Structural
With 50 years’ experience in the specification, design and manufacture of firefighter Personal Protective Equipment (PPE) it is little wonder that Bristol’s garments now protect firefighters in over 110 countries.

This catalogue contains details of Bristol’s clothing designed for use in structural fire fighting situations, known in some countries as bunker or turnout gear. The main standards covering structural firefighting garments are EN469:2005 in Europe and the NFPA standards in the USA. You will find more information on these, together with test methods and a glossary of terms, on pages 6 and 7 of the Bristol technical introduction catalogue.

The European standard EN469:2005 tests for compliance with:

- Heat transfer of flame and radiation
- Resistance to liquid chemicals
- Water vapour resistance

In the USA, the NFPA 1971 2007 standard also calls for compliance with:

- Thermal Protective Performance (TPP)
- Conductive and Compressive Heat Resistance (CCHR)
- Blood/viral protection
- Total Heat Loss (THL)

This catalogue shows the base styles from which Bristol's many product variations are made. With over 3500 separate models on offer, we can rightly claim to provide a unique bespoke service to meet firefighters’ exact needs. On pages 10 and 12 of the Bristol technical introduction catalogue, you will see the most commonly used feature additions. And you can of course get further information from Bristol or your local distributor.

Structural firefighting clothing to Level 2 must consist of:

- An outer layer to protect the wearer from flame injuries.
- Moisture barrier to give protection from external water penetration and allow internal moisture vapour to escape.
- Thermal barrier and inner layer/lining providing heat protection from proximity to flame.

There are also minimum requirements for reflective material that may be specified as part of EN471. All Bristol garments conform to EN343 water resistance requirements and most to EN1149 for protection against static electricity.

Bristol also meets the variations to European standards, such as French NIT standard and the German HuPF. So, whatever your circumstances, you can be confident that our expertise and product range will meet your needs.
# Fabrics Chart

<table>
<thead>
<tr>
<th>Fabric Code Reference</th>
<th>Description</th>
<th>Weight Sq Mtr</th>
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<tbody>
<tr>
<td><strong>Outer Materials</strong></td>
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<td></td>
</tr>
<tr>
<td>A1</td>
<td>Aluminised Fabric</td>
<td>543grms</td>
</tr>
<tr>
<td>PM1</td>
<td>PBI Matrix</td>
<td>205grms</td>
</tr>
<tr>
<td>PS1</td>
<td>PBI Gold Ripstop</td>
<td>205grms</td>
</tr>
<tr>
<td>PT2</td>
<td>PBI Gold Twill</td>
<td>220grms</td>
</tr>
<tr>
<td>RR1</td>
<td>Kereml HTA Ripstop</td>
<td>210grms</td>
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<tr>
<td>HT8</td>
<td>55% Modacrylic, 45% Cotton Twill Fabric</td>
<td>320grms</td>
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<tr>
<td>XF4</td>
<td>Nomex III</td>
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<tr>
<td>XF9</td>
<td>Nomex Delta C</td>
<td>265grms</td>
</tr>
<tr>
<td>XR2</td>
<td>Nomex Hainsworth TITAN with Repel+</td>
<td>220grms</td>
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<tr>
<td>XR6</td>
<td>Nomex Hainsworth TITAN Atlas with Repel+</td>
<td>270grms</td>
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<tr>
<td>XR7</td>
<td>Nomex Hainsworth TITAN Metis with Repel+</td>
<td>172grms</td>
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<tr>
<td>XS2</td>
<td>Nomex Delta T Ripstop</td>
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<td>XS4</td>
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<td>XS5</td>
<td>Nomex Delta T Ripstop</td>
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<tr>
<td>XT5</td>
<td>Nomex Delta T Twill</td>
<td>195grms</td>
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<tr>
<td><strong>Moisture Barrier</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M03</td>
<td>Gore-tex Fireblocker</td>
<td>130grms</td>
</tr>
<tr>
<td>M05</td>
<td>Membrane laminated to Nomex Viscose</td>
<td>135grms</td>
</tr>
<tr>
<td>M06</td>
<td>Gore-tex Membrane laminated to Nomex Viscose</td>
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<tr>
<td>M08</td>
<td>Membrane laminated to Kereml Viscose</td>
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<tr>
<td>M09</td>
<td>Gore Crosstech</td>
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<td>M10</td>
<td>Gore-tex Airlock</td>
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<td>M12</td>
<td>Gore Crosstech SR</td>
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<td>M13</td>
<td>Gore Crosstech Airlock</td>
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<tr>
<td><strong>Thermal Barrier</strong></td>
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<td>F31</td>
<td>Nomex Kevlar (E89)</td>
<td>51grms</td>
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<tr>
<td>N26ME</td>
<td>Nomex/Meta Aramid Viscose with Kevlar Strip Spacers</td>
<td>195grms</td>
</tr>
<tr>
<td>Q01</td>
<td>Nomex/Meta Aramid Viscose Quilted to Thermal Barrier</td>
<td>205grms</td>
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<td>Q02</td>
<td>F.R. Cotton Quilted to Thermal Barrier</td>
<td>300grms</td>
</tr>
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<td>Q03</td>
<td>Nomex/Meta Aramid Viscose Quilted to Thermal Barrier</td>
<td>205grms</td>
</tr>
<tr>
<td>Q04</td>
<td>Delta C Quilted to Thermal Barrier</td>
<td>205grms</td>
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<td>Q05</td>
<td>Delta C Quilted to Thermal Barrier</td>
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<td>Q08</td>
<td>Aramid Viscose Quilt</td>
<td>205grms</td>
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<tr>
<td><strong>Linings</strong></td>
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</tr>
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<td>N21ME</td>
<td>Nomex Viscose</td>
<td>105grms</td>
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<tr>
<td>P21</td>
<td>F.R. Cotton</td>
<td>200grms</td>
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<td>N21RE</td>
<td>Nomex low friction</td>
<td>120grms</td>
</tr>
<tr>
<td>N28PO</td>
<td>Nomex Delta C</td>
<td>105grms</td>
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</table>

