

Report # K-418926-1606P23-R00

Samples Received:
Jun-07-16

Samples Tested:
Jun-14-16

Test Report

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



Tested for

ArcWear
3018 Eastpoint Parkway
Louisville, KY 40223
502-333-0510

Contact information for item tested:

Stern & Stern Industries, Inc.
188 Thacher St
Hornell, NY 14843
607-324-4485

Test item description

Stern & Stern Industries, Inc.,
Style Chem - Arc 8, 8.3 oz/yd² 281 g/m² Plain,
99% Nomex 1% Anti-static, Green,
AAD 8.5 oz/yd² 288 g/m²,
ArcWear# 1606P23

Reference Standard

ASTM F1959/F1959M-14
Standard Test Method for Determining the Arc Rating of Materials for Clothing

Test Parameters:

Test current: 8 kA	Number of samples analysed: 27
Arc Gap: 30 cm	
Distance to Fabric: 30 cm	Incident Energy Range: 5 to 13 cal/cm ²

Arc Rating, ATPV = 8.7 Cal/cm²
Heat Attenuation Factor, HAF = 74%

No variations to standard method noted.

Samples tested as received, pre-test laundering as required by standard was arranged by client.

Test 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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Kinectrics Inc.

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

Date:
Jun-14-16

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

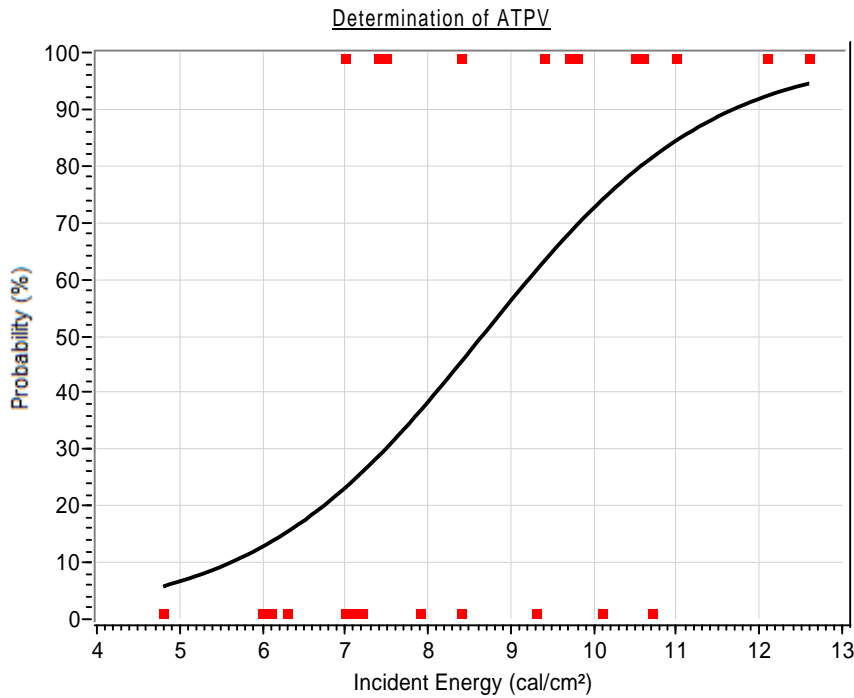


Report #
K-418926-1606P23-R00

Test Performed in accordance with: ASTM F1959/F1959M-14

Fabric Description:

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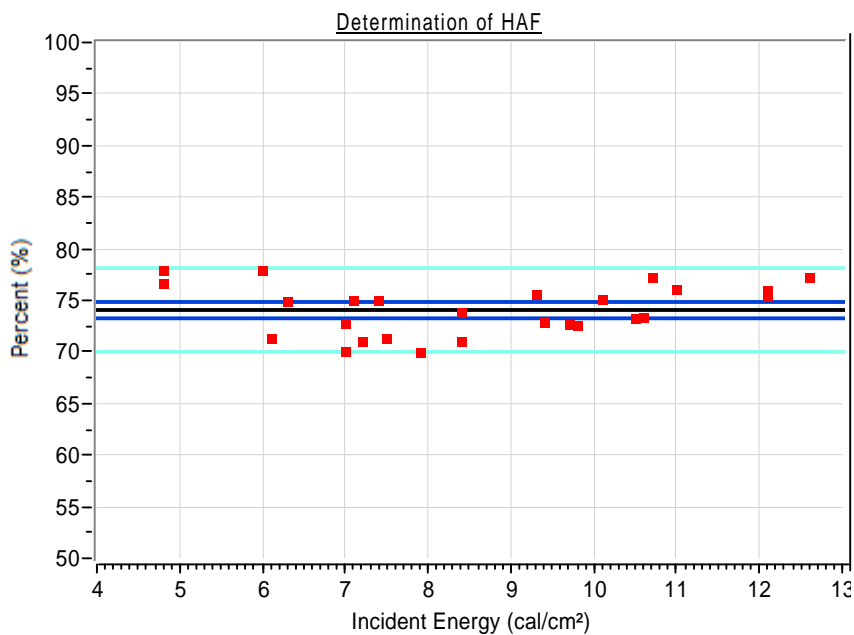


