

Date:
Monday, February 17,

Report #
K-3514-007

High Current Test Laboratory
Kinectrics Inc., Canada
Test Summary



Client

Westex Inc

Fabric description

Style 315, 12.6 oz, USS green

Reference Standard

ASTM F1959/F1959M-04 Standard Test Method for Determining the Arc Rating of Materials for Clothing

Test Parameters:

Test current: 8.23kA

Number of samples analysed: 21

Distance to Fabric: 12

Incident Energy Range: 10 to 16 cal/cm²

Arc Gap: 12

Summary

The arc rating of this material is intended for use as flame resistant clothing for workers exposed to electric arcs. The material used in this test method are in the form of flat specimens, actual performance of the complete garment may vary depending on the final design and assembly of the garment. This test method does not apply to the electrical contact or electrical shock hazard.

The original arc exposure for this fabrics was performed under ASTM F1959/F1959M-99. The raw data was re-analysed and the arc rating calculated to comply with ASTM F1959/F1959M-04.

**Arc Thermal Performance Value, ATPV = 12.9 Cal/cm²
Heat Attenuation Factor, HAF = 80.1%**

Panel data and observations of the fabric samples after the arc exposure were collected and summarized in the attached table. The graphs and statistics on the attached sheets provide more detailed information to better understand the Arc Rating assigned to this material. The client shall review this full report, the video recordings of the arc exposure and the photographs of the samples after the test to determine if the material meets the intended specification.

Test performed by:

Josh Moody, Westex Inc

Contact information

Spare

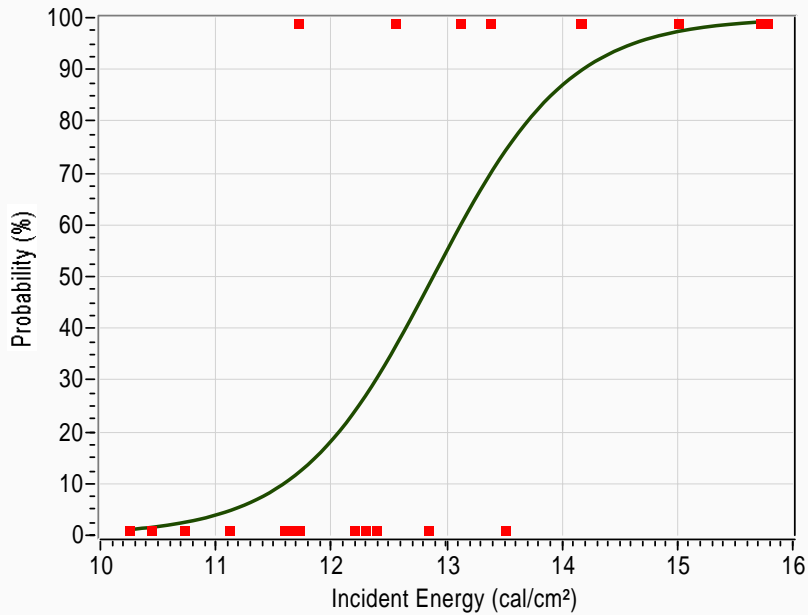
ASTM F1959/F1959M-04
Standard Test Method for Determining the Arc Rating of Materials for Clothing



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Determination of ATPV, 50% Probability of 2nd Degree Burn

