

Report # K-352233-2003P17-R00

Samples Received:
Feb-26-20

Samples Tested:
Mar-17-20

Test Report

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



Tested for

ArcWear.com
3018 Eastpoint Parkway
Louisville, KY 40223
ArcTesting@ArcWear.com

Contact information for item tested:

SSM Industries, Inc.
211 Ellis St.
Spring City, TN 37381
423-365-2418

Test item description

SSM Industries, Inc.,
Style 58424.2, 6.3 oz/yd² 212 g/m² Interlock,
100% FR Cotton, Navy,
AAD 7.2 oz/yd² 244 g/m²,
ArcWear# 2003P17

Reference Standard

ASTM F1959/F1959M-14e1
Standard Test Method for Determining the Arc Rating of Materials for Clothing

Test Parameters:

Test current: 8 kA
Distance to Fabric: 30 cm
Arc Gap: 30 cm

Number of samples analysed: 24
Incident Energy Range: 8 to 15 cal/cm²

Arc Rating, Ebt = 13 Cal/cm²
Heat Attenuation Factor, HAF = 84%

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.

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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:
Mar-17-20

Determination of Ebt by performing logistic regression on the panel
break-open response as indicated in Summary Table



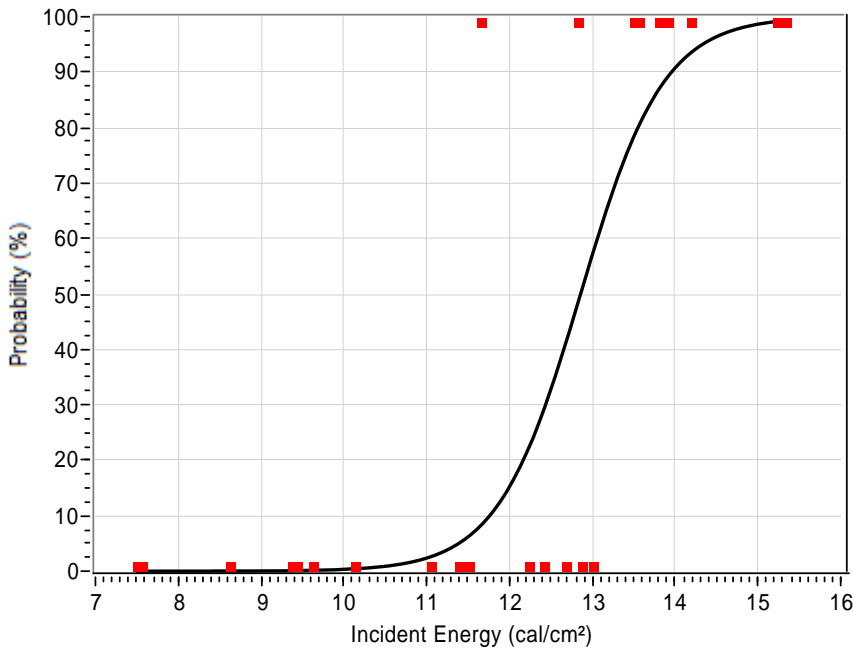
Report #
K-352233-2003P17-R00

Test Performed in accordance with: ASTM F1959/F1959M-14e1

Fabric Description:

SSM Industries, Inc.,
Style 58424.2, 6.3 oz/yd² 212 g/m² Interlock,
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ArcWear# 2003P17

