Date: March 20, 2006	High Current Test Laboratory Kinectrics Inc., Canada Test Summary	KINECTRICS ISO 9001-2000
Report # K-422666		

Client

Westex, Inc.
2845 W. 48th Place
Chicago, IL 60632

Fabric description

12 oz/yd² Style 180 Fleece , Navy

Reference Standard

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

Test Parameters: Test current: 7.98kA
Distance to Fabric: 12"
Arc Gap: 12"

Number of samples analysed: 21
Incident Energy Range: 17 to 28 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 = 21.8 Cal/cm²
Heat Attenuation Factor, HAF = 90.9%

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:

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

KINECTRICS
ISO 9001-2000

Client: Westex, Inc.
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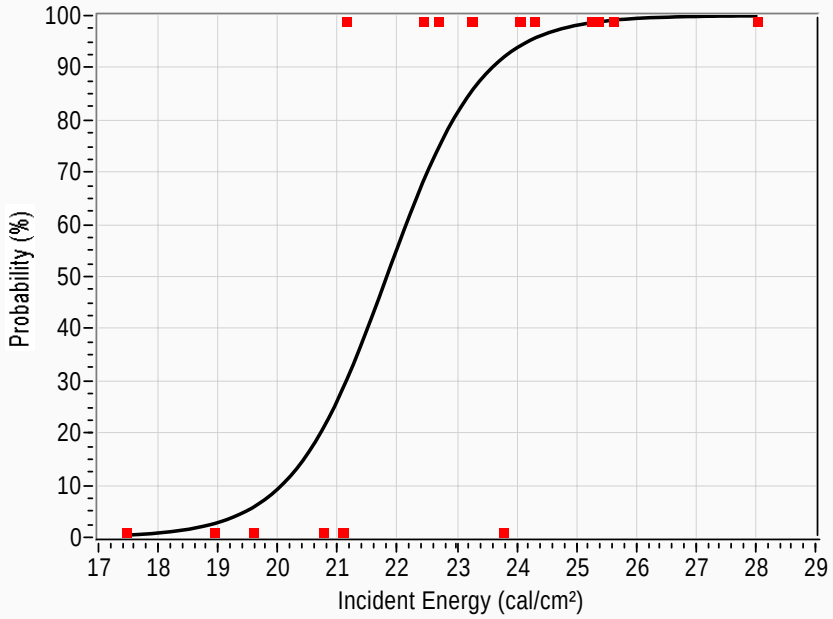
Chicago, IL 60632

Fabric Description: 12 oz/yd² Style 180 Fleece , Navy

Determination of Ebt, 50% of Probability of Breakopen

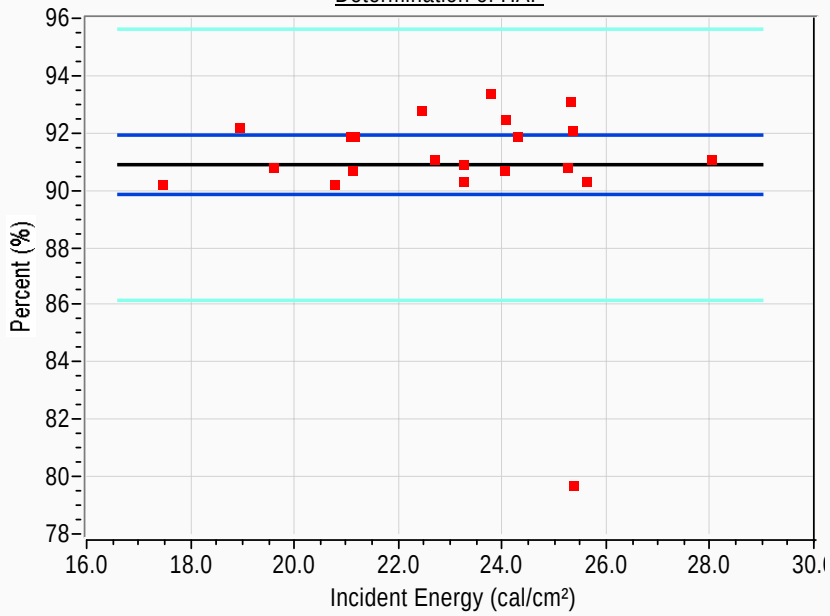


Ebt = 21.8 cal/cm²

Probability of Break-Open	Ei
5%	19.5
10%	20.1
20%	20.7
30%	21.1
40%	21.5
50%	21.8
60%	22.2
70%	22.5
80%	22.9
90%	23.6

 # Pts = 21
 # Pts above Stoll = 2
 # Pts Break-Open = 14
 # Pts above mix zone = 9
 # Pts below mix zone = 6
 # Pts within 20% = 19
 # Pts in mix zone = 6

Determination of HAF



HAF = 90.9 %

Confidence Intervals
95% CI = 89.9 , 91.9

Data pts
Best Fit
95% CI
95% CI pts

Kinectrics WO: K-422666

March 20, 2006

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Fabric Description: 12 oz/yd² Style 180 Fleece , Navy

	Test #	Panel	Cycles # (60Hz)	Ei cal/cm²	SCD cal/cm²	HAF %	Burn yes/no	Break Open Y/N	After Flame sec.	Omit Y/N	Comment	Ignition T-shirt
1	06-1013	A	26.2	22.43	-0.73	92.8	No	Y	-	No		
2	06-1013	B	26.2	23.77	-0.74	93.4	No	-	-	No		
3	06-1013	C	26.2	21.08	-0.78	91.9	No	-	-	No		
4	06-1014	A	28.2	28.03	0.13	91.1	Yes	Y	1	No		
5	06-1014	B	28.2	25.30	-0.70	93.1	No	Y	-	No		
6	06-1014	C	28.2	20.76	-0.58	90.2	No	-	-	No		
7	06-1015	A	30.2	22.69	-0.49	91.1	No	Y	-	No		
8	06-1015	B	30.2	25.61	-0.03	90.3	No	Y	-	No		
9	06-1015	C	30.2	23.25	-0.34	90.3	No	Y	-	No		
10	06-1016	A	23.2	18.94	-0.95	92.2	No	-	-	No		
11	06-1016	B	23.2	21.14	-0.75	91.9	No	Y	-	No		
12	06-1016	C	23.2	17.46	-0.87	90.2	No	-	-	No		
13	06-1017	A	29.2	25.25	-0.02	90.8	No	Y	-	No		
14	06-1017	B	29.2	25.35	-0.55	92.1	No	Y	-	No		
15	06-1017	C	29.2	23.24	-0.51	90.9	No	Y	-	No		
16	06-1018	A	27.2	24.29	-0.54	91.9	No	Y	-	No		
17	06-1018	B	27.2	24.05	-0.77	92.5	No	Y	-	No		
18	06-1018	C	27.2	19.59	-0.91	90.8	No	-	-	No		
19	06-1019	A	29.1	24.04	-0.33	90.7	No	Y	-	No		
20	06-1019	B	29.1	25.36	2.52	79.7	Yes	Y	-	No		
21	06-1019	C	29.1	21.10	-0.80	90.7	No	-	-	No		
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