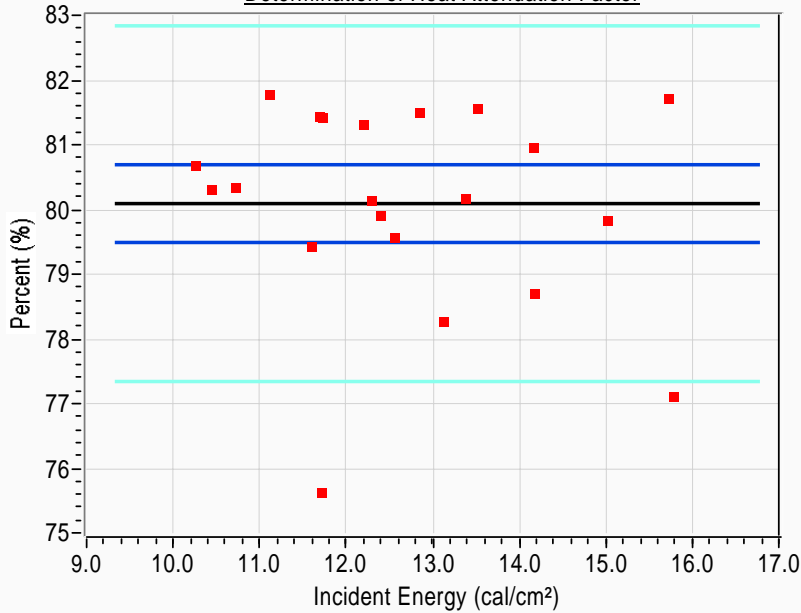


ATPV = 12.9 cal/cm²

Probability of Burn	E _i
5%	11.1
10%	11.6
20%	12.1
30%	12.4
40%	12.6
50%	12.9
60%	13.1
70%	13.4
80%	13.7
90%	14.2

- # Pts = 21
- # Pts above Stoll = 9
- # Pts Break-Open = 0
- # Pts always >STOLL = 5
- # Pts always <STOLL = 6
- # Pts within 20% = 18
- # Pts in mix zone = 10

Determination of Heat Attenuation Factor



HAF = 80.1 %

Confidence Intervals
95% CI = 79.5 , 80.7

- Data pts
- Best Fit
- 95% CI
- 95% CI pts

ASTM F1959/F1959M-04
Standard Test Method for Determining the Arc Rating of Materials for



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Test #	Panel	Cycles # (60Hz)	Ei cal/cm ²	SCD cal/cm ²	HAF %	Burn yes/no	Break Open Y/N	After Flame sec.	Omit Y/N	Comment	Ignition T-shirt	
1	03-390	A	18.1	15.78	1.01	77.12	Yes	-	-	No	-	-
2	03-390	B	18.1	14.17	0.45	78.70	Yes	-	-	No	-	-
3	03-390	C	18.1	15.01	0.34	79.83	Yes	-	-	No	-	-
4	03-391	A	17.2	15.72	0.22	81.72	Yes	-	-	No	-	-
5	03-391	B	17.2	13.38	0.10	80.18	Yes	-	-	No	-	-
6	03-391	C	17.2	13.12	0.23	78.27	Yes	-	-	No	-	-
7	03-392	A	14.7	11.59	-0.11	79.44	No	-	-	No	-	-
8	03-392	B	14.7	11.71	0.45	75.63	Yes	-	-	No	-	-
9	03-392	C	14.7	11.11	-0.35	81.78	No	-	-	No	-	-
10	03-393	A	14.1	11.68	-0.32	81.44	No	-	-	No	-	-
11	03-393	B	14.1	12.84	-0.13	81.51	No	-	-	No	-	-
12	03-393	C	14.1	10.44	-0.20	80.31	No	-	-	No	-	-
13	03-394	A	14.1	10.72	-0.36	80.35	No	-	-	No	-	-
14	03-394	B	14.1	11.72	-0.27	81.42	No	-	-	No	-	-
15	03-394	C	14.1	10.25	-0.40	80.68	No	-	-	No	-	-
16	03-395	A	16.1	14.16	0.16	80.97	Yes	-	-	No	-	-
17	03-395	B	16.1	12.20	-0.23	81.32	No	-	-	No	-	-
18	03-395	C	16.1	12.29	-0.17	80.15	No	-	-	No	-	-
19	03-396	A	16.1	13.51	-0.03	81.57	No	-	-	No	-	-
20	03-396	B	16.1	12.55	0.07	79.57	Yes	-	-	No	-	-
21	03-396	C	16.1	12.39	-0.02	79.92	No	-	-	No	-	-
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