



Blauer[®]
SERIOUS PROTECTION

HOMELAND DEFENDER[®]

NEXT GENERATION PROTECTIVE
ENSEMBLES FOR DEMANDING **CBRN**
AND **HAZMAT** INCIDENTS

NEW RC3[®] ENSEMBLE
NFPA 1994 CLASS 3R, 4R, *page 4*



Chempak[®]
FABRIC

NOMEX[®]
only by DuPont





MODERN DAY THREATS REQUIRE CUTTING-EDGE PPE PERFORMANCE

The threats and performance requirements that first responders and defense personnel face today are radically different than in the past. Hazardous industrial chemicals and materials are used in more industries than ever and are stored and transported throughout the country. First responders now join the ranks of dedicated HAZMAT teams and military personnel as being required to maintain operational readiness for CBRN incidents as terrorist organizations target these chemicals and materials as relatively easy to access tools of mass destruction for use in heavily populated civilian areas. Homeland Defender® ensembles made with GORE® CHEMPAK® fabrics provide the protection, comfort and durability needed to get the job done in the worst CBRN environments.

Certified to the NFPA 1994 Standard on Protective Ensembles for First Responders to Hazardous Materials Emergencies and CBRN Terrorism Incidents and the NFPA 1992 Standard on Liquid Splash-Protective Ensembles and Clothing for Hazardous Materials Emergencies, Blauer's Homeland Defender® suits provide a higher level of protection required to operate in tactically demanding "hot zone" and "warm zone" environments. Homeland Defender® suits are independently certified to strict design and performance requirements.

THE GORE® CHEMPAK® ADVANTAGE

Comfort as a Force Multiplier

Homeland Defender® suits offer a level of comfort that allows responders to function effectively for long durations until the mission is complete. Each suit is designed with a cooling mechanism to alleviate heat stress as compared to conventional HAZMAT suits. This allows for extended response durations and fewer shift rotations.

Durability

The durability of any CBRN suit is important from a safety and investment standpoint. Homeland Defender® suits are uniquely rugged in both fabric and seam construction to allow for worry-free tactical, rescue, and DECON operations without the need for chemical tape. Homeland Defender® suits can be laundered and reused multiple times if they are not contaminated.

Speed and Mobility

Homeland Defender® suits fit your body like conventional outerwear and are certified for use with tactical-style boots. Unlike most traditional HAZMAT suits, our suits allow you to move as needed without compromising protection from dangerous chemical and biological agents.

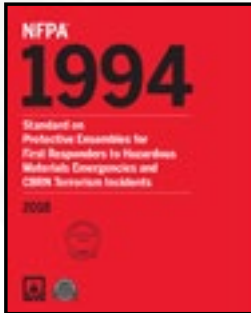


SERIOUS PROTECTION FROM HAZMAT AND CBRN THREATS

ABOVE AND BEYOND OSHA

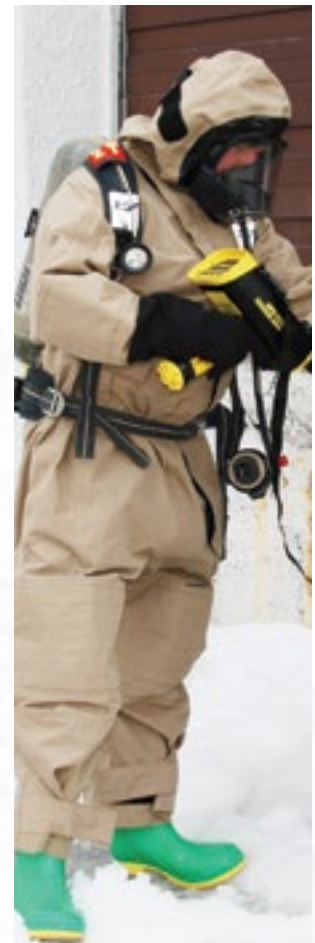
Homeland Defender® suits raise the bar for what first responders and defense personnel should expect from their CBRN and HAZMAT PPE. OSHA-rated HAZMAT suits are designed for cleanup and decontamination operations but can be cumbersome, uncomfortable, and delicate. Blauer's Multi-Threat suit, RC3 suit, XRT suit, and BRN-94 suit are designed specifically for operations where speed, comfort, and durability are crucial.

