



TEST REPORT

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EVALUATION CENTER
Intertek
8431 Murphy Drive
Middleton, WI 53562

RENDERED TO

Cascade Designs Inc.
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Chris Egge
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PRODUCT EVALUATED: Evolution Mesh
EVALUATION PROPERTY: ISO 8191-1

Report of Evolution Mesh for compliance with the applicable requirements of the following criteria: ISO 8191-1: 1987, Furniture - Assessment of Ignitability of Upholstered Furniture-Part 1: Ignition Source : Smoldering Cigarette

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2 INTRODUCTION

Intertek has conducted testing for Cascade Designs Inc. on Evolution Mesh to assess the ignitability of material combinations used in upholstered seating when it is subjected to a small flame. Testing was conducted in accordance with ISO 8191-1:1987, Furniture - Assessment of Ignitability of Upholstered Furniture-Part 1: Ignition Source: Smoldering Cigarette. This evaluation began July 24, 2015 and was completed July 24, 2015.

3 TEST SAMPLES

3.1. SAMPLE SELECTION

Samples were submitted to Intertek directly from the client. Samples were not independently selected for testing. Samples were received at the Evaluation Center on July 17, 2015 in good condition.

3.2. SAMPLE AND ASSEMBLY DESCRIPTION

Sample Name: Evolution Mesh

Sample Description: The Evolution Mesh is a wheelchair skin protection seat cushion.

A complete 18" x 18" seat cushion was provided by the client.

Sample was conditioned at $23 \pm 2^{\circ}\text{C}$ with relative humidity at $50 \pm 5\%$ for sixteen (16) hours immediately before testing began.

Test room conditions: 72.5°F and 56% relative humidity.

4 Testing and Evaluation Methods

4.1. TEST STANDARD

The test sample was positioned into the test frame. A cigarette was lit and air drawn through it until the tip glows brightly. Not less than 5 mm and not more than 8 mm of the cigarette shall be consumed in this operation. The smoldering cigarette was positioned along the junction between the vertical and horizontal test assemblies so that the cigarette is not less than 50 mm from the nearest side edge or from any marks left by any previous test and simultaneously started the clock.

4.2. TEST CRITERIA

The specimens can not have escalating combustion. Within the test duration, the specimen can not have flames reach the extremities (lower margin, either side or full thickness), burned until consumed, smolder to extremities (lower margin, either side or full thickness), or smolder until consumed. On final examination, the specimens cannot have char >100 mm in any direction apart from upwards from the location of the flame source.
(Applies to smoldering ignition only.)

4.3. RESULTS AND OBSERVATIONS

TEST RESULTS

	CRITERIA	Test 1	Test 2
	Escalating combustion*	No	No
	Flames reach extremities*	No	No
	Burned until consumed*	No	No
	Smoldered to extremities*	No	No
	Smoldered until consumed*	No	No
	Char >100mm on final examination	No	No
	<i>*Within the test duration (1 hour from the beginning of the test)</i>		
Observations:	Both cigarettes smoldered their entire length		
	Other Information	Test 1	Test 2
	Vertical Panel Damaged Area (mm)	81 x 9 x 1.9	83 x 8 x 2.2
	Horizontal Panel Damaged Area (mm)	81 x 18 x 5.7	83 x 17 x 6.9
	Flames Extinguished	No	No
	Sample Ignite? Y/N	No	No
	Cigarette burn time (min)	23	26

The sample Evolution Mesh has met the criteria of with ISO 8191-1.

5 CONCLUSION

Intertek has conducted testing for Cascade Designs Inc. on Evolution Mesh to evaluate Ignitability of Upholstered Furniture with match-flame equivalent. Testing was conducted in accordance with ISO 8191-1:1987, Furniture - Assessment of Ignitability of Upholstered Furniture-Part 1: Ignition Source: Smoldering Cigarette.

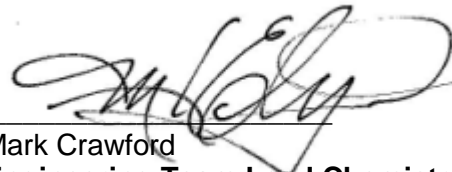
The sample Evolution Mesh has met the criteria of with ISO 8191-1.

The conclusions of this test report may not be used as part of the requirements for Intertek product certification. Authority to Mark must be issued for a product to become certified.

INTERTEK



Reported by: _____
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Reviewed by: _____
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Engineering Team Lead Chemistry/Small Scale Fire

REVISION SUMMARY

DATE	SUMMARY
July 27, 2015	Original Test Report
