

# CARBON



# ACTIVE™ BASELAYER

PROFESSIONALS CONFRONTING HEAT AND FLAME ON A DAILY BASIS SHOULD NOT HAVE TO SACRIFICE COMFORT IN THEIR WORK WEAR TO GET THE PROTECTION THEY DESERVE. BUT COMFORT-DRIVEN, FLAME-RESISTANT (FR) APPAREL HAS NOT HISTORICALLY OFFERED ENOUGH PROTECTION TO BE SERIOUSLY CONSIDERED FOR USE IN HAZARDOUS ENVIRONMENTS.

THE CARBONX® ACTIVE™ BASELAYER IS THE EXCEPTION. UNLIKE SIMILAR PROTECTIVE APPAREL, OUR ACTIVE BASELAYER COMBINES A HIGH LEVEL OF PROTECTION WITH MAXIMUM COMFORT. IN FACT, THE CARBONX ACTIVE BASELAYER IS RATED NFPA 70E HAZARD RISK CATEGORY 2 FOR ITS EXTRAORDINARY PROTECTIVE PROPERTIES WHILE MOST COMPETITORS' GARMENTS OF A SIMILAR WEIGHT FALL INTO CATEGORY 1.

## THE CARBONX ACTIVE BASELAYER—THE SOLUTION FOR BALANCING PROTECTION AND COMFORT

Constructed using advanced patented technology, the CarbonX Active Baselayer is the ideal solution for active wearers who want to keep comfortable even in potentially dangerous conditions. It is made from our TK-60 fabric, a lightweight, double jersey interlock knit comprised of a proprietary blend of high-performance fibers, including a hydrophilic fiber designed to absorb and wick away moisture.

Inherently flame resistant, our Active Baselayer delivers:

**Unmatched Protection:** Will not burn, melt, or ignite, and significantly outperforms other FR options when subjected to direct flame, extreme heat, molten metal, hot/flammable liquids, or arc flash. Even after intense exposure, our baselayer maintains its strength and integrity and continues to protect. It also limits heat transfer much more effectively than other FR apparel of similar weight.

**Comfortable Protection:** Our Active Baselayer is lightweight, soft-to-the-touch, flexible, and odor resistant. It also breathes extremely well, wicks away moisture, and dries quickly, enhancing the wearer's comfort and productivity.

**Permanent Protection:** Because our Active Baselayer is inherently flame resistant, laundering does not impact its protective properties. The thermal protection will not wash out or wear away. It can be worn daily as part of a total personal protective equipment (PPE) solution, providing significant value to users.



ACTIVE BASELAYER  
SOLUTIONS THAT  
COVER HEAD TO TOE

*CarbonX Active Baselayer solutions include: hoods, long- and short-sleeve tops, long-sleeve hooded tops, removable sleeves, full-length and boxer-length bottoms, gloves, and socks. Available in gray or dark blue.*

# SETTING A NEW STANDARD IN FR PROTECTIVE APPAREL

# CARBONX



While competitors work to ensure their products *meet* industry standards, our goal is to *exceed* those standards and go above the norm in providing a persistent thermal barrier with minimal heat conductivity. CarbonX fabrics and apparel offer protection far beyond the industry's "No Melt, No Drip" requirements, which typically only require that protective fabrics not **contribute** to burns in a thermal exposure (as opposed to actually **protecting** the wearer from a thermal event).

## CARBONX ACTIVE BASELAYER

### FABRIC PROPERTIES

TOTAL WEIGHT (OZ/YD<sup>2</sup>) 6.0 OZ

NFPA 70E HAZARD RISK CATEGORY 2

### AFTER FLAME

CARBONX TK-60	None/0 seconds
ASTM F1506	2 seconds or less
NFPA 1971 (2007)	2 seconds or less
NFPA 1975 (2009)	2 seconds or less
NFPA 1977 (2005)	2 seconds or less
NFPA 2112 (2007)	2 seconds or less

### CHAR LENGTH

CARBONX TK-60	9.398 mm (0.37")
ASTM F1506	6" or less
NFPA 1975 (2009)	6" or less
NFPA 1977 (2005)	4" or less
NFPA 2112 (2007)	4" or less

### THERMAL PROTECTION PERFORMANCE (TPP) ATPV

CARBONX TK-60	9.5	CARBONX TK-60	10.0
ASTM F1506	3.0 (spaced TPP of 6.0)	NFPA 70E HRC 2	8.0

ASTM F1506: Standard performance specification for FR textiles in apparel worn by electrical workers exposed to momentary electric arc and related thermal hazards.

NFPA 1971 (2007): Standard on protective ensembles for structural fire fighting and proximity fire fighting.

NFPA 1975 (2009): Standard on station/work uniforms for emergency services.

NFPA 1977 (2005): Standard on protective clothing and equipment for wildland fire fighting.

NFPA 2112 (2007): Standard on FR garments for protection of industrial personnel against flash fire.

Thermal Protection Performance (TPP): The TPP score is simply 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>).

## DEMONSTRABLY SUPERIOR

CarbonX fabrics and apparel deliver better ounce-for-ounce protection against direct flame, molten metal, hot/flammable liquids, arc flash, and extreme heat than competitive products. Every day, professionals and enthusiasts who work and play in some of the world's most hazardous environments rely on CarbonX to provide them with the protection they deserve.

CarbonX partners with leading safety manufacturers and distributors worldwide to deliver customized FR solutions. Available in knits, wovens, and nonwovens, CarbonX fabrics are found in a wide variety of protective applications, including: racing suits, baselayer garments, helmet liners, and driving gloves for motorsports; turnout gear, station wear, and balaclavas for firefighters; and jackets, coveralls, pants, shirts, and socks for industrial and utility workers.

**FOR MORE INFORMATION ABOUT CARBONX FABRICS AND APPAREL, CALL 801-415-0025 OR VISIT [WWW.CARBONX.COM](http://WWW.CARBONX.COM).**