NFPA 1994 VS. OSHA



Most HAZMAT and first responder teams operate in OSHA-rated suits that have changed very little in design and functionality for decades. The problem with this approach is that OSHA ratings only indicate how the suit is designed to interact with the respirator or SCBA and do not factor in any performance requirements related to chemical permeation. In contrast, the NFPA 1994 and NFPA 1992 standards are built around both design and performance requirements. While no suit can guard against all chemical, radiological and biological threats, ensembles certified to NFPA standards are intended to provide protection against a much broader range of threats than basic OSHA-rated suits. Although there is no official relation between the two, a rough comparison of the various NFPA 1994 classes to OSHA levels may be helpful.

OSHA VS. NFPA 1994 COMPARISON CHART			
OSHA-Defined Threat	OSHA Level	NFPA 1994 Class	NFPA-Defined Threat
Airborne and liquid concentrations are at or above IDLH* requiring the highest level of protection for both respiratory system and skin.	Level A: User is encapsulated within the suit. SCBA may be inside the suit OR outside the suit.	Class 1: User is encapsulated within the suit. SCBA may be inside the suit OR outside the suit.	Airborne and liquid concentrations are at or above IDLH* requiring the highest level of protection for both respiratory system and skin. Often referred to as " Tactical Level A " due to higher protective performance requirements than Class 2 & 2R.
Airborne concentrations are at or above IDLH* requiring the highest level of protection for respiratory system. Liquid concentrations are below IDLH* allowing for a lesser level of skin protection.	Level B: User is encapsulated within the suit, while the SCBA is contained outside.	Class 2 & 2R: User is encapsulated within the suit, while the SCBA is contained outside.	Airborne and liquid concentrations are at or above IDLH* requiring the highest level of protection for both respiratory system and skin.
Airborne and liquid concentrations are below IDLH* allowing for a lesser level of respiratory and skin protection.	Level C: User is encapsulated within the suit and using an APR/PAPR .	Class 3 & 3R: User is encapsulated within the suit and using an APR/PAPR .	Airborne and liquid concentrations are below IDLH* allowing for a lesser level of respiratory and skin protection.
Nuisance, Non-Chemical "Powder" Contamination	Level D: Use of basic shield PPE such as coveralls, disposable outer boots, safety glasses. Dust filter required for radiation contamination.	Class 4 & 4R: User is encapsulated within the suit and using an APR/PAPR .	Presence of biological or radiological particulate hazards at below IDLH concentrations.



* IDLH = "Immediately Dangerous to Life and Health"

BLAUER RC3® ENSEMBLE

NFPA 1994 CLASSES 3R AND 4R, NFPA 1992

Blauer's RC3® ensemble is purpose designed to protect wearers against a broad range of CBRN threats including liquid and vapor chemicals, radiological and biological particulates, and liquid chemical splash during physically demanding tactical entries, confined space rescue, and US&R missions.

The RC3 ensemble is made with a ruggedized version of Gore's CHEMPAK® Selectively Permeable fabric that provides a level of abrasion and tear resistance similar to the CHEMPAK Ultra-Barrier fabric used in Blauer's Multi-Threat ensemble while maintaining the breathability of the fabric used in Blauer's XRT ensemble. The RC3 ensemble was developed in response to current users of Blauer's XRT suit (NFPA 1994 Class 3) who requested a more durable fabric and incorporation of reinforcing fabrics and padding at critical stress points to extend into more demanding mission profiles. Like all other Blauer Homeland Defender® ensembles, the RC3 is designed as a one-piece coverall with integrated gloves and booties, a liquid and vapor resistant zipper and storm fly, and integrated hood with a chlorobutyl face seal for use with approved APR/PAPR masks. The suit is self-sealing and requires no chemical tape.



