



**KINECTRICS**  
ISO 9001-2000

# High Current Test Laboratory

Kinectrics Inc., 800 Kipling Avenue,  
Toronto, Ontario, Canada M8Z 6C4  
Tel: 416-207-6000

Report # K-422637-002-R01,

Test date: September 27, 2005

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Test Item: 11.8 oz/yd<sup>2</sup> CarbonX™  
C11 Twill, black

Test Performed: Determination of arc thermal protection level of material for clothing

Reference Standard: **ASTM F1959-04**, *Standard Test Method for Determining Arc Thermal Performance of Textile Materials for Clothing by Electric Arc Exposure Method*

Client: Protective Textile Solutions  
205 Walsh Crescent  
Orangeville, Ontario, CA

Witnessed by : Michael Jeffrey


Test Performed by: Claude Maurice (Kinectrics)  
Martin Goodnough (Kinectrics)

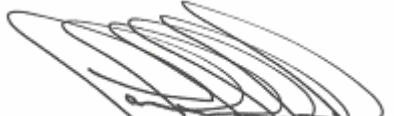
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## Summary

A total of seven arc exposures were done exposing 24 panels of fabric to the arc thermal radiation. In these exposures (approx. 12 to 18 cal/cm<sup>2</sup>), the surface was charred but the back was not discoloured. The material remained pliable and was not weak or brittle. The after-flame was minimal and was less than 1 second on all shots. The incident energy and burn data was analysed in accordance with ASTM F1959-04 to determine the ATPV. The ATPV is defined as the 50% probability of sustaining a burn-injury as defined by the Stoll curve. The observations and graphs of the material performance are given in the Laboratory Test Summary, K-422637-02.

**Arc Thermal Performance Value, ATPV = 14.9 cal/cm<sup>2</sup>** (based on 50% probability of a burn injury)  
**Heat Attenuation Factor (HAF) = 81%**

Prepared by:   
Claude Maurice

Approved by:   
Dr. J. Kuffel, P. Eng  
General Manager, Kinectrics Inc.

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- This Test Performed does not apply to the electrical contact or electrical shock hazard.
  - The test result is applicable only to the Test Item. Other material or color may have different protection level.

Kinectrics Inc. has prepared this report in accordance with, and subject to, the terms and conditions of the contract between Kinectrics Inc. and the Client,

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