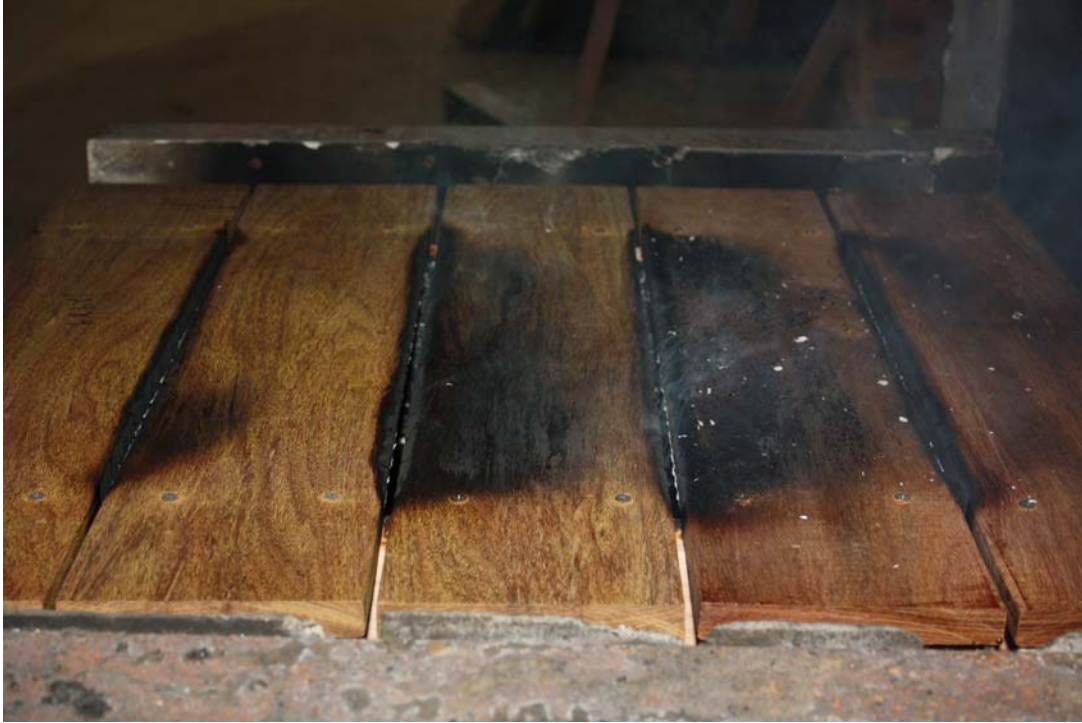
Observations from individual tests, heat release curves and summaries of test results are presented in the following.

Table 1. Part A – Under-Flame Test Results

Test Parameters	Test Criteria	Test 1	Test 2	Test 3
Peak Heat Release Rate	25 (max)	15.5	15.4	16.5
Sustained Flaming or Glowing (40 min)	No	No	No	No
Flaming Drops	No	No	No	No
Structural Failure	No	No	No	No
Results		Pass	Pass	Pass



Part A – Underflame Test: Example of Specimen During Test



Part A – Underflame Test: Example of Specimen Post Test

Figure 1. Heat Release Rate Plots

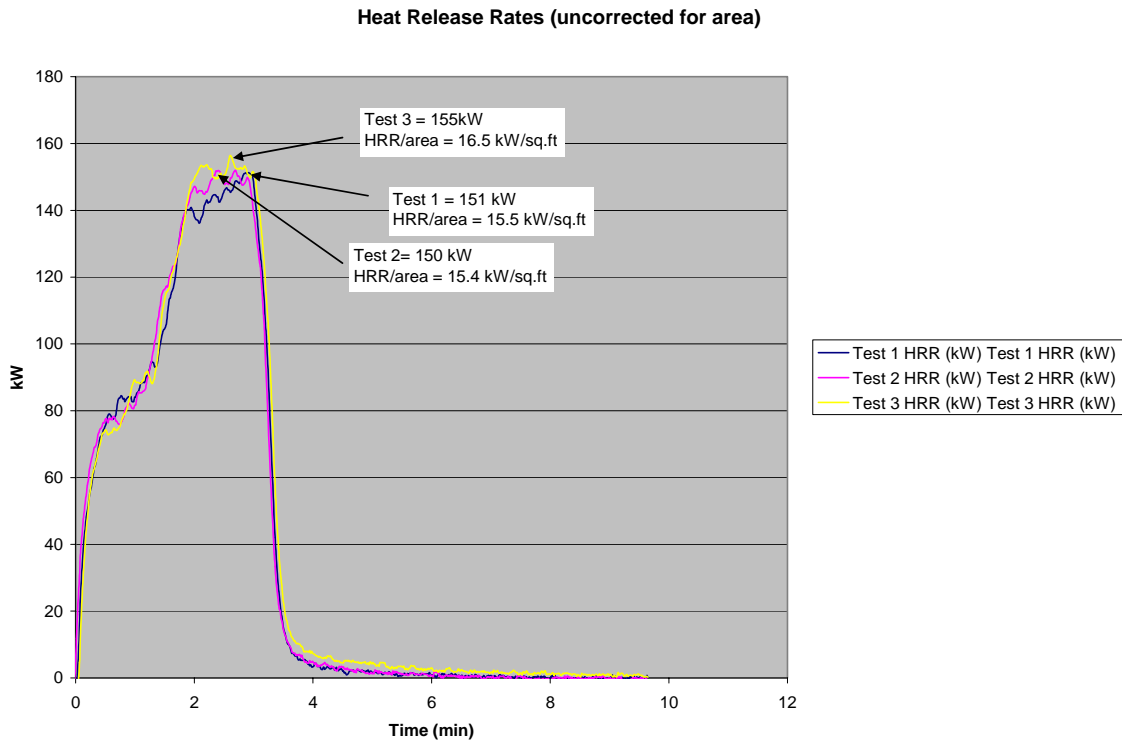


Table 2. Part B – San Diego County Class B Burning Brand Results

Test Parameters	Test Criteria	Test 1	Test 2	Test 3
Sustained Flaming or Glowing (40 min)	No	No	Glow, no flame	No
Flaming Drops	No	No	No	No
Structural Failure	No	No	No	No
Results		Pass	Pass	Pass



Burning Brand – Example of Specimen Prior to Test



Burning Brand Test – Example of Deck Surface During Test



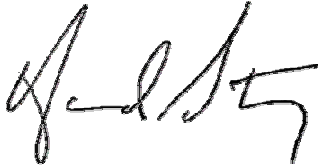
Burning Brand – Example of Deck Post Test

CONCLUSION

The IPE hardwood deck product described in this report is deemed to meet the requirements of the 2007 California Building Code, Chapter 7A [for SFM], *"Materials and Construction Methods for Exterior Wildfire Exposure"*, Section 704A.4.1.1 *Decking Surfaces, Item 3a*, and *San Diego County Building Code, Section 26.3.6.3.2.1*.

SIGNATURE PAGE

Reviewed and Approved by,

A handwritten signature in black ink, appearing to read "H. Stacy", written in a cursive style.

Howard Stacy

Director, Testing Services

**WESTERN FIRE CENTER AUTHORIZES THE CLIENT NAMED HEREIN TO
REPRODUCE THIS REPORT ONLY IF REPRODUCED IN ITS ENTIRETY**

**The test specimen identification is as provided by the client and WFCi
accepts no responsibilities for any inaccuracies therein. WFCi did not select
the specimen from inventory, it has not verified the composition,
manufacturing techniques or quality assurance procedures.**