



Unlined Bibs

Item Number:

365520

General Description:

- CarbonX CR80 Repel fabric sheds molten metal, certain chemicals, and hot or flammable liquids
- Aramid high-tenacity, flame resistant thread
- Heavy duty zipper on aramid tape
- Bar-tacked at all stress points
- Cinch straps on legs and thermal adjustable buckles
- Aramid stretch straps across back of bib for comfort

Applications

- Steel Mills
- Welding
- Motorsports
- Pulp & Paper
- Tactical
- Utilities
- Oil & Gas

Technical Data

Material:	CarbonX CR80 Repel*
Fabric Weight: (OZ/YD2):	9.5 oz.
Color:	Dark Grey
Sizes Available:	S-7XL
Testing & Standards Met:	NFPA 70E Electrical Arc Testing 8.6 cal-HRC2, ASTM F739-12 for Permeation of liquids and gases, ASTM F955
Care Instructions:	Wash in cold water with mild detergent. Do not use bleach or fabric softener. Hang dry. Machine drying is not recommended. Do not dry clean. Do not industrial launder.


CARBON X

CarbonX CR80 Repel Material is made of a patented blend of high-performance fibers and a proprietary compound that enables the fabric to shed molten metal, certain chemicals and hot or flammable liquids. The fabric is non-flammable and will not burn, melt, or ignite.

Standards:

NFPA 70E Electrical Arc Testing 8.6 cal-HRC2 | ASTM F739-12 for Permeation of liquids and gases, ASTM F955



Customer Service: **800.631.1246** | Technical Support: **800.922.8553** | Online: **northernsafety.com**

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).

TECHNICAL PERFORMANCE

POUR TEST (ASTM F955)

Maximum calorimeter temperature rise during the first 30 seconds and time to second-degree burn after impact with molten iron				
	Hazard	Max Temp. Rise (°C) After 30 Seconds		Time to Second-Degree Burn According to Stoll Curve (Seconds)
		Top Cal.	Bottom Cal.	
CR-80 REPEL	Iron	13.4	10.3	None

Average visual rating of outer layer fabric exposed to molten aluminum and iron					
	Hazard	Charring	Shrinkage	Adherence	Perforation
CR-80 REPEL	Iron	3 Moderate charring	1 No shrinkage	1 None	1 None

THERMAL MANNEQUIN TEST (ASTM F1930-13)

Garment System	% of mannequin surface reaching criteria for a second- and third-degree burn	% of mannequin surface under garment reaching criteria for a second- and third-degree burn
CR-80 REPEL	20.8	15.0
ASTM F1930-13	50	50

ANTI-STAT (EN 1149-2, Electrical Resistance)

Pass (Class 1 and 2)

WELDING SPLATTER (EN ISO 11611, Clause 6.8, Impact of Spatter)

Pass (Class 1 and 2)

CHEMICAL RESISTANCE (ASTM F739-12 for Permeation of Liquids and Gases, Time to Permeation)

ASTM F739-12	15 minutes
Hydrogen Peroxide 30%	21.6 minutes
Black Liquor	> 480 minutes
Green Liquor	242 minutes

Sodium Chlorate	> 480 minutes
Sodium Hydroxide 50%	> 480 minutes
Sulfuric Acid 93%	36.3 minutes
White Liquor	60.7 minutes

DEMONSTRABLY SUPERIOR

CarbonX partners with leading safety manufacturers and distributors to deliver customized, non-flammable personal protective equipment (PPE) solutions for the world's most hazardous environments. When confronting these dangerous conditions, professionals and enthusiasts can rely on CarbonX to provide them with the protection they deserve.

FOR MORE INFORMATION ABOUT CARBONX FABRICS AND APPAREL, CALL 801-415-0025 OR VISIT WWW.CARBONX.COM.

CARBONX CR-80 REPEL PROPERTIES

TOTAL WEIGHT (OZ/YD ²)	9.5 OZ
NFPA 70E HAZARD RISK CATEGORY	2

AFTER FLAME

CR-80 REPEL	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

CR-80 REPEL	8.382 mm (0.33")
ASTM F1506	6" or less
NFPA 1975 (2009)	6" or less
NFPA 1977 (2005)	4" or less
NFPA 2112 (2007)	4" or less

THERMAL PROTECTIVE PERFORMANCE (TPP) (cal/cm²)

CR-80 REPEL	7.8
ASTM F1506	3.0 (spaced TPP of 6.0)

ATPV (cal/cm²)

CR-80 REPEL	8.6
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 firefighting and proximity firefighting.

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

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

NFPA 2112 (2007): Standard on FR garments for protection of industrial personnel against flash fire. Thermal Protective 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/cm² 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/cm²).