OPERATIONAL USES

- US&R
- Confined space rescue
- Tactical entry
- Physical security
- Warm-zone patrol
- DECON
- Contaminated casualty transport and handling

FEATURES & BENEFITS

- **NFPA 1994 Class 3R (2018 ed.) certification**
- **NFPA 1994 Class 4R (2018 ed.) certification**
- **NFPA 1992 (2018 ed.) certification**
- Breathable GORE CHEMPAK fabric
- Streamlined pattern provides a more tactical fit on the user and better equipment integration
- Ten year shelf life
- Machine washable for multiple uses if not grossly contaminated
- Durable fabric and seams prevent accidental contamination and provide user confidence
- Integrated knee and elbow pads
- Available with 2 glove system options: Airboss AMG or Gore G9492 with NOMEX overglove

GORE® CHEMPAK® RUGGEDIZED SELECTIVELY-PERMEABLE FABRIC AND SEAM PERMEATION RESULTS - RC3® ENSEMBLE

Chemical	Test Conc.	Time Interval (min)	Minimum Requirement (Detection Limit)	CHEMPAK RSPFF 1994.3 fabric (garment)	CHEMPAK SPFF 1994.3 fabric (sock)	Garment to garment seam	Garment to boot over flap quad seam	Garment hood to FM12/C50 face seal seam	Garment hood to FM53 face seal seam	Garment sleeve to glove seam	Gore G9492 glove with NOMEX over glove	AMG glove with Coolmax Lycra liner	FM12/C50 face seal material	FM53 face seal material
Acrolein (vapor)	40 ppm	15	≤2.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤6.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Acrylonitrile (vapor)	40 ppm	15	≤2.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤6.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Anhydrous ammonia (gas)	40 ppm	15	≤2.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤6.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Chlorine (gas)	40 ppm	15	≤2.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤6.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Dimethyl sulfate (liquid)	10 g/m2	15	≤2.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤6.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Distilled mustard (liquid)	10 g/m2	15	≤1.33 (0.1)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤4.0 (0.1)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Soman (liquid)	10 g/m2	15	≤0.43 (0.05)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤1.25 (0.05)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

NFPA 1992, GARMENT AND SEAM REQUIREMENTS - RC3® ENSEMBLE

Chemical (concentration)	Minimum Requirement*	Chempak RSPFF 1994.3 fabric (garment)	Garment to garment seam	Chempak SPFF 1994.3 fabric (sock)	Garment to boot over flap quad seam	Garment hood to FM12/C50 face seal seam	Garment hood to FM53 face seal seam	Garment sleeve to glove seam	Gore G9492 glove with NOMEX over glove	AMG glove with Coolmax Lycra liner	FM12/C50 face seal material	FM53 face seal material	Garment closure
Butyl acetate, CAS No. 123-86-4, > 95%	> 60	> 60	> 60						> 60	> 60	> 60	> 60	
Dimethyl formamide, CAS No. 68-12-2, > 95%	> 60	> 60	> 60						> 60	> 60	> 60	> 60	
Fuel H (42.5% toluene, 42.5% isooctane, 15% ethanol mixture, v/v)	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60
ISOPROPYL ALCOHOL, CAS NO. 67-63-0, > 91%	> 60	> 60	> 60						> 60	> 60	> 60	> 60	
Methyl isobutyl ketone, CAS No. 108-10-1, > 95%	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60
Nitrobenzene, CAS No. 98-95-3, > 95%	> 60	> 60	> 60						> 60	> 60	> 60	> 60	
Sodium hydroxide, CAS No. 1310-73-2, 50%	> 60	> 60	> 60						> 60	> 60	> 60	> 60	
SODIUM HYPOCHLORITE, 10%	> 60	> 60	> 60						> 60	> 60	> 60	> 60	
Sulfuric acid, CAS No. 7664-93-9, 93.1%	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60
Tetrachloroethylene, CAS No. 127-18-4, > 95%	> 60	> 60	> 60						> 60	> 60	> 60	> 60	

*Time of observed B3:O16 in minutes; "> 60" provided if no liquid penetration through the tested specimens after a 1-hour exposure with 1-minute of the exposure at 7.8 kPa hydrostatic pressure; Notes – Gray shaded areas indicate no requirement for testing.

