



**Acoustic and Insulation  
Product Testing Laboratories**

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**REPORT NO. 93739-CC**

Date: March 10, 2011

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**Title: Characterization of Taita Unfaced Insulation Tested Per ASTM E84**

Type of Sample: Qualification  
Type of Service: Material Characterization

**Purpose**

Determine the surface burning characteristics of Taita Unfaced Insulation as tested per ASTM E84-09c.

This corrected copy report is being issued due to revisions to the Summary section.

**Samples Submitted**

- 1) Taita Rolls- Unfaced R8 insulation, 63mm thick with a density of 10kg/m<sup>3</sup>, 5% binder content
- 2) Taita Boards – Unfaced insulation, 25mm thick with a density of 130kg/m<sup>3</sup>, 9% binder content



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**Summary of Test Results**

ASTM E84-09c	Surface Burning Characteristics	<p>Sample 1: Taita Rolls- Unfaced R8 insulation, 63mm thick with a density of 10kg/m<sup>3</sup>, 5% binder content. Average Flame Spread Index = 5 Average Smoke Developed Index = 10</p> <p>Sample 2: Taita Boards – Unfaced insulation, 25mm thick with a density of 130kg/m<sup>3</sup>, 9% binder content. Average Flame Spread Index = 5 Average Smoke Developed Index = 10</p>
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**Testing Method****ASTM E84**

The results described in this report were obtained per ASTM E84 Standard Test Method for SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS; Volume 04.07 of the American Society for Testing and Materials (ASTM). This procedure is the responsibility of ASTM Committee E5 on Fire Standards.

ASTM E84 describes a method for determining the comparative surface burning behavior of building materials. This test is applicable to exposed surfaces such as walls and ceilings, and is evaluated in the ceiling position with the test surface exposed face down to the ignition source. The material, product, or assembly must be capable of being mounted in the test position by either being self-supporting by its own structural quality, or held in place by added supports along the test surface, or secured from the back side.

Test specimen size per test:

Width between 20 to 24 inches; Length 24 feet; Maximum Thickness 4-in.

(Width between 508 to 610 mm; Length 7.3 meters; Maximum Thickness 101 mm)

**Testing Method Cont'd**

The purpose of this test method is to determine the relative burning behavior of the material by observing the flame spread along the specimen. Flame spread and smoke developed index are reported. However, there is not necessarily a relationship between these two measurements.

ASTM E84 is also published under the following designations:

- UL 723
- ANSI 2.5
- UBC 8-1 (42-1)

**ASTM Caveat**

*This standard should be used to measure and describe the properties of materials, products, or assemblies in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or the fire risk of the materials, products, or assemblies under actual fire conditions. However, results of this test may be used as elements of a fire risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use.*

**Accuracy and Accreditation**

Consult ASTM Test Method E84 for the Precision and Bias of these tests. Data listed in ASTM Test Method E84, Table 1, Within-Laboratory (Repeatability), and Table 2, Between-Laboratory (Reproducibility) were calculated in accordance with ASTM Practice E691 and ISO 5725. These tables address the precision on Flame Spread Index. At this time there is no data presented addressing Smoke Developed Index.

**Test Results****ASTM E84-09c**

Sample	Description	Flame Spread Index	Smoke Developed Index
1	Taita Rolls- Unfaced R8 insulation, 63mm thick with a density of 10kg/m <sup>3</sup> , 5% binder content		
Test 1		5	10
Test 2		5	10
	<b>Average Rounded Off Rating</b>	<b>5</b>	<b>10</b>
2	Taita Boards – Unfaced insulation, 25mm thick with a density of 130kg/m <sup>3</sup> , 9% binder content		
Test 1		5	10
Test 2		5	10
	<b>Average Rounded Off Rating</b>	<b>5</b>	<b>10</b>

**Mounting Method**

Roll samples were supported using 1/4-in. steel rods behind the facing.  
Board samples were self-supporting.

**Test Dates**

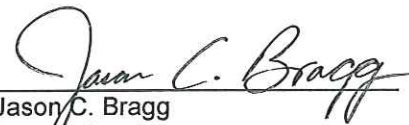
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**Summary**

The data above shows the E-84 results of unfaced fibrous glass wool insulation. With sample 1 having a density of 10 Kg/m<sup>3</sup> and a phenolic binder content of 5% and sample 2 having a density of 130 Kg/m<sup>3</sup> and a phenolic binder content of 9%. Testing in a range of this nature demonstrates that for these unfaced products, all densities and binder contents produced between these tested densities and binder contents will perform equal to the material tested.



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