

# The **ONLY** Particulate Barrier Hood that **Feels** Barrier-less

**COBRA™**  
**BarriAire™**  
Particulate Barrier Technology  
**GOLD HOODS**



Can less really be more? Only if it's a COBRA™ BarriAire™ Gold Hood. Fact is, in wear trials firefighters found the weight, breathability and feel comparable to that of a traditional hood. Additionally, BarriAire Gold Hoods are not loud like PTFE laminated hoods, which can adversely affect a firefighter's ability to communicate and situational awareness. And, BarriAire Gold Hoods offer more protection from harmful particles and contaminants in the areas that pose greatest risk of exposure. BarriAire Gold Hoods combine an outer layer of PGI proprietary gold FR fabric and an inner layer of ultra-lightweight, DuPont™ Nomex® Nano Flex fabric, which can inhibit penetration of many small size harmful particles. BarriAire Gold Hoods combine superior comfort, increased protection and maximum durability. Your fire hood is an investment in your health and safety — go for the gold, BarriAire Gold Hoods only from PGI.

PPE REDEFINED





**3979471**  
**Complete Coverage**



**3979471-1**  
**Critical Coverage**

**3979471 Complete Coverage:**

Particulate coverage includes entire head except for Sure-Fit™ panel at crown. Front and back bib extends particulate barrier coverage beyond critical areas as identified by NFPA - Maximum Protection.

**3979471-1 Critical Coverage:**

Particulate 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.

Certified to NFPA 1971 - Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting - Current Edition

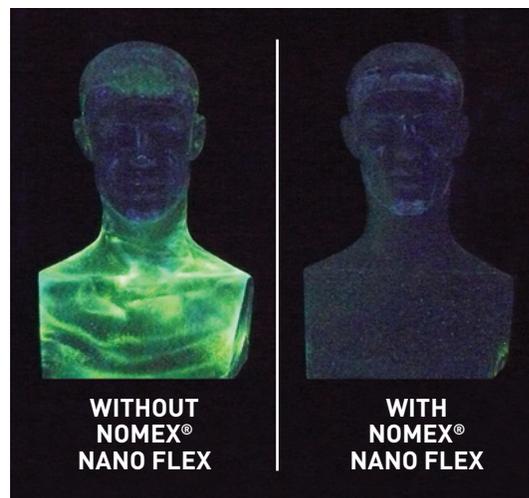


EN13911: 2017

**The Difference is in the Details**

- Proprietary PGI gold FR fabric for excellent heat, flame and thermal resistance with superior tensile and tear strength for longer wear life
- Lightweight with exceptional breathability, weight similar to hoods without a particulate barrier
- Unlike laminated PTFE barrier hoods, BarriAire™ Gold Hoods are quiet and allow excellent hearing. Laminated PTFE hoods are annoyingly loud making a crackle noise with virtually every movement, adversely affecting communication and situational awareness
- Uniquely quilted to stabilize and enhance particulate barrier durability
- Exceeds industry standards of blocking 90 percent of particles between 0.1 and 1.0 microns in size
- Inner fabric engineered to wick moisture from skin, through fabric, to outer shell where it evaporates for a drier more comfortable experience
- Outer shell fabric features a proprietary DWR finish which allows hood to dry 2x-3x faster than non-treated fabrics, reduces build-up of toxic residue that is easily absorbed by non-treated fabrics and enhances the release of contaminants during washing
- Fabric designed with a softer hand and is hypoallergenic making it more comfortable next to the skin
- Built-in stretch and recovery, to better conform to the head and neck for true one size fits all sizing
- Attractive gold color allows you to detect when the hood's soiled and needs cleaning
- Fabric is inherently static resistant
- Generous cut with a little "ease" built into the design so the hood doesn't fit skin tight — creates a layer of air between the hood and head which improves thermal resistance from flame and heat
- Stronger, less bulky stitching — all sewing and quilting done with CRAQ SPUN® AR meta-aramid thread
- Extra-long length (23") front and back, ensures hood stays tucked-in even after laundry shrinkage

**Fluorescent Aerosol Screening Test**



FAST UV-light photographs without Nomex® Nano Flex (left) and with Nomex® Nano Flex (right) illustrating after particle exposure for the test subject's head and neck; bright yellow areas show where particles penetrated the ensemble.