RC3 ENSEMBLE PROTECTIVE PERFORMANCE

Test	NFPA 1994 Class 3R Requirement	RC3 Ensemble Performance
MIST Testing	PPDFsys > 69	PPDFsys > 1,000
Seam Strength - fabric to fabric	≥ 34 N/25mm	211.4 N/25mm
Seam Strength - fabric to butyl	≥ 34 N/25mm	69.6 N/25mm

MULTI-THREAT ENSEMBLE

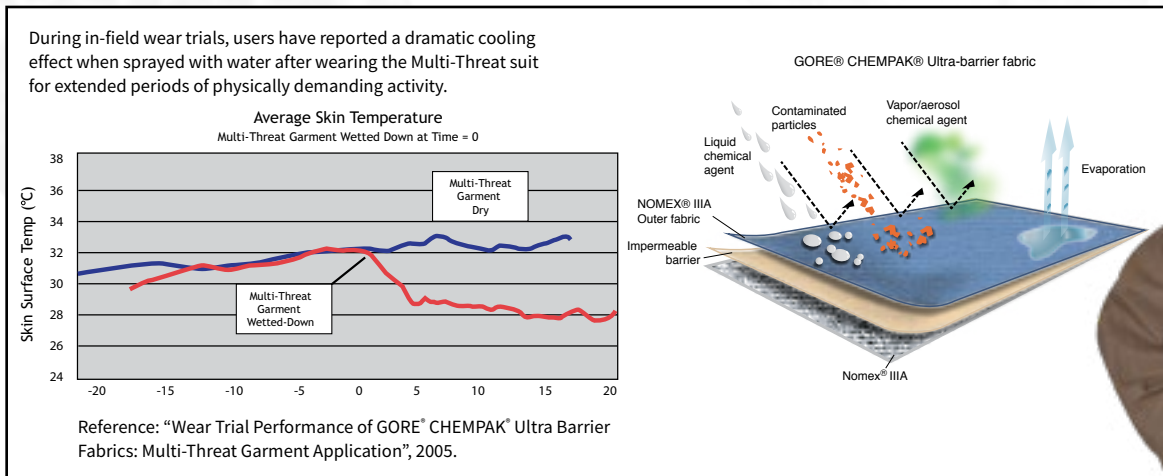
NFPA 1994 CLASSES 1 AND 2, NFPA 1992

TRIPLE-CERTIFIED PROTECTION FOR HOT ZONE CBRN MISSIONS

Blauer's Multi-Threat ensemble offers the highest level of protection in the Homeland Defender® line from liquid and vapor forms of CBRN agents. The suit is made of GORE® CHEMPAK® Ultra-barrier fabric and is certified to NFPA 1994 Classes 1 and 2 and NFPA 1992 for protection against chemical warfare agents (CWA's) and toxic industrial chemicals (TIC's) at concentrations at or above IDLH when worn with approved SCBA systems. For added protection, this revolutionary non-permeable membrane is laminated to a 4.5 ounce NOMEX IIIA outer and inner shell, which provides excellent static dissipative performance and resists melting, dripping, and burning when exposed to high heat and flame.

SUPERIOR HEAT STRESS MANAGEMENT

First responders, HAZMAT, and tactical teams must deal with heat stress and elevated core body temperatures caused in large part by their PPE ensembles, which trap body heat and interfere with the body's sweat response. The Multi-Threat suit effectively alleviates this problem through a unique "evaporative cooling" capability. The NOMEX® IIIA outer shell has been engineered to absorb water without affecting the integrity or protective performance of the underlying GORE® CHEMPAK® barrier. By wetting the suit down with water before or during use, the wearer benefits from a natural cooling effect similar to sweating as the water evaporates from the outer shell.



