

ArcWear.com

Test Observed by
ArcWear.com
Louisville, KY 40223
www.ArcWear.com

Garments provided by
ICORP-IFOAM Specialty Products Corp.
250 Power Court
Sanford, FL 32771
(407) 383-6736

GARMENT EVALUATION
NSA Spentex Shirt with Sniff n' Stop Personal Protection Spray vs. DEET

Performed in accordance with ASTM F2621 - 12

Standard Practice for Determining Response Characteristics and Design Integrity of Arc
Rated Finished Products in an Electric Arc Exposure

Kinectrics Inc. Report No.: K-418706-1406T07-R01

Item received: June 13, 2014

Test Date: June 24, 2014

Observer: Hugh Hoagland
Arcwear.com
Louisville, KY
Office: 502-333-0510

PRIVATE INFORMATION

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Electric Arc Exposure Test Report

Test Description

The test standard requires that the finished garment be exposed to a level at least equal to the arc rating (ATPV or Ebt) of the fabric or system. The garment is placed on a FR fiberglass mannequin. The mannequin is placed on the test fixture at suitable location and distance as indicated in the test standard. Following the arc exposure, the garment is examined. Areas of particular interest are seams, integrity of the closure (buttons, Velcro® fastener or zipper), overlap of important areas, reflective trim if applied and the embroidery or logos or other accessories. The front area is examined for evidence of arc energy that may enter and expose the under-layers. A lightweight undergarment may be used to provide a heat sensitive indicator which is used to help in the evaluation of thermal energy through the closures or interface.

- Test Parameters: Arc Gap= 30 cm, Distance to the arc = 30 cm,
- Arc current = 8 kA rms,

The following test data was recorded for each trial:

- Arc exposure electrical conditions: arc trial number, arc current, arc voltage, arc duration, energy dissipated in arc, incident energy.
- Review of garment by qualified observer (see attached observation form)
- Photographs of garment before and after arc exposure.
- Video of arc exposure.

Results and Observations

The details of the garment and observations are attached on the following garment evaluation form. These were completed at the time of the test. The subjective evaluation of the garment is to document garment design or material response concerns that may lower the protection level of the fabric in an arc flash incident. The test observations are performed by a qualified observer that has knowledge of behavior of textiles in an arc exposure and in depth knowledge of arc testing specifications and requirements.

Note about this report

- The test performed does not apply to electrical contact or electrical shock hazard
- The test result is applicable only to the Test Item, other material or color may have a different response.
- The findings of this report are based on the current test method as described in the Reference Standard
- It is assumed that the information supplied by the client was valid and complete

Photograph(s) of garment



3860 A

K-418706-1406T07

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Date Received: June 13, 2014

Date Tested: June 24, 2014

Kinectrics w/o: K-418706-1406T07-R01

Kinectrics Test Station Operator: Andrew Haines

	Test Number 14-3860A
Test Standard	ASTM F2621
Style, Model, Ref #	Sniff'n'Stop Personal Protection Spray vs. Deet
Description:	FR Green Shirt
Manufacturer	ICORP-IFOAM Specialty Products Corp.
Fabric System Rating	ATPV 9.3 cal/cm ²
Garment Label Rating	ATPV 9.3 cal/cm ²
Number fabric layers:	1
Laundered:	Garment was unwashed and treated with Sniff n' Stop Personal Protection Spray
Reflective trim:	N/A
Other trim or accessories	N/A
Pocket and location:	2 Front
Closure(s)	Buttons
Any non-FR components	N/A
Fabric description:	ICORP-IFOAM Specialty Products Corp., NSA Spentex Shirt with Sniff'n'Stop Personal Protection Spray vs. DEET, ArcWear# 1406T07-R01

Recorded by (sign): _____ Name: Hugh Hoagland

Observations

General garment	Shot # 14-3860A Sniff n' Stop Personal Protection Spray	Shot # 14-3860A DEET
		10.6 cal/cm ²
Break-open through the garment (Y/N, Area & Size)	N	N
Number layers with ablation (multi-layer only)	0	0
Afterflame (sec) and location:	0	45 s
Ignition of any component (Y/N)	N	N
Melting & dripping (Y/N & area)	N	N
Shrinkage (none, slight, moderate, major)	None	None
Closure(s)		
Closure operable Y/N	N/A	N/A
Failure of Closure Y/N	N/A	N/A
Indicator Fabric		
Used in evaluation Y/N	N	N
Indicator Fabric Type	N/A	N/A
Ignition Otherwise, put None	N/A	N/A
General		
Comment	Side sprayed with Sniff n' Stop Personal Spray did not ignite during arcflash.	Side sprayed with DEET did ignite, almost 1 min afterflame time near face.

Summary of Observations:

Sniff n' Stop Personal Protection Spray had no risk of injury to a worker from increased afterflame at the arc rating of the shirt. The amount used in this test was saturation level. This may not represent the dosing recommended by the manufacturer. DEET usually is not recommended for use on flame resistant clothing.

Recorded by (sign): _____ Name: Hugh Hoagland