

FIRE PROTECTIVE CLOTHING

HIGH PERFORMANCE
PROTECTIVE CLOTHING
FOR EMERGENCY SERVICES



Fire **Protective Clothing**

High-performance protective clothing for emergency services. Formerly Bristol Uniforms, now part of the MSA family.



The Safety Company

BRISTOL

The combined expertise of both Bristol Uniforms and MSA Safety enhance and strengthen its offering to fire and rescue customers and now provides top-to-toe protection to firefighters across the world.



Structural Firefighting

Structural firefighter clothing, sometimes also referred to as bunker or turnout gear, is the principal type of personal protective equipment (PPE) used by municipal and industrial firefighters. All of our main structural styles are made to conform to the most widely used standards, EN469:2020, Level 2, and offer Level 2 protection.

To do so, garments must provide

- An outer layer to protect against flame injury.
- A moisture barrier to protect against water penetration whilst allowing internal moisture vapour to escape.
- An inner thermal barrier and lining to protect against heat from proximity to flame.



Marine

MSA Bristol's Marine clothing has been used on board ships for over 50 years. The fire coat, trouser, helmet, and boots are in compliance with the Marine Equipment Directive 96/98/EC (MED) and the relevant EN Standard.

B-Tech



B-Tech is MSA Bristol's entry-level, reliable and economical coat and trouser for structural firefighting. The short style coat is designed with ergonomic fit. The trouser measurements provide adequate overlap, so that there is no gap between coat and trousers when bending. That is the ideal fire protective clothing solution for industrial users or markets where price is the main driver but a quality product from a proven and trusted manufacturer is still sought. With a nod towards ergonomics and 28 male and female sizes, this is more than just an entry level garment range.

Now available certified to EN469:2020, Level 2



BT5/A Coat

- Two outer lower welt pockets with mitred flaps
- One internal patch pocket
- Plain cuffs with Neoprene anti-wicking barrier
- Neoprene anti-wicking barrier in hem
- Hanger loop on under collar
- Moulded zip front with velcro fastened flap Neoprene lined
- Flip back throat tab Goretex lined
- Articulated sleeves



TBT5/B. Now comes with detachable braces

- Standard waist trouser with side elastication
- Back seat with yoke
- One internal hip patch pocket
- Plain trouser hems with Neoprene anti-wicking panels
- Self cloth outer curved kneepads, twin stitched seam and Aramid felt internal knee pads
- Coats and Trousers available in 28 sizes, Male and Female
- Removable crossed suspenders for easy cleaning and operations

Ergotech Action 2



MSA Bristol's Ergotech Action 2 design, developed after careful research and extensive user trials into the ergonomics of firefighter activities most frequently involved in day-to-day firefighting, has become the standard by which lightweight firefighter PPE is measured for comfort and performance.

Ergotech Action incorporates the latest technical fabrics and has been designed and developed in close collaboration with the world's leading fibre and fabric manufacturers and has become a globally recognised design by fire authorities looking to equip their firefighters with PPE which combines class leading protection with low physiological impact. Coupled with the use of more advanced fabrics Ergotech Action 2 is the perfect choice for those users seeking a fantastic balance between cost and performance.

Now available certified to EN469:2020, Level 2



EA25/A Coat

- Collar and throat tab shape provide optimal compatibility with helmet and fire hood
- Shoulder shape and increased upper sleeve allow full rotational mobility in shoulder and arm
- Shaped panel over the shoulder eliminates the shoulder seam and makes a smoother line with greater comfort when wearing breathing apparatus
- Increased underarm gusset allows more manoeuvrability when reaching overhead
- Two action pleats added at the back shoulder



TEA25/A Trousers

- Articulated knees with convex seams around the knee for greater flexibility when bending/climbing
- Shaped seaming on back of knee to reduce fullness when crawling
- Top of trouser contoured to the body with raised back and elasticated adjustment across lumbar region
- Two large half bellow pockets
- Removable H pattern suspenders for easy cleaning and operations

XFlex



XFlex is MSA BRISTOL's best selling silhouette in light-weight fire-fighting PPE. Ergonomically designed it gives the ultimate in fit and comfort for the maximum number of body types. XFlex has distinctive sports styling and offers a garment combination that is suitable for the various hazardous roles associated with a fire-fighter's work. Fabric combinations have been designed to give the optimum performance whilst being light in weight to minimise heat stress. All layers are breathable and with wickable linings reduce the build up of heat.