FEATURES & BENEFITS

- **NFPA 1994 Class 1 (2018 ed.) certification**
- **NFPA 1994 Class 2 (2018 ed.) certification**
- **NFPA 1992 (2018 ed.) certification**
- Form-fitting design for superior mobility and confined space operations
- NOMEX® IIIA laminate fabrics for limited FR protection
- Approved for use with tactical-style boots
- Tactical gloves for superior dexterity
- One piece design with integrated CBRN booties and gloves
- Rubber to rubber SCBA mask interface eliminates the need for chemical tape
- Evaporative cooling capability allows for extended response times
- Rugged GORE® CHEMPAK® Ultra-barrier fabric and extra strength seams for safer operations in demanding CBRN environments
- Reusable – Can be laundered multiple times if no gross contamination

APPLICATIONS

- S.W.A.T. – active shooter and high-risk clandestine lab entry
- Urban Search and Rescue (US&R)
- HAZMAT
- DECON
- "Hot Zone" search and rescue

Navy and rear zipper versions available



GORE® CHEMPAK® ULTRA-BARRIER FABRIC AND SEAM PERMEATION RESULTS - MULTI-THREAT ENSEMBLE

Chemical	Test Conc.	Time Interval (min)	Minimum Requirement* (Detection Limit)	Chempak Ultra Barrier fabric (woven/knit)	Chempak Ultra Barrier fabric (knit/knit)	Chempak Ultra Barrier fabric garment to garment seam	Chempak Ultra Barrier tri-garment to glove seam	Chempak Ultra Barrier Garment to Sock tri-seam	Chempak Ultra Barrier hood to Avon Class 2 faceseal seam	Chempak Ultra Barrier sock seam	Avon Class 2 faceseal material	Glove system liner material	Glove system liner seam
Acrolein (vapor)	10,000 ppm	15	≤2.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤6.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Acrylonitrile (vapor)	10,000 ppm	15	≤2.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤6.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Anhydrous ammonia (gas)	10,000 ppm	15	≤2.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤6.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Chlorine (gas)	10,000 ppm	15	≤2.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤6.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Diethylamine (vapor)	10,000 ppm	15	≤2.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤6.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Dimethyl sulfate (liquid)	20 g/m2	15	≤2.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤6.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Distilled mustard (liquid)	20 g/m2	15	≤1.33 (0.1)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤4.0 (0.1)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Ethyl acetate (vapor)	10,000 ppm	15	≤2.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤6.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Soman (liquid)	20 g/m2	15	≤0.43 (0.05)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤1.25 (0.05)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Sulfuric acid, 96.1% (liquid)	20 g/m2	15	≤2.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤6.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Tetrachloroethylene (liquid)	20 g/m2	15	≤2.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤6.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Toluene (liquid)	20 g/m2	15	≤2.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤6.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

NFPA 1992, GARMENT AND SEAM REQUIREMENTS - MULTI-THREAT ENSEMBLE

Chemical (concentration)	Minimum Requirement*	Chempak Ultra-Barrier fabric (garment)	Garment to garment seam	Chempak Ultra-Barrier fabric (sock)	Garment to boot over flap quad seam	Garment hood to FM53 faceseal seam	Garment sleeve to glove seam	Gore G9492 glove with NOMEX over glove	Garment closure	FM53 faceseal material
Butyl acetate, CAS No. 123-86-4, > 95%	> 60	> 60	> 60					> 60	> 60	
Dimethyl formamide, CAS No. 68-12-2, > 95%	> 60	> 60	> 60					> 60	> 60	
Fuel H (42.5% toluene, 42.5% isooctane, 15% ethanol mixture, v/v)	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60
Isopropyl alcohol, CAS No. 67-63-0, > 91%	> 60	> 60	> 60					> 60	> 60	
Methyl isobutyl ketone, CAS No. 108-10-1, > 95%	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60
Nitrobenzene, CAS No. 98-95-3, > 95%	> 60	> 60	> 60					> 60	> 60	
Sodium hydroxide, CAS No. 1310-73-2, 50%	> 60	> 60	> 60					> 60	> 60	
Sodium hypochlorite, 10%	> 60	> 60	> 60					> 60	> 60	
Sulfuric acid, CAS No. 7664-93-9, 93.1%	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60	> 60
Tetrachloroethylene, CAS No. 127-18-4, > 95%	> 60	> 60	> 60					> 60	> 60	

*Time of observed penetration in minutes; "> 60" provided if no liquid penetration through the tested specimens after a 1-hour exposure with 1-minute of the exposure at 7.8 kPa hydrostatic pressure; Notes - Gray shaded areas indicate no requirement for testing.

