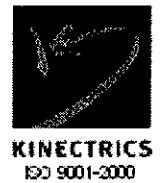


Date:
March 18, 2009

Report #
K-418157

High Current Test Laboratory
Kinectrics Inc., Canada
Test Summary



Client

DRIFIRE

Fabric description

Drifire, DriFire Style 2-7324/B69539AFAPJ Khaki, 7 oz/yd², 80% Modacrylic 15% Cotton 5% Para Aramid, Twill over DriFire Style 80142, Desert Sand, 75% Modacrylic 15% Cotton, 10% Nylon Tubular Jersey Knit, Laundered weight 6.0 oz/yd²

Reference Standard

ASTM F1959/F1959M-06 Standard Test Method for Determining the Arc Rating of Materials for Clothing

Test Parameters: Test current: 8kA
Distance to Fabric: 12 inches
Arc Gap: 12 inches
Number of samples analysed: 21
Incident Energy Range: 11 to 27 cal/cm²

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.

Based on the data obtained and analysed in accordance with the latest version of the applicable standards, the following Arc Rating was calculated.

**Material Break-Open Threshold Energy, Ebt = 21.6 Cal/cm²
Heat Attenuation Factor, HAF = 88.7%**

The measured data and observations of the test 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 item. 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:

Hugh Hoagland
Arcwear.com
502-314-7158
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Contact information

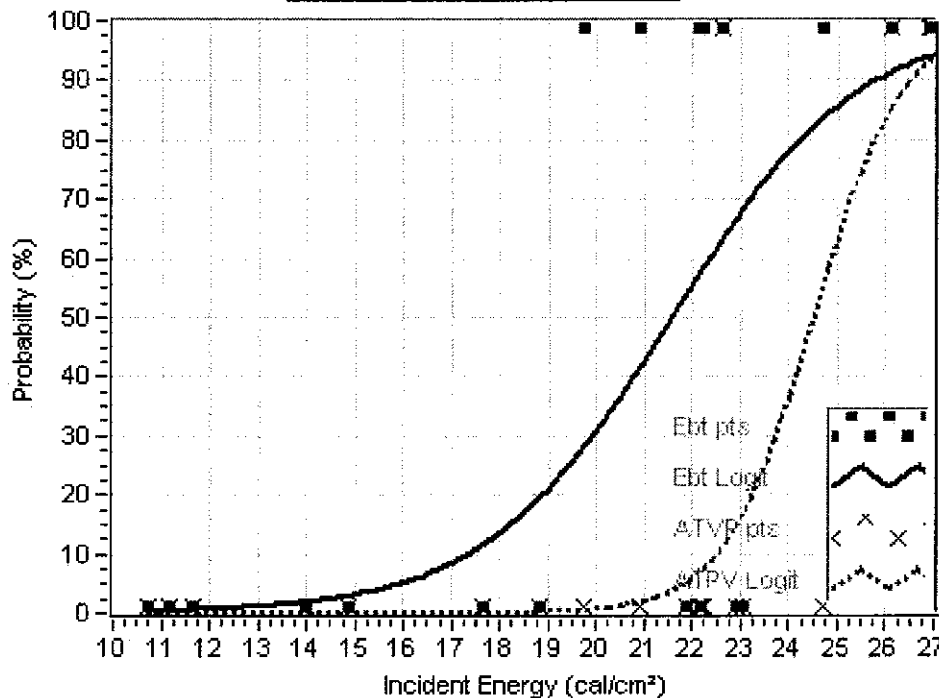
Rob Hines
DRIFIRE
(706) 507-7115
rhines@drifire.com



Client: DRIFIRE

Fabric: Drifire, DriFire Style 2-7324/B69539AFAPJ Khaki, 7 oz/yd², 80% Modacrylic 15% Cotton 5% Para Aramid, Twill over DriFire Style 80142, Desert Sand, 75% Modacrylic 15% Cotton, 10% Nylon Tubular Jersey Knit, Laundered weight 6.0 oz/yd²

Determination of Ebt, 50% of Probability of Breakopen with overlay of ATPV Logit curve

