Report # K-352163-01-R00	Test Report Kinectrics Inc., 800 Kipling Avenue, Unit 2 Toronto, Ontario, Canada Tel: 416-207-6000, www.kinectrics.com
Samples Received: May-01-19 Samples Tested: May-03-19	

Tested for

Polison Corporation
David Cheng
david@polison.com
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Contact information for item tested:

Polison Corporation
David Cheng
david@polison.com
+886 7 7616842

Test item description

Polison Corporation, Faceshield;
Lens: Model FCA9, Polycarbonate, Thickness: 1.6 mm, Grey;
Hard Hat: Model HR36;
Chin Cup: Model C4, ABS;
Bracket: Model A8, ABS;

Reference Standard

ASTM F2178-17b
Standard Test Method for Determining the Arc Rating and Standard Specification for Eye or Face Protective Products

Test Parameters:

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

Number of samples analysed: 20

Incident Energy Range: 14 to 25 cal/cm²

Arc Rating, ATPV = 19 Cal/cm²
Heat Attenuation Factor, HAF = 92%

No variations to standard method noted.
Samples tested as received.

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.

Prepared by:

Yosbani Guerra
2019.05.30
17:55:08 -04'00'

Yosbani Guerra
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Kinectrics Inc.

Approved by:

Andrew Haines
2019.05.30
17:56:16 -04'00'

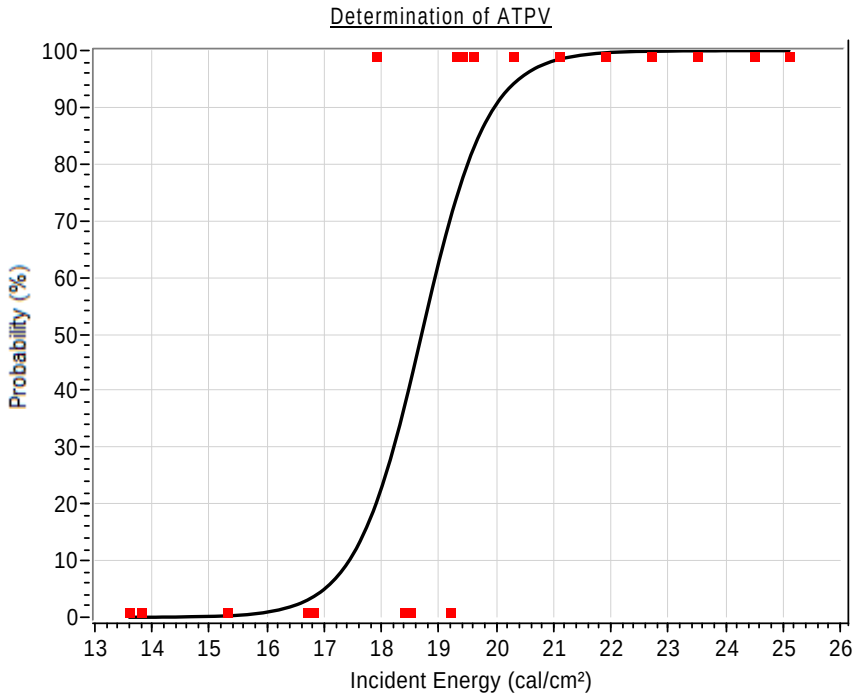
Andrew Haines
HCL Supervising Technologist
Kinectrics Inc.

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

Date: May-03-19	Determination of ATPV by performing logistic regression on the panel burn response as indicated in Summary Table
Report # K-352163-01-R00	Test Performed in accordance with: ASTM F2178-17b

Item Description:

Polison Corporation, Faceshield;
Lens: Model FCA9, Polycarbonate, Thickness: 1.6 mm, Grey;
Hard Hat: Model HR36;
Chin Cup: Model C4, ABS;
Bracket: Model A8, ABS;