MULTI-THREAT™ ENSEMBLE PROTECTIVE PERFORMANCE

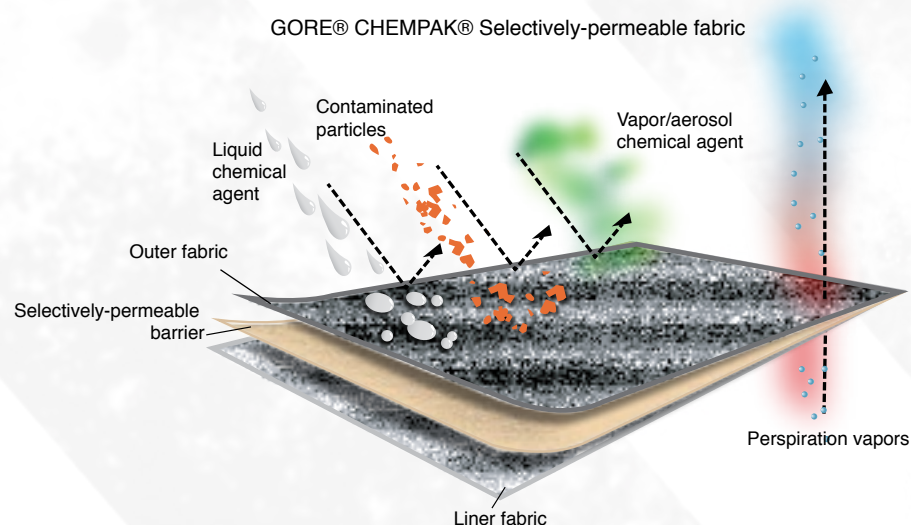
Test	NFPA 1994 Requirement	Blauer Multi-Threat Ensemble Performance
MIST Testing	PPDFsys > 441	PPDFsys > 1,500
Seam Strength - fabric to fabric	≥ 67 N/25mm	263.3 N/25mm
Seam Strength - fabric to butyl	≥ 67 N/25mm	85.4 N/25mm

XRT ENSEMBLE

NFPA 1994 CLASSES 3 AND 4

EXTENDED DURATION RESPONSE FOR WARM ZONE CBRN INCIDENTS

Blauer's XRT ensemble is certified to the NFPA 1994 standard for Class 3 protection against liquid and vapor CBRN agents and NFPA 1994 Class 4 protection against radiological and biological particulates at levels below IDLH. Made with GORE® CHEMPAK® Selectively-Permeable fabric, the XRT suit is lightweight and highly breathable to provide comfort during extended response operations. The suit's one-piece design with integrated glove system and booties eliminates the need for chemical tape and allows first responders and consequence management personnel to quickly self-don the suit with approved APR/PAPR systems.



FEATURES & BENEFITS

- **NFPA 1994 Class 3 (2018 ed.) certification**
- **NFPA 1994 Class 4 (2018 ed.) certification**
- Lightweight and form-fitting for excellent mobility
- Breathable barrier fabric allows heat and sweat vapor to dissipate away from the body for greater comfort and extended wear time
- Front-entry design allows for self-donning
- Integrated glove system and booties eliminate the need for chemical tape
- Approved for use with tactical-style boots
- Rugged GORE® CHEMPAK® Selectively-Permeable fabric and extra-strength seams allow for safer operations in demanding tactical and perimeter control situations
- Price point appropriate for mass distribution and cache strategies
- Machine washable for multiple uses if not grossly contaminated

APPLICATIONS

- Perimeter security and control of CBRN environments
- DECON
- "Warm Zone" search and rescue
- Escape from contaminated environments
- Medical triage for WMD and industrial accident victims
- Consequence management

Reflective trim, radio pocket, and thigh pockets are optional features.