Determination of Ebt, 50% of Probability of Breakopen



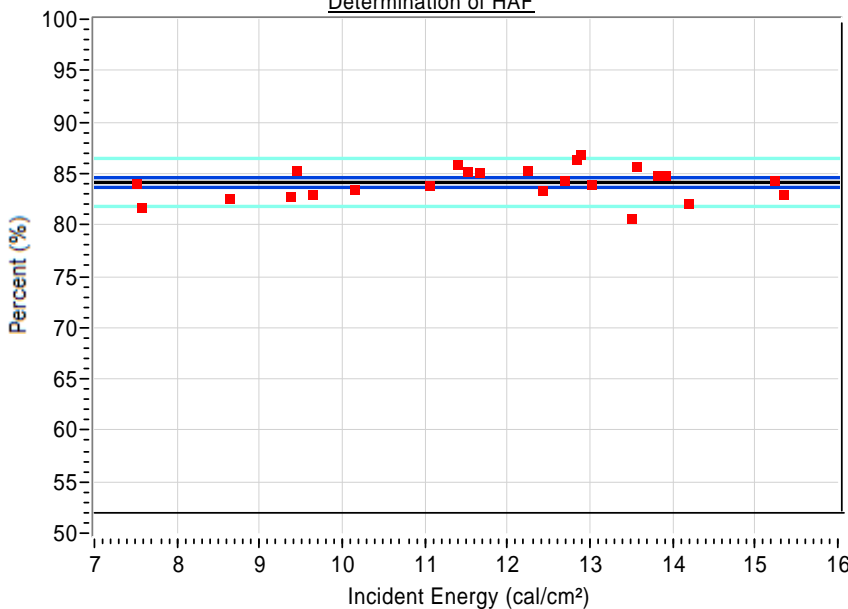
Ebt = 13 cal/cm²

Probability	Ei
5%	11.4
10%	11.8
20%	12.2
30%	12.4
40%	12.7
50%	12.9
60%	13.1
70%	13.3
80%	13.6
90%	14.0

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

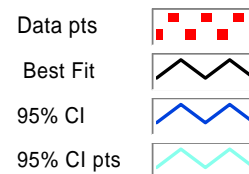
Total points analyzed = 24
Points Break-Open = 9
Points above mix zone = 7
Points below mix zone = 10
Pts within 20% = 17
Pts in mix zone = 7

Determination of HAF



HAF = 84 %

Confidence Intervals
95% CI = 83.5 , 84.5



Date:
Mar-17-20

Summary of Measured Energy and Observations



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Fabric SSM Industries, Inc.,
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AAD 7.2 oz/yd² 244 g/m²,
ArcWear# 2003P17

	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-352233-1622	A	8356	9.2	8.63	-0.26	82.6	No	N	-	0	No	
2	K-352233-1622	B	8356	9.2	7.50	-0.46	84.1	No	N	-	0	No	
3	K-352233-1622	C	8356	9.2	7.56	-0.36	81.7	No	N	-	0	No	
4	K-352233-1623	A	8276	11.2	9.37	-0.26	82.8	No	N	-	0	No	
5	K-352233-1623	B	8276	11.2	9.44	-0.40	85.3	No	N	-	0	No	
6	K-352233-1623	C	8276	11.2	9.63	-0.31	83.0	No	N	-	0	No	
7	K-352233-1624	A	8217	15.2	13.01	-0.00	84.0	No	N	-	0	No	
8	K-352233-1624	B	8217	15.2	11.05	-0.14	83.9	No	N	-	0	No	
9	K-352233-1624	C	8217	15.2	12.68	-0.17	84.3	No	N	-	0	No	
10	K-352233-1625	A	8155	18.2	14.19	0.57	82.1	Yes	Y	-	1	No	
11	K-352233-1625	B	8155	18.2	13.56	0.12	85.7	Yes	Y	-	0	No	
12	K-352233-1625	C	8155	18.2	15.23	0.62	84.3	Yes	Y	-	0	No	
13	K-352233-1626	A	8198	17.2	13.50	0.96	80.7	Yes	Y	-	3	No	
14	K-352233-1626	B	8198	17.2	12.88	-0.29	86.9	No	N	-	0	No	
15	K-352233-1626	C	8198	17.2	13.91	0.07	84.8	Yes	Y	-	1	No	
16	K-352233-1627	A	8184	16.2	15.34	0.92	83.0	Yes	Y	-	1.5	No	
17	K-352233-1627	B	8184	16.2	12.83	-0.31	86.4	No	Y	-	0	No	
18	K-352233-1627	C	8184	16.2	11.51	-0.28	85.2	No	N	-	1	No	
19	K-352233-1628	A	8185	15.7	13.81	0.20	84.8	Yes	Y	-	0	No	
20	K-352233-1628	B	8185	15.7	11.66	-0.13	85.1	No	Y	-	0	No	
21	K-352233-1628	C	8185	15.7	12.42	-0.08	83.4	No	N	-	1	No	
22	K-352233-1629	A	8234	13.7	12.24	-0.23	85.3	No	N	-	0	No	
23	K-352233-1629	B	8234	13.7	10.14	-0.30	83.5	No	N	-	1	No	
24	K-352233-1629	C	8234	13.7	11.39	-0.39	85.9	No	N	-	0	No	
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7 samples exhibited afterflame with an average duration of 1.4 seconds.
There was evidence of breakopen in 9 of the samples tested.