

Report # K-418777-01-R00

Samples Received:
NOV 17, 2014

Samples Tested:
NOV 27, 2014

Test Report

Kinectrics Inc., 800 Kipling Avenue, Unit 2
Toronto, Ontario, Canada
Tel: 416-207-6000, www.kinectrics.com



Tested for

Stern and Stern Industries
188 Thacher Street
Hornell, NY 1483
607-324-4485

Contact information for item tested:

Test item description

Style HT541-70
Fibre Blend: Nomex with anti-static grid
Colour: Sage Green
Nominal Weight: 10.57 oz/yd²
Weight as Tested: 11.2 oz/yd²
Samples laundered and cut by Stern and Stern Industries

Reference Standard

ASTM F1959/F1959M-12
Standard Test Method for Determining the Arc Rating of Materials for Clothing

Test Parameters:

Test current: 8 kA	Number of samples analysed: 21
Arc Gap: 30 cm	
Distance to Fabric: 30 cm	Incident Energy Range: 8 to 17 cal/cm ²

Arc Rating, ATPV = 12 Cal/cm²
Heat Attenuation Factor, HAF = 78%

No variations to standard method noted.
Break-open Ebt not achieved or determined.
Samples tested as received, pre-test laundering as required by standard was arranged by client.

Summary

The Arc Rating of this material is intended for use as part of a flame resistant garment or system for workers exposed to electric arcs. The test result is applicable only to the test item as described; other fiber blends, weaves, finishing or dye may have different protection level. The test articles are tested as received; no test is done to validate the fiber content or composition. The Arc Rating was calculated based on the data obtained and analysed in accordance with the latest version of the applicable standards. The individual test sheets, graphs, photographs of the samples and video of every test are provided in digital format to the Client for review.

The arc testing performed to the above mentioned Standard is accredited by the Standards Council of Canada (SCC) to conform to the requirements of CAN-P-4E (ISO/IEC 17025:2005). Accreditation by the Standards Council of Canada (SCC) is a mark of competence and reliability recognized throughout the world.

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Note: The test performed does not apply to electrical contact or electrical shock hazard.

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Prepared by:

Approved by:

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HCL Technologist
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Claude Maurice
Test laboratory manager
Kinectrics Inc.

Note: For verification about results in this report, please forward copy of the report or inquiry to hcl@kinectrics.com

Date:
NOV 27, 2014

Determination of ATPV by performing logistic regression on the panel burn response as indicated in Summary Table

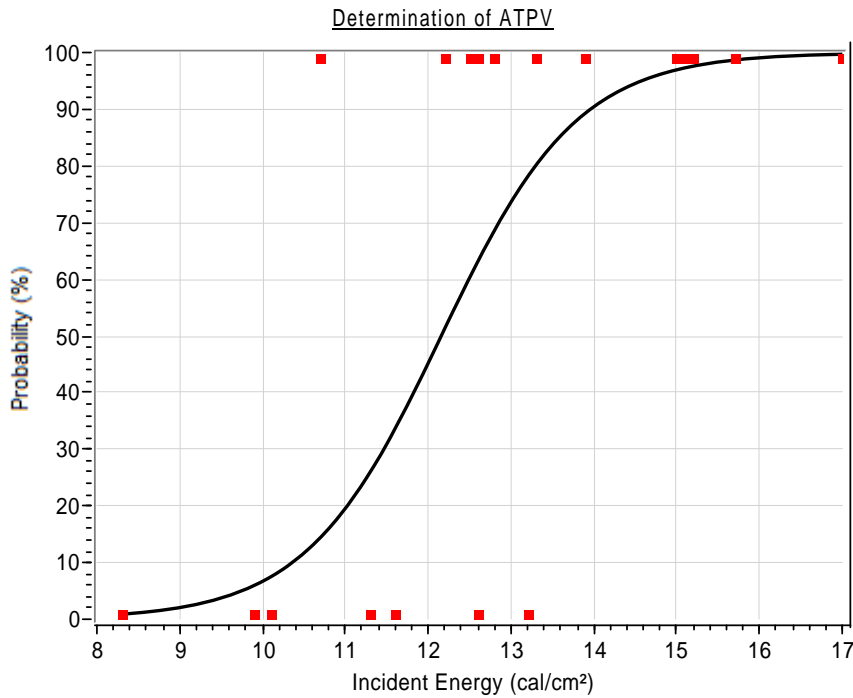


Report #
K-418777-01-R00

Test Performed in accordance with: ASTM F1959/F1959M-12

Fabric Description:

Style HT541-70
 Fibre Blend: Nomex with anti-static grid
 Colour: Sage Green
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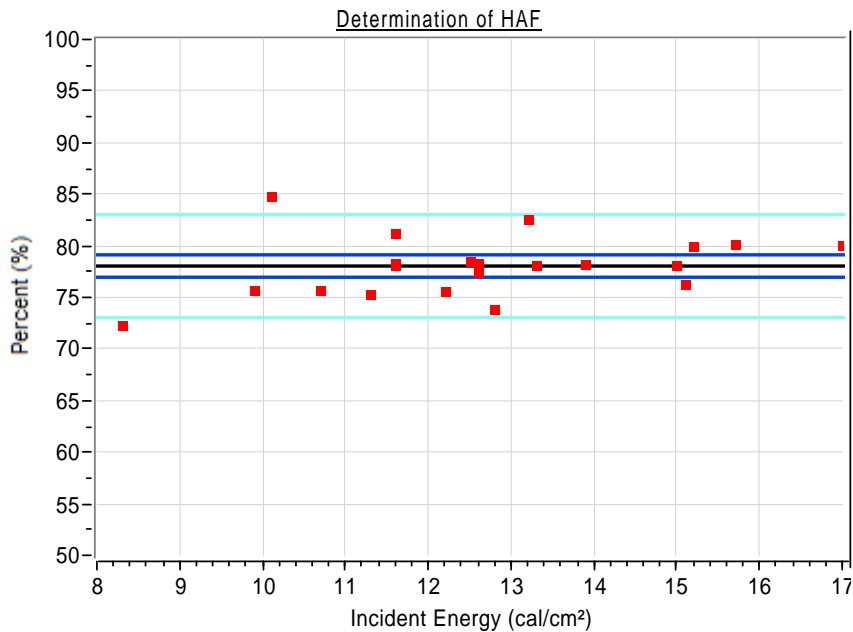


ATPV = 12 cal/cm²

Probability	Ei
5%	9.7
10%	10.4
20%	11.0
30%	11.5
40%	11.8
50%	12.2
60%	12.5
70%	12.9
80%	13.3
90%	14.0

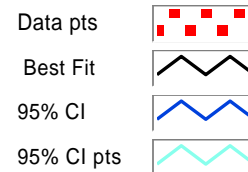
(Note: ATPV is reported to nearest integer for ratings above 10 cal/cm²)

Total points analyzed = 21
Points above Stoll = 12
Points above mix zone = 7
Points below mix zone = 3
Pts within 20% = 15
Pts in mix zone = 11



HAF = 78 %

Confidence Intervals
 95% CI = 76.9 , 79.1



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Summary of Measured Energy and Observations



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	Test #	Panel	Test Current A	Cycles of 60Hz	Ei Cal/cm ²	SCD Cal/cm ²	HAF %	>Stoll Y/N	Break Open Y/N	Ablation Y/N	After Flame sec.	Omit Y/N	Comment
1	K-411777-7858	A	8334	12.2	8.3	-0.3	72.3	No	-	-	-	No	
2	K-411777-7858	B	8334	12.2	13.2	-0.1	82.6	No	-	-	-	No	
3	K-411777-7858	C	8334	12.2	9.9	-0.1	75.7	No	-	-	-	No	
4	K-418777-7859	A	8281	15.2	11.3	-0.1	75.3	No	-	-	-	No	
5	K-418777-7859	B	8281	15.2	12.6	0.2	77.5	Yes	-	-	-	No	
6	K-418777-7859	C	8281	15.2	12.5	0.1	78.5	Yes	-	-	-	No	
7	K-418777-7860	A	8349	16.2	12.2	0.3	75.6	Yes	-	-	-	No	
8	K-418777-7860	B	8349	16.2	15.0	0.5	78.1	Yes	-	-	-	No	
9	K-418777-7860	C	8349	16.2	15.7	0.3	80.2	Yes	-	-	-	No	
10	K-418777-7861	A	8349	15.7	11.6	-0.3	81.2	No	-	-	-	No	
11	K-418777-7861	B	8349	15.7	12.6	-0.1	78.3	No	-	-	-	No	
12	K-418777-7861	C	8349	15.7	12.8	0.6	73.9	Yes	-	-	-	No	
13	K-418777-7862	A	8336	16.7	11.6	-0.2	78.1	No	-	-	-	No	
14	K-418777-7862	B	8336	16.7	15.1	0.8	76.3	Yes	-	-	-	No	
15	K-418777-7862	C	8336	16.7	13.9	0.4	78.2	Yes	-	-	-	No	
16	K-418777-7863	A	8350	16.2	11.6	-0.1	78.3	No	-	-	-	No	
17	K-418777-7863	B	8350	16.2	17.0	0.7	80.1	Yes	-	-	-	No	
18	K-418777-7863	C	8350	16.2	13.3	0.1	78.1	Yes	-	-	-	No	
19	K-418777-7864	A	8381	14.2	10.1	-0.5	84.8	No	-	-	-	No	
20	K-418777-7864	B	8381	14.2	10.7	0.0	75.7	Yes	-	-	-	No	
21	K-418777-7864	C	8381	14.2	15.2	0.2	80.0	Yes	-	-	-	No	
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No afterflame observed.