Above test performed on complete coverage hood without turnout coat. Test was performed at RTI (Test #2322, DOD Test Operations Procedure 10-2-022 modified for head form). These conditions may not be typical of the conditions encountered in actual situations. The results of these tests are only predictions under these specific laboratory conditions. The user is solely responsible for any interpretations of the test data provided by DuPont. DUPONT MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE AND ASSUMES NO LIABILITY IN CONNECTION WITH ANY USE OF THIS INFORMATION. This data is not intended for use by the user or others without expressed written consent of DuPont.

DuPont™  
**Nomex Nano Flex**



P.O. Box 307 ■ 550 Commercial Avenue ■ Green Lake, WI 54941 ■ 800.558.8290 ■ barriairehoods.com

COBRA™

**BarriAire**  
Particulate Barrier Technology  
GOLD HOODS™

# SPECIFICATIONS

## DURABLE WATER RESISTANT FINISH

Outer shell fabric features a proprietary DWR finish which allows hood to dry 2x-3x faster than non-treated fabrics, reduces build-up of toxic residue that is easily absorbed by non-treated fabrics and enhances the release of contaminants during washing.

## STITCH TYPES AND SEAMS

- All stitching conforms to Federal Standard 751 Specifications (FED-STD-751).
- Major seams are flat seam assembled, stitch type 607.
- Elastic in face opening is serged in with stitch type 504 and reinforced with bottom cover-stitch, stitch type 406.
- Binding is applied with bottom cover-stitch, stitch type 406.

## CONSTRUCTION

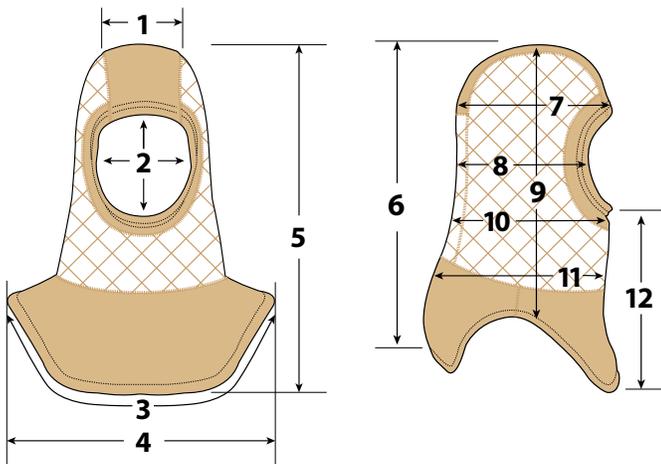
- Composed of 3-ply quilted BarriAire™ Gold fabric with rib knit around face opening, on crown of head, and gusseted shoulders.
- Sure-Fit panel in the center of the hood for improved comfort, fit and performance. 4" wide rib knit begins at face opening and extending 12" over the crown of the head. The quilted fabric continues to the knit drape where it widens to 4.5".
- For a contoured fit the hood is seamed from top of face opening to bottom neck.
- Face opening is circular in shape and serged with x-heavy duty 1/2" wide elastic around the perimeter. The elastic is then folded back 1/2" and cover stitched. The face opening stretches a full 16" (which is 25% more than conventional hoods) for easy donning and a snug fit around face of SCBA mask. Face opening maintains original shape after repeated launderings.
- Bottom edge of hood is bound with self-material bias binding.
- Rib knit drape begins below neck with notched shoulder for a smoother drape.