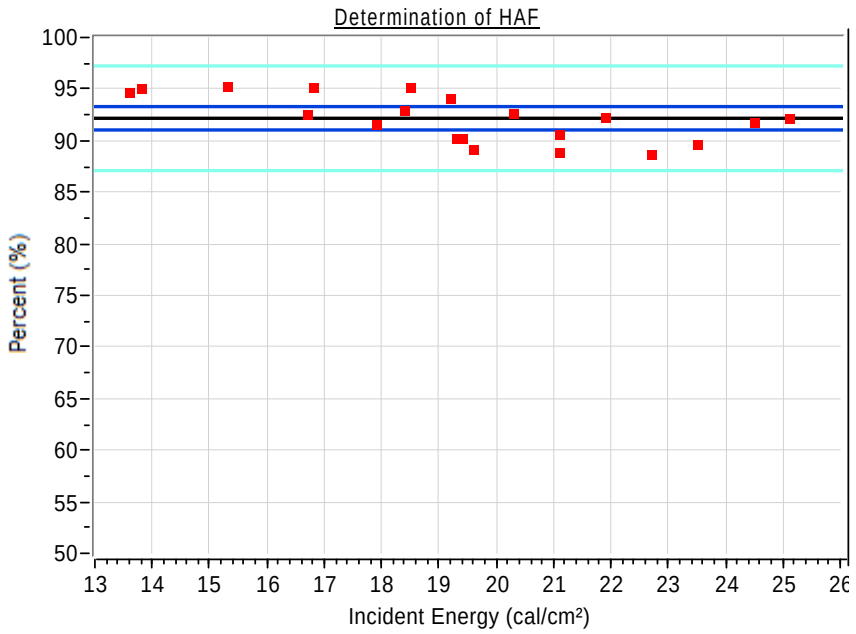


ATPV = 19 cal/cm²

Probability	Ei
5%	17.0
10%	17.4
20%	17.9
30%	18.2
40%	18.5
50%	18.7
60%	18.9
70%	19.2
80%	19.5
90%	20.0

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

Total points analyzed = 20
Points above Stoll = 12
Points above mix zone = 11
Points below mix zone = 5
 # Pts within 20% = 14
 # Pts in mix zone = 4



HAF = 92 %

Confidence Intervals
95% CI = 90.9 , 93.1

Data pts
Best Fit
95% CI
95% CI pts

Date: May-03-19	Summary of Measured Energy and Observations	
Report # K-352163-01-R00	Test Performed in accordance with : ASTM F2178-17b	KINECTRICS

Item Description: Polison Corporation, Faceshield;
Lens: Model FCA9, Polycarbonate, Thickness: 1.6 mm, Grey;
Hard Hat: Model HR36;
Chin Cup: Model C4, ABS;
Bracket: Model A8, ABS;

	Test #	Panel	Test Current A	Cycles of 60Hz	Ei Cal/cm²	SCD Cal/cm²	HAF %	>Stoll Y/N	Break Open Y/N	Ablation Y/N	After Flame sec.	Omit Y/N	Comment
1	K-352163-2555	A	8316	20.2	16.7	-0.1	92.6	No	N	N	0	No	
2	K-352163-2555	B	8316	20.2	13.6	-0.7	94.7	No	N	N	0	No	
3	K-352163-2556	A	8290	25.2	16.8	-0.6	95.2	No	N	N	0	No	
4	K-352163-2556	B	8290	25.2	21.1	1.0	88.9	Yes	N	N	0	No	Exceeded Stoll curve on LE, RE and M sensors.
5	K-352163-2557	A	8262	30.2	24.5	0.6	91.8	Yes	N	N	0	No	Exceeded Stoll curve on LE, RE and M sensors.
6	K-352163-2557	B	8262	30.2	25.1	0.5	92.2	Yes	N	N	0	No	Exceeded Stoll curve on LE, RE and M sensors.
7	K-352163-2558	A	8288	28.2	22.7	1.2	88.7	Yes	N	N	0	No	Exceeded Stoll curve on LE, RE and M sensors.
8	K-352163-2558	B	8288	28.2	20.3	0.0	92.7	Yes	N	N	15	No	Exceeded Stoll curve on M sensor.
9	K-352163-2559	A	8278	26.2	21.9	0.3	92.3	Yes	N	N	0	No	Exceeded Stoll curve on LE and M sensors.
10	K-352163-2559	B	8278	26.2	19.2	-0.4	94.1	No	N	N	0	No	
11	K-352163-2560	A	8296	27.2	19.4	0.5	90.2	Yes	N	N	0	No	Exceeded Stoll curve on LE, RE and M sensors.
12	K-352163-2560	B	8296	27.2	23.5	1.1	89.7	Yes	N	N	0	No	Exceeded Stoll curve on LE, RE and M sensors.
13	K-352163-2561	A	8082	24.2	15.3	-0.7	95.3	No	N	N	0	No	
14	K-352163-2561	B	8082	24.2	21.1	0.6	90.6	Yes	N	N	0	No	Exceeded Stoll curve on LE, RE and M sensors.
15	K-352163-2562	A	8093	23.2	18.5	-0.5	95.2	No	N	N	0	No	
16	K-352163-2562	B	8093	23.2	13.8	-0.7	95.1	No	N	N	0	No	
17	K-352163-2563	A	8063	24.2	19.6	0.8	89.2	Yes	N	N	0	No	Exceeded Stoll curve on LE, RE and M sensors.
18	K-352163-2563	B	8063	24.2	18.4	-0.2	93.0	No	N	N	0	No	
19	K-352163-2564	A	8122	24.2	17.9	0.1	91.6	Yes	N	N	0	No	Exceeded Stoll curve on M sensor.
20	K-352163-2564	B	8122	24.2	19.3	0.5	90.2	Yes	N	N	0	No	Exceeded Stoll curve on LE, RE and M sensors.
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1 sample exhibited afterflame during testing for a duration of 15 seconds.