Now available certified to EN469:2020, Level 2



XF5/A Coat

- Tapered body shape
- Hem curved up at front and down at back – comfort and protection
- Shoulder shape and under arm gussets allow for full rotational arm movement
- Shoulder yoke shaped for comfort, especially with breathing apparatus
- Angled and curved style lines, emphasised shaping highlighted with reflective piping and contrast stitching
- Double zip flap extends to neck with internal zip guard to protect throat
- Soft knitted inner lining on collar
- Deep return on cuff hem ensures gloves fit well inside sleeve
- Large landscape side pockets with shaped flaps incorporating internal pull tab
- Vertical pocket under zip flap and pen pocket
- Large internal pocket with care and instruction label
- Ergonomic three dimensional articulated elbow
- Hem of sleeve curved over back of hand for additional protection
- Easy-to-donning/doffing



TXF5/A Trouser

- Natural waistline at front with high curved back
- Centrally placed zip fly allows tapering of top of trouser, giving superior fit and making it easier to put on
- Distinctive angled and shaped seam lines highlighted with reflective piping
- Large twin pleated cargo pockets with shaped pocket flap incorporating integral pull tab, and large internal patch pocket, with care and instruction label
- Inside hem lined with Neoprene to minimise abrasion from boots
- Fully articulated 3 dimensional ergonomic knee shaping which goes through all layers
- Very flexible reinforcement fabric
- Removable H pattern suspenders with unique webbing slide adjuster suspenders for easy cleaning and operations
- Reinforced pipping for enhanced durability

Colour Range

Paris Blue	Gold	Desert Tan	Sage Green	Navy	Blue Grey	Lime Green	Flame Red	Yellow	Orange

* Certain colours require a Minimum Order Quantity (MOQ)

Marine **Services Garments**

Marine Fleet Suits

MSA Bristol's Marine clothing has been used on board ships for over 50 years. The fire coat, trouser and boots are in compliance with the Marine Equipment Directive 96/98/EC (MED) and the relevant EN Standard.

A Full range of Fire Coats & Trousers are available, which all carry the Mariner's Wheelmark Certification. Sizes : Small, Medium, Large, Extra Large

Meets MED and EN469:2020, Level 2 (FS17/FS18)



Coat FS17 (EN469 Level 2)

- Fleece lined high collar
- Zip front with velcro fastened flap
- Plain cuffs



Trouser FS18 (EN469 Level 2)

- Outer patch pocket right leg
- One internal hip pocket
- Braces fastened with velcro through brace loops at front.
- Velcro fastened fly

Bristol Particulate Protection Hood - BRISTOLHOOD6/BRISTOLHOOD7



The effects of smoke exposure are of concern due to the worryingly higher rates of cancer diagnoses and deaths amongst firefighters.

Nomex NanoFlex has been specifically developed to prevent contamination from potentially harmful particles. The new material is flame-resistant with superior particle barrier performance, but is also highly breathable, thin and light-weight – essential characteristics for the prevention of heat stress, and for improving comfort. The Bristol Particulate Protection Hood is proven to be 99.8% efficient at filtering harmful smoke particles. Worn under the helmet and collar, it covers the neck and jawline - areas of the body that are known to be particularly vulnerable to smoke contamination.

