



**ISO 8191-1 : 1987  
ASSESSMENT OF IGNITABILITY OF  
UPHOLSTERED FURNITURE  
PART 1  
IGNITION SOURCE: SMOULDERING CIGARETTE**

**TEST REPORT**

**Client:** Invacare Corporation  
**Address:** 899 Cleveland St.  
Elyria, Ohio 44036

**Received Date:** November 6, 2003

**Test Date:** November 18, 2003

**Report Date:** November 21, 2003

**Project No:** 11900-116509

**Sample Identification:** Ballistic Nylon/Soft Foam (Terminator-Soft)

**Description:**  
Ballistic Nylon-Finished side to outside (outer cover)  
Soft Foam

*The test specimen identification is as provided by the client and Omega Point Laboratories, Inc. accepts no responsibility for any inaccuracies therein. Omega Point did not select the specimen and has not verified the composition, manufacturing techniques or quality assurance procedures.*

**Sample Conditioning:** 73.4±4°F and 50±5% R.H. for 24 hrs.

**Summary of Test Method:** The specimen was tested in accordance to ISO 8191 part 1. This standard is for assessing the ignitability of material combinations. The combinations of filling materials and fabrics are tested as a seat. The ignition source used is a smoldering cigarette. The cigarette is lit and placed along the junction between the seat and back of the test specimen as specified in the standard. If ignition or smoldering after 1 hour is not observed, then a replicate test is performed. Both test runs must meet the test criteria to pass this test standard.

**Omega Point Laboratories, Inc.**  
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Elmendorf, Texas 78112-9784  
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**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 can not have char >100 mm in any direction apart from upwards from the location of the flame source. (Applies to smoldering ignition only.)

*The following test results relate only to the ignitability of the combination of materials under the particular test conditions; they are not intended as a means of assessing the full potential fire hazard of the materials in use.*

**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 > 100 mm on final examination	No	No

*\*Within the test duration (1 hour from the beginning of the test)*

Other Information	Test 1	Test 2
Vertical Panel Damaged Area	8mmx80mmx1mm	9mmx80mmx1mm
Horizontal Panel Damaged Area	9mmx75mmx1mm	9mmx79mmx1mm
Flames Extinguished	No	No



**Conclusion: The sample submitted and described herein PASSED the criteria.**

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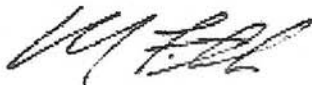
This report contains a total of three pages.



Servando Romo  
Manager, Small Scale Testing

11-21-03  
Date

Reviewed and approved:



William E. Fitch, P.E. No. 55296

11-21-03  
Date





**ISO 8191-2 : 1988  
ASSESSMENT OF IGNITABILITY OF  
UPHOLSTERED FURNITURE  
PART 2  
IGNITION SOURCE: MATCH-FLAME EQUIVALENT**

**TEST REPORT**

**Client:** Invacare Corporation  
**Address:** 899 Cleveland St.  
Elyria, Ohio 44036

**Received Date:** November 6, 2003

**Test Date:** November 19, 2003

**Report Date:** November 21, 2003

**Project No:** 11900-116510

**Sample Identification:** Ballistic Nylon/Soft Foam (Terminator-Soft)

**Description:**

Ballistic Nylon-Finished side to outside (outer cover)  
Soft Foam

*The test specimen identification is as provided by the client and Omega Point Laboratories, Inc. accepts no responsibility for any inaccuracies therein. Omega Point did not select the specimen and has not verified the composition, manufacturing techniques or quality assurance procedures.*

**Sample Conditioning:** 73.4±4°F and 50±5% R.H. for 24 hrs.

**Summary of Test Method:** The specimen was tested in accordance to ISO 8191 part 2. This standard is for assessing the ignitability of material combinations. The combinations of filling materials and fabrics are tested as a seat. The source flame used is source 1, which is a gas flame (match-flame equivalent). For this ignition source, a 35 mm high flame is impinged along the junction between the seat and back of the test specimen for 20 seconds as specified in the standard. If ignition or smoldering after 1 hour is not observed, then a replicate test is performed. Both test runs must meet the test criteria to pass this test standard.

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**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 can not have char >100 mm in any direction apart from upwards from the location of the flame source. (Applies to smoldering ignition only.)

