



The Power of CarbonX<sup>®</sup>

# When you demand the highest level of protection,

## You can depend on CarbonX®.

From fighting fires to pouring liquid steel to racing at over 300 mph, professionals in high-risk occupations insist that their protective apparel be made with CarbonX® fabrics. The patented CarbonX® blend of high-performance fibers raises the bar for FR textiles by providing the highest levels of protection from heat and flame.

# When you demand the highest level of service with your CarbonX® products,

## You can depend on Chicago Protective Apparel Inc.

Our experience and ability to manufacture products made of CarbonX® is unsurpassed. No other manufacturer in the world has worked with a wider variety of CarbonX® fabrics or products. Since the inception of CarbonX®, Chicago Protective Apparel Inc. has played a pioneering role in bringing this unique fabric to the safety market.

## Facts,

The patented CarbonX® blend of O-pan fibers and strengthening fibers is demonstrably superior to other FR fabrics using industry standard testing. One of the most important tests for determining flame resistance is the Limited Oxygen Index (LOI), which calculates the amount of oxygen needed in the environment to support combustion. The higher the LOI value, the more flame resistant the material. CarbonX® has an LOI more than 50 percent higher than Nomex® and 33% higher than PBI®/FR/Rayon blends. Chicago Protective Apparel has performed Arc tests at the Kinetrics Lab and received amazing ATPV's. We have had similar success with molten metal splash tests performed at the University of Alabama and with our TPP testing. Results of the thermal manikin test have surpassed any garment fabric we have seen in our 90 year history. For specific testing results please contact us.

*"CarbonX® is simply the most amazing material I have ever seen. It was hard to believe it could offer that much protection against heat and flame until I tried it myself. CarbonX® has the potential to prevent countless burn injuries and deaths. The possibilities are limitless."*

-Jeffrey W. Klaver, Ford Racing Technology, Performance Parts

*"CarbonX® is the most cutting edge fire retardant fabric I have seen. When I strap myself in wearing my CarbonX® Design 500 suit, safety from fire and heat elements is one aspect I do not have to be concerned about."*

-Mark Kinser, 2-Time World of Outlaw Points Champion

*"I went from a Firesuit to a CarbonX® fire-proof suit."*

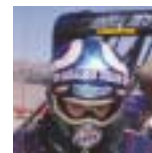
-Larry Dixon, Driver of the Don 'The Snake' Prudhomme Miller Lite Top Fuel Dragster

**CARBON**



# Undergarments

Safety and the ultimate in protection from heat and flame begins with CarbonX® undergarments. This has proven to be our most successful line of CarbonX® safety clothing.



Kim Merikoski  
*Marketing*



Scott Sherman  
*President*

## PRODUCTS

Long Sleeve Top	style # CX-54-(size)
Short Sleeve Top	style # CX-64-(size)
Long Pants	style # CX-55-(size)
Shorts	style # CX-65-(size)
22" Socks	style # CX-56-22

Undergarments are made of a single layer of 7.7 oz Interlock Knit. The fabric has a TPP rating of 14.7 and an ATPV of 12.3 cal/cm<sup>2</sup>. Tops and bottoms are available in sizes S through 4XL. Socks are one size.

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# Work Wear



Our CarbonX® work wear is manufactured to be comfortable and appealing while keeping your safety in mind. CarbonX® has superior wicking properties that help keep you cool. You will be amazed at the comfort afforded by this breathable and soft fabric.



Kim M.  
Marketing



Angel Mendez  
Sales Manager



Scott Sherman  
President

CarbonX® work wear is made from 11 oz. Abrasion Resistant Black 2 X 2 Twill Weave cloth. The fabric has a TPP Rating of 16.0. All styles are available in sizes S through 5XL.

## PRODUCTS

**Bib overalls**,  
2 front and 2 rear pockets,  
1 divided chest pocket and  
a ruler pocket. Adjustable  
shoulder straps.  
style # 618-CX11-(W x Inseam)

**Coverall**,  
5 pocket style, zipper front,  
long sleeve.  
style # 605-CX11-(size)

**Jacket**, 30" long, 1 inside  
chest pocket, snap front.  
style # 600-CX11-(size)  
**Pant**, 4 pocket with zipper fly,  
belt loops and snap at waist.  
style # 606-CX11-(W x Inseam)



**CARBON**

# Aluminized & Twill

**W**e offer our fabrics aluminized to provide the same lightweight comfort as our standard work wear while adding the radiant protection needed in some applications. The aluminization also provides increased protection from molten sparks and splash.