## LABELING AND USER INFORMATION

- UL Certified FR label facilitates tracking and identification through barcoding, sequential numbering and personalization.
- Owner Identification at bottom of each label is an area which shows PROPERTY OF: \_\_\_\_\_ . Simply write your name with permanent laundry marker directly to label for permanent identification.
- Each hood is clearly labeled to identify material contents, NFPA acceptance, UL Classification, Date of Manufacture, Lot Tracking Number, Style Number, Statement of Made in USA and care instructions.
- Each hood includes a complete users information guide.

## MEETS OR EXCEEDS INDUSTRY STANDARDS

- UL Classified to meet or exceed the current hood requirements of NFPA 1971, Standard on Protective Ensemble for Structural Firefighting.
- UL Certified to the NFPA 1971, 2018 Edition Option for Particulate Protection.
- EN13911: 2017



## 3979471-1 Critical Coverage

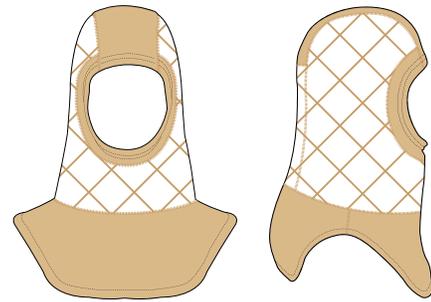
### HOOD DIMENSIONS - ONE SIZE HOOD FITS ALL

1. Sure-Fit™ center panel 4" wide from top of face opening to 4.5" wide where drape is attached, in place of traditional center seam.
2. Face opening is circular and measures between 4.6" to 5.6" in diameter.
3. Width around bottom (1/2) approx. 22.75".
4. Width of hood from edge of shoulder cap to opposite edge of shoulder cap approx. 15.25".
5. Length of hood at front top to bottom approx. 24".
6. Length of hood at back from top to bottom approx. 23.25".
  - Rib section from top of head (not including to front of face) approx. 6.5"
  - Quilted approx. 8.75"
  - Rib knit drape approx. 8"
7. Width of hood above face opening approx. 9.75".
8. Width of hood mid face opening to back approx. 9.5".
9. Length of hood at side from top to bottom approx. 18".
10. Width of hood 1" below bottom of face opening approx. 12.5".
11. Width of hood above shoulder cap approx. 15".
12. Length of hood below face opening approx. 14.25".
  - Rib knit around face approx. 1.5"
  - Quilted approx. 4.75"
  - Rib knit drape approx. 8"

### FABRIC DESCRIPTION

Quilted Composite Durable Water resistant finish on exterior layer of jersey knit with Nomex® Nano Flex particulate barrier between the inside layer of jersey knit. Averages 95%-98% particulate filtration efficiency that actually improves with repeated launderings.





ISO 9001: 2005 Registered Manufacturer

**FABRIC DESCRIPTION**

Quilted Composite durable water resistant finish on exterior layer of jersey knit with Nomex® Nano Flex particulate barrier between the inside layer of jersey knit. Averages 95%-98% particulate filtration efficiency that actually improves with repeated launderings.

Fabric Performance Values	Requirements NFPA 1971 2018 EDITION	Critical Coverage
<b>Particulate Efficiency</b>		
■ As Received & Washed Average	≥ 90%	96%
<b>Thermal Protective Performance (TPP)</b>		
Rib Knit		
■ As Received	20.0 (min)	30.2
■ After 5 Washings	20.0 (min)	33.1
Quilted Composite		
■ As Received	20.0 (min)	29.3
■ After 5 Washings	20.0 (min)	30.8
<b>Total Heat Loss (THL)</b>	≥ 325 W/m <sup>2</sup>	401.3 W/m <sup>2</sup>
<b>Hood Material Burst Strength</b>	> 225 N	614 N
<b>Flame Resistance Test - Quilted Composite</b>		
After Flame (Wales x Courses)		
■ As Received	≤ 2.0 sec	0.0 sec x 1.0 sec
■ After 5 Washings	≤ 2.0 sec	1.0 sec x 1.0 sec
Char Length (Wales x Courses)		
■ As Received	≤ 100 mm	18 mm x 17 mm
■ After 5 Washings	≤ 100 mm	3 mm x 2 mm
<b>Cleaning Shrinkage Resistance Test</b>		
Hood Measurement		
■ After 5 Washings	≥ -5%	-0.7%
Face Opening Measurement		
■ After 5 Washings	Meets Requirement	YES
<b>Heat &amp; Thermal Shrinkage Resistance Test</b>		
Hood Measurement		
■ As Received	≥ -10%	0%
■ After 5 Washings	≥ -10%	0%
Face Opening Measurement		
■ As Received	Meets Requirement	YES
■ After 5 Washings	Meets Requirement	YES
<b>Seam Breaking Strength Test</b>		
■ Quilted to Quilted	> 181 N	1219 N
■ Quilted to Knit	> 181 N	1144 N
<b>Melt or Drip When Exposed to Flame</b>	No Melting or Dripping	NONE