SERIOUS PROTECTION FROM HAZMAT AND CBRN THREATS



Hoodless version available for use with PAPER hoods

COMPETITIVE PRODUCT COMPARISON



	XRT Suit	Tychem [®] CPF3	Saratoga HAMMER Suit
DHS Grant-Eligible Certification	NFPA 1994 Classes 3 and 4	NONE	NONE
Barrier Technology	CHEMPAK [®] Selectively Permeable membrane	Tychem [®] to Polypropylene	Absorptive
Fire Retardant	NO	NO	NO
Fit	Form-fitting	Form-fitting	Form-Fitting
Function	Security & DECON	DECON	Tactical & Security
Entry Point	Front	Front	Two-piece
Tactical Boot Approval	YES	NA	NA
Tactical Style Glove Approval	YES	NA	NA
Chemical Tape (Recommended)	NO	YES	NO
Heat Stress Mgmt System	Breathable	NONE	Air Permeable

Gore[®] CHEMPAK[®] SELECTIVELY-PERMEABLE FABRIC AND SEAM PERMEATION RESULTS - XRT ENSEMBLE

Chemical	Test Conc.	Time Interval (min)	Minimum Requirement (Detection Limit)	CHEMPAK SPFF 1994.3 fabric (garment)	CHEMPAK SPFF 1994.3 fabric (sock)	Garment to garment seam	Garment to boot over flap quad seam	Garment hood to FM12/C50 face seal seam	Garment hood to FM53 face seal seam	Garment sleeve to glove seam	AMG glove with Coolmax Lycra liner	FM12/C50 face seal material	FM53 face seal material
Acrolein (vapor)	40 ppm	15	≤2.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤6.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Acrylonitrile (vapor)	40 ppm	15	≤2.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤6.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Anhydrous ammonia (gas)	40 ppm	15	≤2.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤6.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Chlorine (gas)	40 ppm	15	≤2.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤6.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Dimethyl sulfate (liquid)	10 g/m ²	15	≤2.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤6.0	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Distilled mustard (liquid)	10 g/m ²	15	≤1.33 (0.1)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤4.0 (0.1)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Soman (liquid)	10 g/m ²	15	≤0.43 (0.05)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
		60	≤1.25 (0.05)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

XRT ENSEMBLE PROTECTIVE PERFORMANCE

Test	NFPA 1994 Class 3 Requirement	XRT Ensemble Performance
MIST Testing	PPDFsys > 69	PPDFsys > 1,000
Seam Strength - fabric to fabric	≥ 34 N/25mm	149.9 N/25mm
Seam Strength - fabric to butyl	≥ 34 N/25mm	74.0 N/25mm

BRN-94[®] ENSEMBLE

NFPA 1994 CLASS 4, NFPA 1999 ENSEMBLE

Blauer's BRN-94[®] Ensemble is the first purpose-designed PPE to be certified to the NFPA 1994 Standard on Protective Ensembles for First Responders to CBRN Terrorism Incidents for CLASS 4 protection against radiological and biological particulate threats as well as the NFPA 1999 Ensemble Standard for protection against blood-borne pathogens, body fluids, and common chemicals.

The BRN-94 ensemble is made with GORE[®] CROSSTECH[®] fabric to provide durable protection against liquid and particulate biological and radiological threats while remaining highly breathable for lower heat stress on the wearer during extended response operations. The BRN-94 was developed in response to the Ebola Virus Disease outbreak and is designed with integrated barrier gloves and booties, a liquid-resistant zipper and storm fly, and integrated hood with a chlorobutyl face seal for use with approved APR/PAPR masks. Like the other CBRN ensembles in Blauer's Homeland Defender[®] line, the BRN-94 is self-sealing and requires no chemical tape.

OPERATIONAL USES

- First Receivers
- Physical security
- Warm-zone patrol
- DECON
- Contaminated patient transport and handling
- Mortuary operations

FEATURES & BENEFITS

- Certified to NFPA 1994 for Class 4 and NFPA 1999 Ensemble
- Simple, one-piece coverall design with integrated gloves, booties, and hood for fewer potential areas of exposure and efficient donning/doffing
- Highly breathable GORE[®] CROSSTECH[®] fabric allows for longer mission durations due to low thermal burden.
- Durable fabric and seams prevent accidental contamination and provide user confidence
- Front or rear zipper versions available



Model: WZ9440F-2
(front zipper version)



BRN-94[®] overglove



BRN-94[®] barrier glove

FREQUENTLY ASKED QUESTIONS

Are Blauer's Homeland Defender® suits OSHA certified?

