

# FICHA TECNICA



Ficha Tecnica No.101604

Mayo de 2018

## CARACTERISTICAS:

Balaclava o monja tejida , para protección de la cabeza del arco eléctrico o fuego repentino, nivel de arco eléctrico 32 Cal/cm<sup>2</sup>. Compuesto por 2 capas de 7oz de tejido Carbón X.

## APLICACIÓN Y RECOMENDACIONES:

En trabajos donde el nivel de riesgo para arco eléctrico sea nivel 3 o menor y la máxima exposición a arco eléctrico de 32 cal/cm<sup>2</sup>. Se recomienda usar debajo de la pantalla facial y el casco. Permite lavado industrial. Antes de usar asegurarse que la balaclava no este rasgada ni descocida, y libre de polvo.

## NORMAS:

Cumple con las últimas versiones de NFPA 70E, ASTM 1959, ASTM 1506, NFPA 2112



## PRODUCTO:

**BALACLAVA TEJIDA EN  
CARBONX PARA ARCO  
ELECTRICO 32 cal/cm<sup>2</sup>-  
ESTILO ACAMPANADO**

MARCA: CPA INC.

MODELO: KCF-51

PROTAR INDUSTRIAL SAS

CALLE 18 # 5-32 2 PISO

TEL:(572) 5241994

CEL: (57) 3215675098

Email: protar@protar.com.co

www.protar.com.co

## CARBONX® KNIT HOODS

*Arc Flash Protection • Foundry Protection*

### CARBONX® ULTIMATE HOOD



The CarbonX® Ultimate flared style hood provides maximum coverage. Our hood features flat stitching and seamless chin area for better fit and comfort. It is made from 2-ply of 7 oz. CarbonX® rib knit fabric. It is rated at 32 ATPV, PPE 3. This hood meets NFPA 70E and ASTM F1506 performance standards.

**PART # KCF-51**

### CARBONX® CLASSIC HOOD



This classic cut hood made from CarbonX® provides excellent protection. Non-flammable, non-melting. It is made from 2-ply of 7 oz. CarbonX® rib knit fabric. It is rated at 32 ATPV, PPE 3. This hood meets NFPA 70E and ASTM F1506 performance standards.

**PART # KC-51**

[www.chicagoprotective.com](http://www.chicagoprotective.com)

# CARBONX® FABRIC DESCRIPTION & SPECIFICATIONS

## DESCRIPTION

CarbonX® is a blend of high-performance fibers that will not burn, melt or ignite even when subjected to direct flame.

CarbonX® comes in various weights of woven and knit fabrics. Knit CarbonX® is excellent when used in baselayer garments and next-to-skin applications. It is very lightweight, flexible and soft-to-the-touch, while protecting the skin from burn injuries. All CarbonX® knit fabrics, regardless of weight and thickness, are rated NFPA 70E PPE 2 for their remarkable protective properties. Garments made of multiple layers of CarbonX® receive even higher ratings.

Base layer garments made of CarbonX® knit fabrics play an essential role in protecting wearers against serious burn injuries and more common nuisance burns. In dangerous situations, having CarbonX® knits close to the skin may buy the wearer critical time to escape without severe or life-threatening injuries. Additionally, CarbonX® is inherently flame resistant and the thermal protective properties will not wash out or wear away.

One of the most significant characteristics that gives CarbonX® such high protection from heat and flame is its high Limiting Oxygen Index, or LOI. The Limiting Oxygen Index measures the amount of oxygen required in the environment for a fabric to support combustion. Any material with an LOI of less than 20.95 (the oxygen volume of air) will burn in air. CarbonX® has an LOI of 55, indicating that it needs an oxygen level of nearly three times that of air to burn. When exposed to heat and flame, the patented fiber blend carbonizes and then expands, eliminating any oxygen content within the fabric.

## SPECIFICATIONS

Type of Knit	1 x 1 rib knit
NFPA 70E PPE Category ASTM F1959-99	2
Total Weight (oz / yd <sup>2</sup> )	7 oz.
Thickness (mls)	48.60
ATPV NFPA 70E PPE 2	11.9
Thermal Protection Performance ASTM F1506	11.3
Char Length ASTM F1506	8.89 mm (0.35")
After Flame ASTM D6413-99	0 seconds
After Glow ASTM D6413-99	0 seconds
Martindale Abrasion ASTM D4966	36000
Colorfastness to Light AATC 1C Option A	20/40/60/80/100 hours; Class 5 (no color change)

## GLOSSARY OF TERMS

### ASTM F1506

Standard performance specification for FR textiles in apparel worn by electrical workers exposed to momentary electric arc and related thermal hazards.

### Thermal Protection Performance (TPP)

The TPP score is two-times the number of seconds it takes for a second-degree burn to occur when exposed to a 2.0 cal / cm<sup>2</sup> flame. The higher the TPP rating, the higher the level of protection.

### ATPV

ATPV is defined in the ASTM F1959-99 standard arc test method for FR fabrics as the incident energy that would cause the onset of a second-degree burn (1.2 cal / cm<sup>2</sup>).

# ArcWear

3018 Eastpoint Parkway, Louisville, KY 40223. 502-333-0510, [www.ArcWear.com](http://www.ArcWear.com)

## Sampling and Specimen Preparation - Arc Testing

Date: December 17, 2014

Report #: 1411P28-SP

Client: Chapman Innovations  
343 West 400 South  
Salt Lake City, UT 84101  
801 415-0023

At request of: Jake Hirschi

### Sample Identified By Client As:

Chapman Innovations, 2 Layers of Style NSM 18-19, 6.7 oz/yd<sup>2</sup> 227 g/m<sup>2</sup> 1x1 Rib Knit, CarbonX NSM 18-19 (86% OPAN, 14% P-aramid), Black, AAD 7.0 oz/yd<sup>2</sup> 237 g/m<sup>2</sup>, ArcWear# 1411P28

Sample received on: November 3, 2014

### Test Procedure:

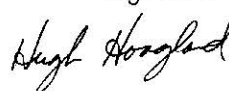
The samples were laundered 3 times in accordance with Section 8.2.1 of ASTM F1959/F1959M-12 *Standard Test Method for Determining the Arc Rating of Materials for Clothing* and AATCC Test Method 135, Procedure 3, IV, Aiii. The post-laundered aerial density was determined and test specimens were cut, assembled, and prepared for testing in accordance with Section 8 of ASTM F1959/F1959M-14 *Standard Test Method for Determining the Arc Rating of Materials for Clothing*. The total weight per load of the specimens and ballast (if used) was 8 lbs.

This is a design test which is required as a part of the compliance with ASTM F1506-10a. Other tests and ongoing testing are required for full compliance. ArcWear recommends asking for reports of ongoing testing from the manufacturer of the garment or fabric. Of special importance is vertical flammability but other test requirements may also be desired as proof that the product meets the full performance specification.

The results of testing to ASTM F1959/F1959M-14\* have been documented in Kinectrics Report Number K-418712-1411P28. Based on this test report, this fabric received a final performance value of

**Arc Rating: ATPV = 32 cal/cm<sup>2</sup>**

Signed for the Company by:



Digitally signed by Hugh  
Hoagland  
Date: 2014.12.17 14:00:56  
-05'00'

Hugh Hoagland  
President



TESTING CERT #3570.01

\*ASTM F1959/F1959M-14 is performed at Kinectrics and is on their scope of accreditation (SCC Accredited Lab # 610). ASTM F1959 is not on ArcWear's scope of accreditation.