It is possible that fabric and garment specifications may change or be withdrawn if circumstances demand. However, plenty of notice will be given, and you can always confirm availability by contacting Bristol or its nominated distributors.
B-Tech
Standard EN469:2005 Level 2

B-Tech is Bristol’s entry level for a structural firefighting coat and trousers to EN469:2005 Level 2.

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.

Features

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 Gore-tex lined
- Articulated sleeves
BT/A with silver reflective
BT/B with triple trim reflective

Trousers
- Standard waist trousers with side elastication
- Fixed braces crossed at back
- Back seat with yoke
- Self cloth outer curved kneepads, twin stitched seam and Aramid felt internal knee pads
- One internal hip patch pocket
- Plain trouser hems with Neoprene anti-wicking panels
TBT/A with silver reflective
TBT/B with triple trim reflective

Usual fabric combination:
XT5 Nomex Delta T
M03 Gore-tex Fireblocker
Q02 FR Felt quilted to FR Cotton lining

Standard Colours
Dark navy
Brigadier blue
Orange
Yellow

Sizes
Chest/waist: Small to 4XL
Height fittings: short/regular/tall/extra tall
28 male and 28 female sizes
Since its introduction, the Wessex fire coat and trouser has proved to be a particular favourite with many brigades, not just in the UK, but in many other parts of the world too.

A comfortable, practical garment, it provides Level 2 EN469 protection without compromising on comfort or safety.

Features

- Traditional bunker length
- Internal Kevlar felt shoulder pads to protect against BA strap pressure
- Heavy moulded zip covered with Velcro front fastening flap
- Two external and four internal pockets
- One row of 50mm silver 3M Scotchlite™ reflective tape
- Meets Gore rain room test

Usual fabric combination:

XT5 Nomex Delta T  
M03 Gore-Tex Fireblocker  
Q01 FR Felt quilted to Nomex  
Viscose lining

Standard Colours

- Dark navy
- Brigadier blue
- Orange
- Yellow

Sizes

Coat - male and female sizes:  
Small to 4XL.  
Height fitting: short, regular, tall and extra tall.

<table>
<thead>
<tr>
<th>Waist</th>
<th>Fitting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small and large</td>
<td>extra short</td>
</tr>
<tr>
<td>Small, large, XL, 2XL</td>
<td>short</td>
</tr>
<tr>
<td>Small, large, XL, 2XL, 3XL</td>
<td>regular and tall</td>
</tr>
<tr>
<td>Small, large, XL, 2XL</td>
<td>extra tall</td>
</tr>
</tbody>
</table>

Trousers - male

<table>
<thead>
<tr>
<th>Waist</th>
<th>Fitting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small to 4XL</td>
<td>short, regular, tall and extra tail</td>
</tr>
</tbody>
</table>

Trousers - Female

<table>
<thead>
<tr>
<th>Waist</th>
<th>Fitting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small to 4XL</td>
<td>short, regular, tall and extra tail</td>
</tr>
</tbody>
</table>

Models

- Coat – W/A
- Trouser – TC/B
W/A coat, TC/B trouser

W/A coat, TC/B trouser
Bristol’s Ergotech brand has quickly established itself as a leading style for many UK and overseas brigades. Ergonomically designed, it is the result of careful research into the type of tasks that firefighters perform regularly.

