

# CARBON X

by TEXTECH

# MAXAIR

ALUMINUM AND COPPER FURNACES RUN BETWEEN 1500–1700 °F, AND STEEL FURNACES RUN AT TEMPERATURES ABOVE 3000 °F. ALUMINIZED CLOTHING IS THE PERSONAL PROTECTIVE EQUIPMENT (PPE) OF CHOICE IN MOLTEN-METAL AND HIGH-HEAT CONDITIONS AS IT SHIELDS WORKERS FROM THE POTENTIAL MOLTEN METAL SPLASH OF THESE INSANELY HOT MATERIALS AND PROTECTS AGAINST THE STAGGERING AMOUNT OF RADIANT HEAT THAT IS GENERATED BY THE METAL AND FURNACES. BUT NO MATTER THEIR WEIGHT OR FLEXIBILITY, ALMOST ALL ALUMINIZED CLOTHING FACES THE SAME CHALLENGE: THE ALUMINUM FILM ON THE OUTSIDE OF THE FABRIC IS A SOLID LAYER SO IT IS NON-BREATHABLE.

WITH A UNIQUE PERFORATED ALUMINUM SURFACE TO ACHIEVE MAXIMUM BREATHABILITY, CARBONX MAXAIR TAKES THE PERFORMANCE OF ALUMINIZED APPAREL TO ANOTHER LEVEL AS IT PROTECTS AND KEEPS WORKERS COMFORTABLE.

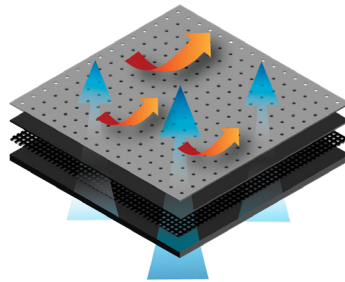
*Applications for CarbonX MaxAir: jackets, aprons, spats, boot covers, leggings, gloves, overalls, and pants*

## CARBONX MAXAIR: A BREATHABILITY BREAKTHROUGH

CarbonX® MaxAir is an innovative fabric that combines our brand's signature protective properties with maximum comfort and breathability. Its first-of-a-kind construction includes a non-woven felt as the base fabric on which layers of hydrophobic and hydrophilic fibers are added to repel and pull moisture away from the body. A strengthening scrim layer keeps the fabric strong and durable.

The moisture escapes through a perforated aluminum surface with thousands of tiny holes. The airflow and water evaporation after seeping through the holes creates a dramatic cooling effect.

### RADIANT HEAT



### EVAPORATIVE COOLING EFFECT

While the holes are small enough to allow air permeation, they are not large enough to significantly impact the level of radiant heat protection that the outer layer of aluminum provides. Likewise, when exposed to metal splash, the holes are small enough and the metal splash is hot enough that the holes seal when hit with molten metal. CarbonX MaxAir meets the requirement of the ASTM F955 pour test and is HRC 2.

The non-woven base fabric is truly non-flammable and will not burn, melt, or ignite, providing a persistent barrier if the aluminized coating melts away. The fabric maintains its flexibility even after it is aluminized and is soft to the touch, enhancing the wearer's comfort and productivity.

CarbonX aluminized fabrics incorporate the Gentex® proprietary Dual Mirror® system, which ensures a high level of abrasion resistance so the fabric remains highly reflective and provides six times better protection at higher heats than similar weight non-aluminized fabrics.

CarbonX MaxAir is available in two different weights: Ultra (14 oz) and Lite (11.4 oz).





# SETTING A NEW STANDARD IN FR PROTECTIVE APPAREL

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.

## ASTM F955 POUR TEST RESULTS

### Maximum calorimeter temperature rise during the first 30 seconds and time to second-degree burn after impact with molten substance

Hazard	Max Temperature Rise (°C) After 30 Seconds		Time to Second-Degree Burn According to Stoll Curve (Seconds)
	Top Cal.	Bottom Cal.	
<b>MAXAIR ULTRA</b>			
Molten Iron	12.7	7.4	None
Molten Aluminum	10.1	9.6	None

<b>MAXAIR LITE</b>			
Molten Iron	15.9	8.7	None

### Average visual rating of outer layer fabric exposed to molten substance\*

Hazard	Charring	Shrinkage	Adherence	Perforation
<b>MAXAIR ULTRA</b>				
Molten Iron	3	2	1	1
Molten Aluminum	2.5	2	1.5	1
<b>MAXAIR LITE</b>				
Molten Iron	15.9	8.7	None	

\*Evaluated visually on a scale of 1-5, with 1=none and 5=significant charring, shrinkage, adherence, or perforation.

### ASTM E-96 PROCEDURE B RESULTS (MAXAIR ULTRA)

Moisture Vapor Transmission	779-1040 g/m <sup>2</sup>
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**FOR MORE INFORMATION ABOUT CARBONX FABRICS AND APPAREL, CALL 801.415.0023 OR VISIT WWW.CARBONX.COM.**



#### CARBONX MAXAIR ULTRA

TOTAL WEIGHT (OZ/YD<sup>2</sup>) 14.0 OZ  
TOTAL WEIGHT (G/M<sup>2</sup>) 475 G/M<sup>2</sup>

#### CARBONX MAXAIR LITE

TOTAL WEIGHT (OZ/YD<sup>2</sup>) 11.4 OZ  
TOTAL WEIGHT (G/M<sup>2</sup>) 323 G/M<sup>2</sup>

### Multilayer Dual Mirror Aluminumization

MULTIPLE LAYERS OF ALUMINUM, PROTECTIVE FILMS, AND HEAT-STABLE ADHESIVES SO IF ONE LAYER BREAKS DOWN, ANOTHER LAYER IS THERE TO PROTECT.