The effects of smoke exposure are of concern due to the worryingly higher rates of cancer diagnoses and deaths amongst firefighters. This has presented a new challenge for the industry, to create PPE that acts as a barrier to toxins and harmful particles, whilst ensuring the body stays cool and dry. In particular, studies have shown that firefighter protective hoods are the most penetrable piece of clothing worn by firefighters. A safety bulletin issued by the NFPA in January 2017, warns that hoods are particularly concerning due to direct exposure to a firefighter's skin, and states that: "The face and neck have been identified as a significant area of dermal exposure to products of combustion and potential carcinogens." The Bristol Particulate Protection Hood is proven to be 99.8% efficient at filtering harmful smoke particles. Worn under the helmet and collar, it covers the neck and jawline - areas of the body that are known to be particularly vulnerable to smoke contamination.

Crucially, the hood is also lightweight, soft and breathable, allowing heat and moisture to escape, thereby reducing the risk of heat stress. The Particulate Protection Hood has been certified to standard EN13911:2017. The new design is made up of Dupont's Nomex and Kevlar fibres with viscose in a knitted fabric, and crucially features the innovative new Nomex NanoFlex particulate barrier. Nomex NanoFlex has been specifically developed to prevent contamination from potentially harmful particles. The new material is flame-resistant with superior particle barrier performance, but is also highly breathable, thin and light-weight – essential characteristics for the prevention of heat stress, and for improving comfort.

Product Description

Product Name	BRISTOLHOOD6
Fabric	Nomex and Kevlar with Viscose/Modacrylic quilted with Nomex NanoFlex.
Colour	NAVY BLUE
Performance For Total Heat Loss <i>(THL NFPA 1971:2018)</i>	469 (W/m2)
Breathability <i>tested to EN ISO 11092:2014</i>	8.31 (m2Pa/W)
Standards	EN13911:2017.
Sizes	Available in Medium & Large

Product Name	BRISTOLHOOD7
Fabric	Pbi/Twaron quilted with Nomex Nanoflex
Colour	GOLD
Performance For Total Heat Loss <i>(THL NFPA 1971:2018)</i>	438 (W/m2)
Breathability <i>tested to EN ISO 11092:2014</i>	9.09 (m2Pa/W)
Standards	EN13911:2017.
Sizes	Available in Medium & Large

PBI Flash Hood - Gold - BRISTOLHOOD1



- PBI Gold Rib Outer @ 170g/m2**
Kermel Viscose Inner @ 220g/m2
- Designed and manufactured to BSEN13911:2004.
 - Superb comfort.
 - Breathable.
 - Wickable.
 - Easy to put on and take off.
 - Improved fit.
 - Increased coverage when worn with BA mask.
 - Increased coverage to shoulder area thus reducing the risk of "roll up" around the neck.
 - Secure in operational situations owing to flexible fabrics.
 - Tested by firefighters

Flash Hood - Black - BRISTOLHOOD2



- Double layer Nomex® MHP knit 220g/m2 (per layer)**
- Designed and manufactured to BSEN13911:2004.
 - Superb comfort.
 - Breathable.
 - Wickable.
 - Easy to put on and take off.
 - Improved fit.
 - Increased coverage when worn with BA mask.
 - Increased coverage to shoulder area thus reducing the risk of "roll up" around the neck.
 - Secure in operational situations owing to flexible fabrics.
 - Tested by firefighters.

Fire Protective Clothing

Structural Glove - GLOVE 53



- **Palm** Double-Face knit of KEVLAR® with **Silicon Carbon Coating**.
- **Back Hand** PBI® (RED) with Heat Absorber positioned to protect knuckles. Elastic shirring at wrist.
- **Liner** SENSO LINING SYSTEM. Strong and permanent link between KEVLAR® lining, CROSSTECH® moisture barrier and the outer shell.
- **Membrane** Waterproof and breathable CROSSTECH® moisture barrier with resistance to blood and bacterial infected body fluids.
- **Cuff** NOMEX® knitted cuff.
- **Sizes** 5 - 14.
- **Certified** EN 659:2008 (EN 659:2003 + A1:2008 + AC:2009).