No. OSHA provides ensemble configuration guidance but does not certify suits. Blauer suits are certified to the NFPA 1994, NFPA 1992 and NFPA 1999 Standards. The NFPA standards are more comprehensive than OSHA guidelines because they specify design and protective performance requirements. OSHA ratings only apply to the design of a suit for various threat levels and how the suit fits with a respirator or SCBA.

What are GORE® CHEMPAK® and CROSSTECH® Fabrics made of?

GORE® CHEMPAK® and CROSSTECH® fabrics are made with high-strength fluoropolymer barrier films that are laminated to various inner and outer shell fabrics for use in CBRN contaminated environments. GORE® CHEMPAK® Ultra-Barrier fabric is impermeable and is appropriate for use in environments where CBRN agents are at or above IDLH levels when worn with approved SCBA systems. GORE® CHEMPAK® Selectively-Permeable fabric is breathable and offers protection against CBRN agents in concentrations below IDLH when worn with approved respirators. GORE® CROSSTECH® fabrics are lightweight and breathable enough for everyday wear with the added benefit of protection against liquid and airborne biological and radiological threats.

How do I care for my Homeland Defender® suit?

Homeland Defender suits require only basic storage and maintenance. Every Homeland Defender® suit comes with a User Manual, which provides detailed instructions for storage and care of the garment. To insure the protective performance of your Homeland Defender® suit, it is important that these instructions are followed at all times.

What is the shelf-life of Homeland Defender® suits?

Homeland Defender® suits have a shelf life of ten years if basic storage and care instructions are followed. The actual shelf life depends on the extent and conditions under which the garment is used and stored.

Can any SCBA or APR/PAPR face piece be worn with Homeland Defender® suits?

No. Because every face piece is constructed differently, the NFPA 1994 Standard requires that ensembles be certified with specific SCBA's, APR's, or PAPR's to ensure user safety. Only respirators and SCBA systems that are certified by NIOSH as CBRN approved and listed on each Homeland Defender® ensemble's certification may be worn.

Do Homeland Defender® suits provide thermal or FR protection?

The Multi-Threat suit provides limited FR protection due to its NOMEX® IIIA outer and inner shells, which will resist melting, dripping, and burning when exposed to high heat and flame. However, the suit does not have any insulative layer and will not protect the wearer from sustained high temperatures. The XRT, RC3 and BRN-94® suits offer no FR or thermal protection.

Can Homeland Defender® suits be decontaminated and re-used?

Homeland Defender Suits are designed and rated for multiple uses and/or launderings if not grossly contaminated or damaged. Users should follow all care instructions as detailed in the User Manual to insure the protective qualities of their Homeland Defender® suits are adequately maintained.

Does Blauer warranty its Homeland Defender® suits?

Yes. Blauer warrants that every Homeland Defender® suit is free of defects in materials and workmanship and is certified to the specified standards stated on its certification label when it is shipped from our factory. If an agency or end-user receives a Homeland Defender® suit from Blauer and it is damaged or suspected of having defects, Blauer will coordinate the return and evaluation of the suit and issue a new or repaired suit as appropriate.

How do I obtain evaluation samples of Homeland Defender® suits?

Contact Blauer's Homeland Defender® service desk by phone (800-225-6715 x 245) or e-mail (Chembio@blauer.com). We will discuss your agency's needs and coordinate an in-person demonstration.

Does Blauer also sell the respirators and boots that are certified with Homeland Defender® suits?

No. Blauer manufactures and sells the suits only.

How much do Homeland Defender® suits cost?

Pricing for Homeland Defender® suits is based on unit volume for each purchase order. Contact our Homeland Defender® service desk for a quote.

I have additional questions about Blauer's Homeland Defender® line. Who should I contact to get more information?

Please either contact our Homeland Defender® help desk (800-225-6715 x 245) or e-mail (chembio@blauer.com) or your local Blauer sales representative.



HOMELAND DEFENDER[®]

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