



The Power of Carbon

Carbon Shield™ is a flame resistant fabric breakthrough based on carbon fiber technology. The fabric simply won't burn in air. Besides providing outstanding protection against direct flame, the fabric exhibits low thermal conductivity – making it an excellent insulator against heat. Constructed using advanced patented technology, Carbon Shield™ knit fabric is gravure [dot] laminated to DuPont™ Nomex® Nano Flex, providing the ultimate level of flame, heat and particulate protection without sacrificing breathability or comfort. With a Particulate Filtration Efficiency (PFE) of 99.92% before laundering/conditioning and 99.98% after laundering/conditioning, BarriAire Carbon Shield Elite Pro hoods offer superb protection against dangerous and toxic particles routinely encountered while on a working call. Your fire hood is an investment in your health and safety, don't compromise, BarriAire Carbon Shield Elite Pro hoods only from PGI.

«DUPONT»
Nomex
Nano Flex



Elite Pro
39708-01-192198
Critical Coverage



Elite Pro Short
39709-01-192198
Critical Coverage

The Elite Pro Advantage

Elite Pro hoods are specifically designed to improve comfort and provide greater freedom of movement while significantly reducing tugging or pulling away from the SCBA facepiece. Tapered back, notched shoulder drape and patterned bib perfectly interface with turnout collars and SCBA strapping. Designed to comfortably integrate with SCBA facepiece head harness and maintain proper seal with mask.

Particulate Coverage

Particulate barrier coverage from base of the neck and around entire head except for Sure-Fit™ panel at crown. All critical areas of particulate penetration as identified by NFPA have particulate barrier.

UL Classified to NFPA 1971 Standard on Protective Ensembles for Structural Firefighting and Proximity Firefighting (Current Edition).

Fabric Performance Values	NFPA 1971 Requirements	BarriAire Carbon Shield™
Particulate Efficiency		
■ As Received	≥ 90%	99.92%
■ After Conditioning	≥ 90%	99.98%
Thermal Protective Performance (TPP)		
■ As Received	≥ 20.0 (min)	24.9
■ After 5 Washings	≥ 20.0 (min)	31.9
Total Heat Loss (THL)	≥ 325 W/m ²	395.3 W/m ²
Flame Resistance Test - Laminate		
After Flame (Wales x Courses)		
■ As Received	≤ 2.0 sec	0.4 sec x 0.3 sec
■ After 5 Washings	≤ 2.0 sec	0.3 sec x 0.3 sec
Char Length (Wales x Courses)		
■ As Received	≤ 100 mm	0 mm x 0 mm
■ After 5 Washings	≤ 100 mm	0 mm x 0 mm
Cleaning Shrinkage Resistance Test		
■ After 5 Washings	≥ -5.0%	-1.0%
Heat & Thermal Shrinkage Resistance Test		
■ As Received	≥ -10%	-1.4%
■ After 5 Washings	≥ -10%	-1.3%
Seam Breaking Strength Test		
Laminate to Laminate	≥ 181 N	665 N
Laminate to Carbon Shield™ Rib Knit		
■ Location: Crown	≥ 181 N	681 N
■ Location: Bib Attachment	≥ 181 N	452 N
Hood Material Burst Strength	≥ 225 N	745 N
Melt or Drip When Exposed to Flame	No Melting or Dripping	NONE

Physical Properties	BarriAire Carbon Shield™
Stretch and Recovery	Excellent – Similar to regular non-barrier hood.
Low Water Retention	Excellent – Reduces chances for steam burns.
Acoustic Performance	Excellent – Quiet, allows excellent hearing without adversely affecting communication and situational awareness.
Moisture Management	Excellent – Approximately 9% to 10% moisture regain at 65% RH. Reduces the potential for heat stress.
Limiting Oxygen Index (LOI)	Excellent – LOI is 55 which is the highest LOI of all flame resistant hood fabrics.
Chemical Resistance	Excellent – Good resistance to organic solvents, weak alkalis and weak acids.
Odor Resistance	Excellent – Has the ability to absorb and neutralize odors.
UV Resistance	Excellent – Will not fade or weaken when exposed to UV rays.
Laundry Shrinkage	Excellent – Average shrinkage approximately 3%. Virtually all shrinkage occurs after initial 3 to 4 washings.