Aluminized CarbonX® is made from 10 oz. Abrasion Resistant Navy Twill base cloth. All styles of garments are available in sizes S through 5XL.

## PRODUCTS

**Aluminized Jacket,**  
30" long, snap front.  
style # 600-ACX10-(size)

**Aluminized Pants,**  
belt loops and snap  
at waist.  
style # 606-ACX10-(size)

**Aluminized Coat,**  
50" long, snap front.  
style # 603-ACX10-(size)

**14" Legging  
Hood**  
style # 401-ACX10  
style # 0647-ACX10

**10oz Twill Jacket,**  
30" long, snap front.  
style # 600-CX10-(size)

**10oz Twill Pants,**  
4 pockets, zipper fly, belt  
loops and snap at waist.  
style # 606-CX10-(W x Inseam)



## PRODUCTS

### Style # CX-18-TH

18" 2 ply knitted heat resistant sleeve with thumb hole. Tight form fit style. Sold as pairs.



### Style # CX-14

14" 2 ply knitted heat resistant sleeve. Loose style with form fitted wrist and top. Sold as pairs.



### Style # 593-CX-AA

18" woven welders style sleeve. 2" elastic at wrist and top. Sold as pairs.



### Style # CX-100

11" machine knitted carbon string glove. Ambidextrous. Sold as pairs.



### Style # CX-100-20

20" machine knitted carbon string glove/sleeve combination. Ambidextrous. Sold as pairs.





### Classic Hood,

The CarbonX® Classic style hood provides double layer coverage to meet NFPA 1971 requirements. Our hood features flat stitching and seamless chin area for better fit and comfort. ATPV is 23 cal/cm<sup>2</sup>. Non-flammable, non-melting with excellent stretch and recovery properties. One size fits all. **style # KC-51**



### Ultimate Hood,

The CarbonX® Ultimate flared style hood provides maximum double layer coverage to meet NFPA 1971 requirements. The hood covers chest, shoulders and shoulder blades. Our hood features flat stitching and seamless chin area for better fit and comfort. ATPV is 23 cal/cm<sup>2</sup>. Non-flammable, non-melting with excellent stretch and recovery properties. One size fits all. **style # KCF-51**



### 3 in 1 Multipurpose CarbonX® Blanket,

Blanket is made of 5.9 oz. Non-Woven Needle Punch Felt, Oxy-Carbon Fiber Defender, TPP Rated: 22

**Extrication Blanket-** Guards against sparks and minor metal splash created during cutting or torching.

**Fire Blanket-** Will not support flame in air. Helps to smother or extinguish flames or fire.

**Safety Blanket-** First aid style safety blanket is warm and comfortable to wrap around a victim to protect from the elements.

Size is 60" x 80" **style # 6080-CX**



### CarbonX® Welding Blanket,

Blanket is made of 13.3 oz. Non-Woven Needle Punch Felt with Reinforcement Core

Excellent protection from sparks and splash created during welding. CarbonX® is non-flammable in air and withstands heat in excess of 2600° F. Blanket will not fade or weaken when exposed to UV rays. All CarbonX® fabrics are also available in roll goods form to be used for insulation or heat stress applications. Blankets can be made to custom sizes.

Standard size is 6' x 6' **style # CXFH-6X6**

# CARBON X Revolution

**Non-melting, Non-flammable, Non-shrinking, Higher LOI, Odor absorbing, UV resistant**

Thermal Protective Performance, or TPP, applies to the garment's ability to provide thermal protection when exposed to both direct flame and radiant heat, and suggests the length of time before a person is subject to second-degree burns. After extensive TPP, flammability and shrinkage test comparisons between the leading FR fabrics and CarbonX®, based on the auto racing industry SFI standards, the results show CarbonX® is a superior product.

At approximately 600°F, the leading FR fabrics burn, begin to shrink while charring, then crack and decompose—all within about 10 seconds. Under flammability testing, the FR fabrics ignite and often have problems passing the shrinkage test. Under these same conditions, CarbonX® is not affected in any way. The fabric actually disperses heat energy, taking many seconds before heat starts to penetrate to the next layer of fabric. CarbonX® won't ignite or burn even when exposed to temperatures near 2600°F for as long as 120 seconds. And CarbonX® exhibits no noticeable shrinkage.



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