ATPV = 8.7 cal/cm²

Probability	Ei
5%	4.8
10%	5.6
20%	6.7
30%	7.5
40%	8.1
50%	8.7
60%	9.2
70%	9.8
80%	10.6
90%	11.7

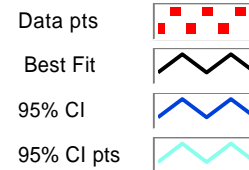
(Note: ATPV is reported to nearest integer for ratings above 10 cal/cm²)

Total points analyzed = 27
Points above Stoll = 13
Points above mix zone = 4
Points below mix zone = 5
Pts within 20% = 15
Pts in mix zone = 18



HAF = 74 %

Confidence Intervals
95% CI = 73.2 , 74.8



Date:
Jun-14-16

Summary of Measured Energy and Observations

Test Performed in accordance with : ASTM F1959/F1959M-14



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ArcWear# 1606P23

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-418926-3001	A	8412	10.2	7.2	-0.2	71.1	No	N	-	-	No
2	K-418926-3001	B	8412	10.2	8.4	-0.2	73.9	No	N	-	-	No
3	K-418926-3001	C	8412	10.2	7.1	-0.1	75.0	No	N	-	-	No
4	K-418926-3002	A	8336	12.2	7.9	-0.1	70.0	No	N	-	-	No
5	K-418926-3002	B	8336	12.2	10.7	-0.1	77.2	No	N	-	-	No
6	K-418926-3002	C	8336	12.2	9.7	0.3	72.7	Yes	N	-	-	No
7	K-418926-3003	A	8293	14.2	10.6	0.3	73.4	Yes	N	-	-	No
8	K-418926-3003	B	8293	14.2	12.1	0.3	76.0	Yes	Y	-	-	No
9	K-418926-3003	C	8293	14.2	12.6	0.5	77.2	Yes	Y	-	-	No
10	K-418926-3004	A	8328	13.2	10.5	0.1	73.3	Yes	N	-	-	No
11	K-418926-3004	B	8328	13.2	10.1	-0.1	75.1	No	N	-	-	No
12	K-418926-3004	C	8328	13.2	11.0	0.3	76.1	Yes	N	-	-	No
13	K-418926-3005	A	8332	13.7	9.4	0.2	72.9	Yes	N	-	-	No
14	K-418926-3005	B	8332	13.7	12.1	0.4	75.5	Yes	Y	-	-	No
15	K-418926-3005	C	8332	13.7	9.8	0.3	72.6	Yes	N	-	-	No
16	K-418926-3006	A	8170	11.2	7.5	0.0	71.3	Yes	N	-	-	No
17	K-418926-3006	B	8170	11.2	9.3	-0.1	75.6	No	N	-	-	No
18	K-418926-3006	C	8170	11.2	8.4	0.2	71.1	Yes	N	-	-	No
19	K-418926-3007	A	8290	9.2	7.0	0.0	70.1	Yes	N	-	-	No
20	K-418926-3007	B	8290	9.2	7.0	-0.3	72.8	No	N	-	-	No
21	K-418926-3007	C	8290	9.2	7.4	0.0	75.0	Yes	N	-	-	No
22	K-418926-3008	A	8339	7.7	6.1	-0.3	71.3	No	N	-	-	No
23	K-418926-3008	B	8339	7.7	6.0	-0.4	77.9	No	N	-	-	No
24	K-418926-3008	C	8339	7.7	7.0	-0.1	72.8	No	N	-	-	No
25	K-418926-3009	A	8414	6.7	4.8	-0.7	77.9	No	N	-	-	No
26	K-418926-3009	B	8414	6.7	6.3	-0.2	74.9	No	N	-	-	No
27	K-418926-3009	C	8414	6.7	4.8	-0.5	76.7	No	N	-	-	No
28												
29												
30												
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37												

No evidence of afterflame in samples tested.