UL Classified to meet or exceed the current hood requirements of NFPA 1971 Standard on Protective Ensemble for Structural Firefighting – 2018 Edition. EN 13911:2017



# YOUR FIRE HOOD IS AN INVESTMENT IN YOUR HEALTH & SAFETY



In an effort to aid fire departments with the inspection of their firefighting hoods as well as the Nomex® Nano Flex particulate barrier, the following two-step process is recommended.

## STEP 1

Begin by following NFPA 1851 – Current Edition Guidelines for Firefighting Hoods:



6.3.5.2 Hood elements shall be inspected for the following:

1. Soiling
2. Contamination
3. Physical damage such as follows:
  - a. Rips, tears, and cuts
  - b. Thermal damage (charring, burn holes, melting, discoloration of any layer)
4. Shrinkage
5. Loss of material elasticity or stretching out of shape
6. Loss of seam integrity and broken or missing stitches
7. Loss of face-opening adjustment
8. Label integrity and legibility

8.1.1 All repairs shall be performed by the original manufacturer, a verified ISP who has received training, or a member of the organization who has received training.

After completing the NFPA 1851 – Current Edition guidelines for advanced inspection of hood elements, PGI recommends the following for particulate barrier inspection.

## STEP 2

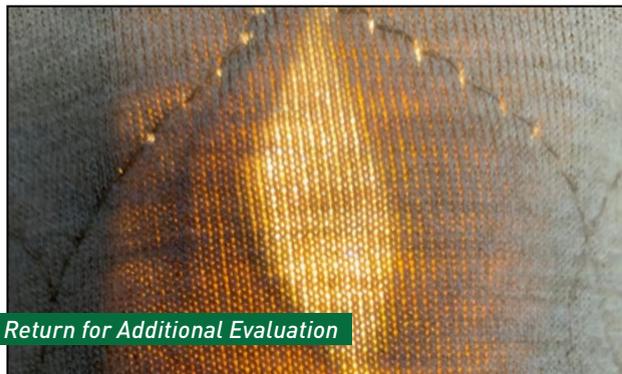
1. The 3-ply composite fabric, Nomex® Nano Flex particulate barrier quilted between jersey knit BarriAire Gold fabrics, can be easily inspected with a flashlight for structural integrity to identify rips, tears, and cuts.
2. Please be advised that the quilting holes you see are not detrimental to particulate barrier performance, Nomex® Nano Flex fabric with our quilting blocks more than 95% of particulate which increases to 98% after 20 launderings and remains above 98% through 100 launderings.
3. Any necessary advanced evaluations of Cobra BarriAire Gold hoods shall be conducted by PGI through the return authorization process in accordance with PGI's ISO 9001 certification. Please call Customer Service at 800-558-8290 for all return inquiries.



Nomex® Nano Flex  
Good Condition



Nomex® Nano Flex  
Overlapped Good Condition



Tear in Nomex® Nano Flex

PPE REDEFINED



800.558.8290  
BarriAireHoods.com