Parameter	Requirement	Result
Abrasion resistance	EN 388 3 (2000 Cycles)	4
Cut resistance	EN 388 2 (Factor 2,5)	4
Tear resistance	EN388 3(50N)	3
Puncture resistance	EN 388 3 (100N)	3
Burning behavior	EN 407 4	passed
Convective heat	EN 367 / 4074 (HTI24 ≥ 13s)	passed
Radiation heat	EN ISO 6942 RHTI24 ≥ 18s	passed
Contact heat	EN 702 t = 10s	passed
Dexterity	EN420 ≤5% at 180°C	2
All other parameters = passed.		

Rubber Fire Boot with Pull-On Loops – BOOT9



- Manufactured to EN ISO 345: 2011 and EN 15090: 2012 F21
- Rubber boot with pull-on loops.
- Oil and acid resistant sole.
- Canvas lining.
- Sizes available: UK 4 - 14.



Gallet F1XF Structural Fire Helmet

Certified to EN443:2008



Key Features

- Ergonomic, well balanced design, providing unmatched comfort in all operating conditions.
- 2 helmet sizes ensuring an optimal fit for both small and large head sizes.
- Effective, intuitive and robust adjustment mechanisms, ensuring optimal fit for all user profiles.
- Unique adjustable ocular visor - fitting over prescription glasses while providing gap-free enclosure.
- Comfortable, high-performance face protection with excellent coverage, clear or gold coating.
- Extended thermal and mechanical protection even in extremely hot conditions.
- Fully integrated lighting module with unique distribution of light and weight, supporting work and safe navigation in the dark.
- New retroreflective sticker style for Gallet F1XF available in 5 colors (yellow, grey, blue, green, red).
- Be visible day and night thanks to 1 new helmet color (yellow) which combine Hi-viz and photoluminescence.

Gallet F2XR Multifunctional Helmet

Its comfort, versatility and ultimate integration of accessories make the F2XR the perfect head protection solution for a variety of applications, such as Wildland Firefighting, Technical Rescue, Urban Search and Rescue, Road Traffic Accidents, Rescue at Height and Water Rescue.

EN 16471:2015 – Helmets for Wildland Firefighting

EN 16473:2015 – Helmets for Technical Rescue

EN 12492:2012 – Helmets for Mountaineers



INNOVATION

- Powerful integrated dual-beam headlamp with tail light and SOS mode
- Ultimate integration of accessories including ocular visor and hearing protection with communication systems
- Ergonomic knob wheel with adjustable position on the neck
- Innovative one-piece padding in soft-goods (welded instead of sewed) to help prevent pressure points.
- Optimised soft goods design and material for easy cleaning and drying

PROTECTION AND RESISTANCE

- High temperature thermoplastic shell for optimal resistance to mechanical impacts
- High performance suspension system for optimal shock absorption
- Ear protection side panels to extend area of coverage for water rescue missions

COMFORT

- Light weight, optimal balance and high retention for increased comfort during long lasting operations
- Multiple adjustments with 3-position ride heights to ensure perfect fit to all wearers
- Vented shell and inner padding available to optimize user's breathability

VERSATILITY

- Large range of accessories for enhanced protection in various situations

MSA - The Safety Company

Established in 1914, MSA Safety Incorporated is the global leader in the development, manufacture and supply of safety products that protect people and facility infrastructures. Many MSA products integrate a combination of electronics, mechanical systems and advanced materials to protect users against hazardous or life-threatening situations. The company's comprehensive product line is used by workers around the world in a broad range of markets, including the oil, gas and petrochemical industry, the fire service, the construction industry, mining and the military. MSA's core products include self-contained breathing apparatus, fixed gas and flame detection systems, portable gas detection instruments, industrial head protection products, fire and rescue helmets, and fall protection devices.

Accompanying you in firefighting, emergency response and search and rescue, our Bristol line is one of the world's leading emergency services protective clothing brands, with history dating back to 1801.

WHEN YOU GO IN, WE GO IN WITH YOU.

NOTE: This Bulletin contains only a general description of the products shown. While uses and performance capabilities are described, under no circumstances shall the products be used by untrained or unqualified individuals and not until the product instructions including any warning or cautions provided have been thoroughly read and understood. Only they contain the complete and detail information concerning proper use and care of these products.

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