*The following test results relate only to the ignitability of the combination of materials under the particular test conditions; they are not intended as a means of assessing the full potential fire hazard of the materials in use.*

**TEST RESULTS**

<b>CRITERIA</b>	<b>Test 1</b>	<b>Test 2</b>
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 > 100 mm on final examination	No	No

*\*Within the test duration (1 hour from the beginning of the test)*

<b>Other Information</b>	<b>Test 1</b>	<b>Test 2</b>
Vertical Panel Damaged Area	18mm x 43mm x 4mm	20mm x 52mm x 5mm
Horizontal Panel Damaged Area	16mm x 7mm x 3mm	7mm x 6mm x 4mm
Flames Extinguished	No	No



**Conclusion: The sample submitted and described herein PASSED the criteria.**

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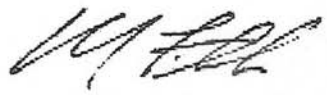
This report contains a total of three pages.



Servando Romo  
Manager, Small Scale Testing

11-21-03  
Date

Reviewed and approved:

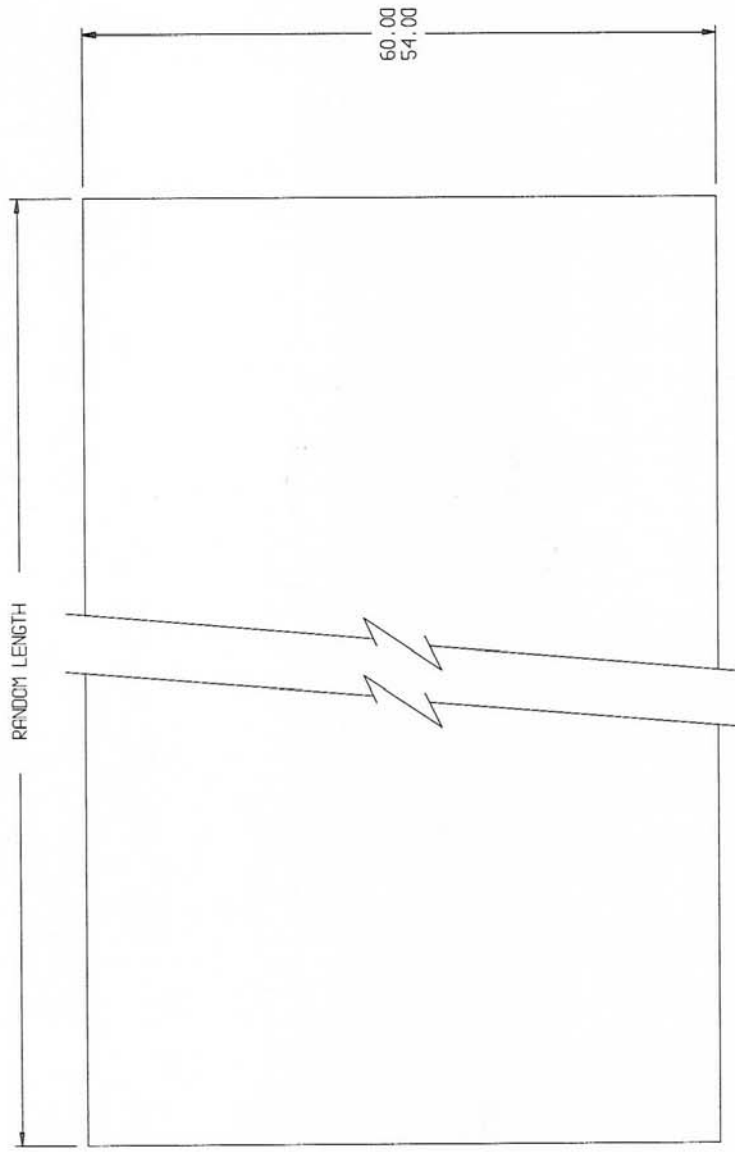


William E. Fitch, P.E. No. 55296

11-21-03  
Date



PART NO.  
1029440

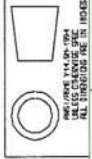


MANUFACTURER:  
FAIRHAVEN TEXTILES

NOTES:

- MATERIAL: BLACK NO. 850 DEN-BALLISTIC MATERIAL  
W/ 1/2 OZ. URETHANE BACK COATING.

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B		11/4/51	UPH, NYLON U850
			INVACARE CORP. ELVRIA OHIO
			PART NO. 1029440

5-10

VEND INQ] \_\_\_\_\_ [10/20/06  
RT ENTRY] \*\*\* VENDOR MAINTENANCE \*\*\* 09:18:23

Vendor Nbr: 141120 Supplier Rpt: Y Interplant Sup:  
PC: IT: Prt P/O:  
Ven Name: DURO IND./FAIRHAVEN TEXTILE Abbr Name: Sts/Type: 2 INVT  
Qual Ven: U Temp Ind: N 1099 Ind: N SIC Code: 0001  
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