Photographs

The following photographs are representative of test results observed.

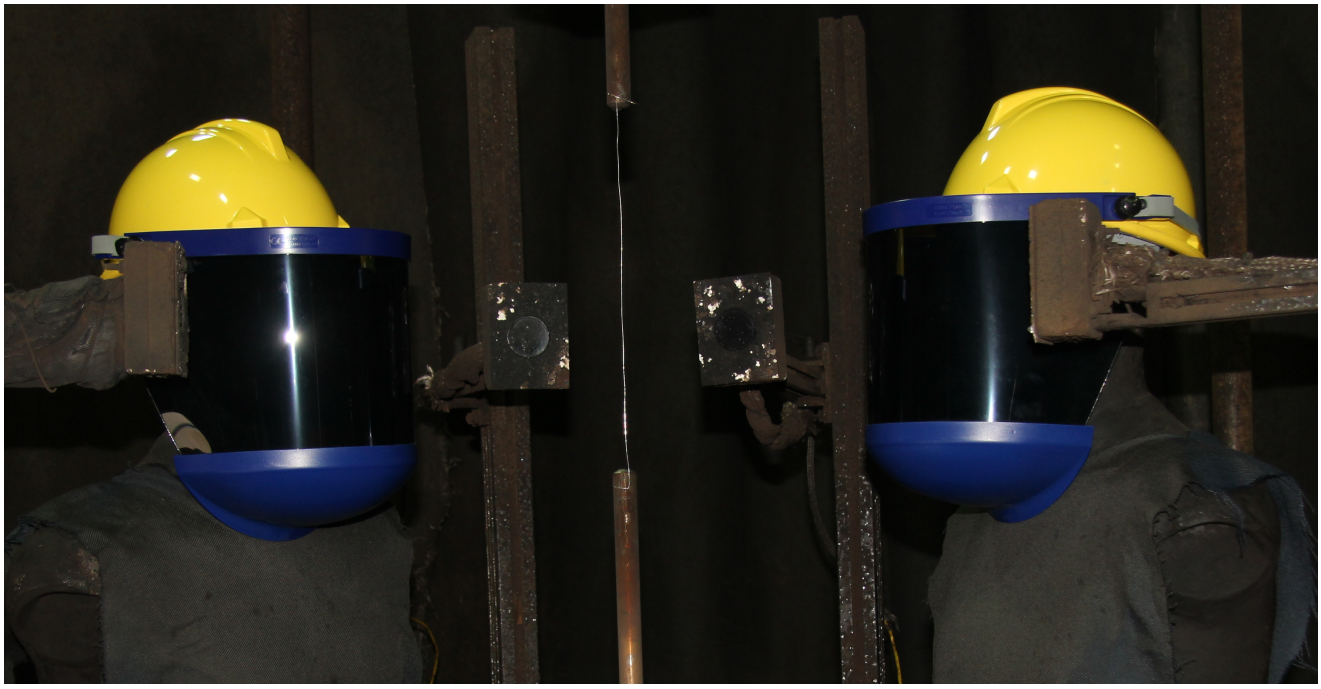

Figure 1. Faceshield before arc exposure.

Figure 2. Faceshield after arc exposure at 19 cal/cm²