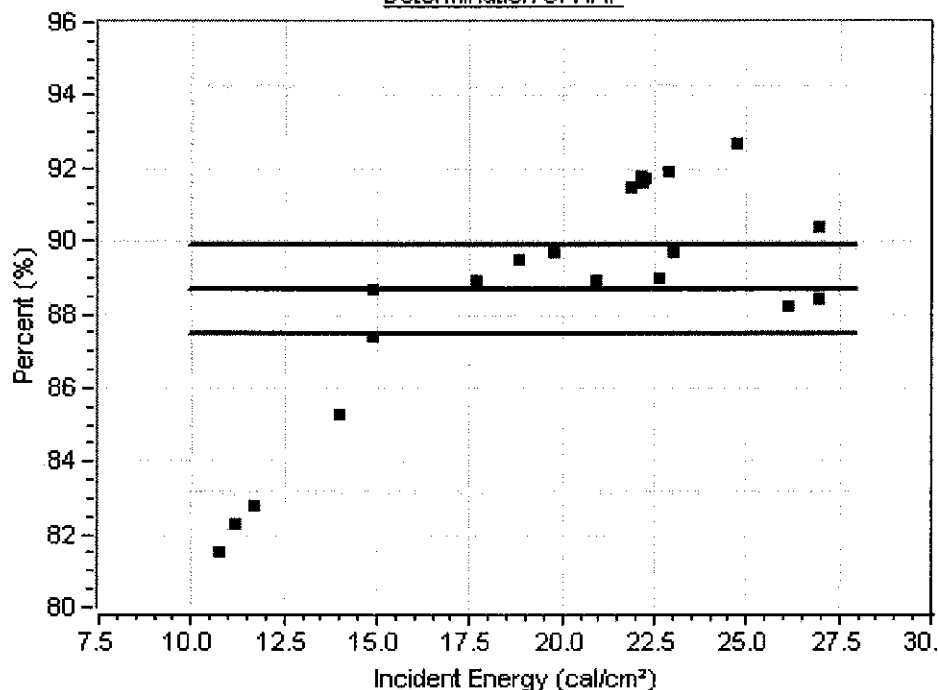


Ebt = 21.6 cal/cm²

Probability of Break-Open	Ei
5%	15.9
10%	17.3
20%	18.9
30%	19.9
40%	20.8
50%	21.6
60%	22.3
70%	23.2
80%	24.2
90%	25.8

Pts = 21
 # Pts above Stoll = 4
 # Pts Break-Open = 9
 # Pts above mix zone = 4
 # Pts below mix zone = 8
 # Pts within 20% = 12
 # Pts in mix zone = 9

Determination of HAF



HAF = 88.7 %

Confidence Intervals
 95% CI = 87.4, 89.9

Data pts
 Best Fit
 95% CI
 95% CI pts

**ASTM F1959/F1959M-06
Standard Test Method for Determining the Arc Rating of Materials for**



Client: DRIFIRE

Fabric Description: Drifire, Drifire Style 2-7324/B69539A/APJ Khaki, 7 oz/yd², 80% Modacrylic 15% Cotton 5% Para Aramid, Twill over Drifire Style 80142, Desert Sand, 75% Modacrylic 15% Cotton, 10% Nylon Tubular Jersey Knit, Laundered weight 6.0 oz/yd²

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	09-983	A	15.1	11.18	-0.71	82.3	No	0	No		
2	09-983	B	15.1	10.75	-0.55	81.5	No	0	No		
3	09-983	C	15.1	11.68	-0.50	82.8	No	0	No		
4	09-984	A	20.1	14.89	-0.68	87.4	No	0	No		
5	09-984	B	20.1	13.98	-0.41	85.3	No	0	No		
6	09-984	C	20.1	14.86	-0.62	88.7	No	0	No	Ablation	
7	09-985	A	25.1	18.83	-0.48	89.5	No	0	No	Ablation	
8	09-985	B	25.1	17.66	-0.49	88.9	No	0	No	Ablation	
9	09-985	C	25.1	19.74	-0.29	89.7	No	0	No		
10	09-986	A	30.2	22.14	-0.53	91.8	No	0	No		
11	09-986	B	30.2	22.63	0.83	89.0	Yes	0	No		
12	09-986	C	30.2	21.87	-0.43	91.5	No	0	No	Ablation	
13	09-987	A	35.1	26.10	0.51	88.2	Yes	0	No		
14	09-987	B	35.1	26.93	1.21	88.4	Yes	0	No		
15	09-987	C	35.1	26.92	0.27	90.4	Yes	0	No		
16	09-988	A	29.1	22.16	-0.48	91.6	No	0	No		
17	09-988	B	29.1	20.90	-0.17	88.9	No	0	No		
18	09-988	C	29.1	22.23	-0.29	91.7	No	0	No		
19	09-989	A	31.2	22.91	-0.52	91.9	No	0	No		
20	09-989	B	31.2	24.72	-0.26	92.7	No	0	No		
21	09-989	C	31.2	23.04	-0.31	89.7	No	0	No		
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