Using the latest materials, designed in collaboration with the world’s leading fabric producers, the Ergotech range provides improved fit, wearer comfort, and a lighter weight ensemble, without compromising on any levels of operational protection.

Minimizing wearer heat stress has been key to the design process; the Ergotech range helps reduce internal body heat build up for greater safety under extended operational conditions.

Usual fabric combinations:
XR2 Hainsworth TITAN
M10 Gore-Tex Airlock
N21ME Nomex Viscose Lining

PS1 PBI
M10 Gore-Tex Airlock
N21ME Nomex Viscose Lining

Colours
XR2 Hainsworth TITAN
Paris blue
Yellow
Orange
Red/orange
Desert tan
Red
Grey

PBI
Gold
Available to order:
Black, navy, red

Also available to order PBI Matrix.

Ergotech coat model E2/A
• Tapered girth with sleeve featuring articulated construction and underarm gusset
• Closed cell foam padding to shoulders and elbows
• Extended lined and laminated zip flap

Ergotech trouser model TE2/A
• Articulated seat and knee construction for greater wearer comfort and manoeuvrability
• Arashield external knee panels with closed cell foam and Kevlar felt padding

Sizes
Chest/waist: small-4XL
Height fittings: short, regular, tall and extra tall
28 male and female sizes
E2/A coat, TE2/A trouser

E2/A coat, TE2/A trouser
Ergotech Action fire coat and trouser
Standard EN469:2005 Level 2

**Ergotech Action coat model EA2/A**
- 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

**Usual fabric combinations:**
- XR2 Hainsworth TITAN
- M10 Gore-Tex Airlock
- N21ME Nomex Viscose Lining
- PS1 PBI
- M10 Gore-Tex Airlock
- N21ME Nomex Viscose Lining

**Colours**
- XR2 Hainsworth TITAN
  - Paris blue
  - Yellow
  - Orange
  - Red/orange
  - Desert tan
  - Red
  - Grey
- PBI
  - Gold
  - Available to order: Black, navy, red
  - Also available to order PBI Matrix.

**Sizes**
- Chest/waist: small - 4XL
- Height fittings: short, regular, tall and extra tall
- 28 male and female sizes

**Ergotech Action trouser model TEA2/A**
- 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
- H pattern braces
- Two large half bellow pockets

H braces and elastication in lumbar region
Back pleat

Articulated knee

EA2/A coat, TEA2/A trouser

EA2/A coat, TEA2/A trouser
Multi-purpose coat and coverall

Because today’s firefighters are involved in many situations for which the Level 2 Structural fire fighting garment may be unsuitable, such as road traffic accidents and general rescue, Bristol’s designers have come up with a solution: a one piece coverall, which can be used for technical rescue and accident work, but which, with the addition of a coat, becomes an ensemble, providing protective clothing for structural firefighting to meet EN469:2005.

Coverall model UNC90

- Body and sleeves in Hi-Viz material with Crosstech SR moisture barrier
- Waist to ankle XR2 Hainsworth TITAN outer with Crosstech Airlock moisture barrier and N20PO Nomex Delta C lining

Standards

- EN ISO 11612 General flame
- EN471 Class 3

Features

- Zip front with Velcro flap
- Yoke back with thigh pleats
- Two half bellow side pockets with Velcro flaps and pull tabs
- Elastic waist
- Knitted cuff with thumbloops
- Articulated knee assembly with Kevlar felt and foam kneepad and Arashield outer panels
- Padded elbows with Arashield outer panels
- Underarm gussets with vent panel
- Silver 3M reflective on top part
- Yellow Reflexite below waist

Fully lined coverall UNC9

In certain areas, a one-piece garment is preferred to the coat and trouser. Bristol offers a practical solution which is durable, yet comfortable.

Features

- Two half bellow thigh pockets with drainholes
- One internal pocket
- Plain waist (no elastic)
- Two way zip covered with Velcro fastening flap
- 50mm silver 3M Scotchlite™ reflective tape
- Available in sizes: small, medium, large, X-large, XX-large

Usual fabric combination:

XT5 Nomex Delta T
M03 Gore-Tex Fireblocker
Q01 Nomex Viscose Lining

Colours

Dark navy
Brigadier blue
Yellow
Orange

Sizes

Chest/waist: small - 4XL
Height fittings: short, regular, tall and extra tall
28 male and female sizes

UNC90

= EN ISO 11612
= EN471 Class 3

UNC91

= EN471 Class 1
= EN469:2005 Level 2
Coat model UNC91
XR2 Hainsworth TITAN
N20PO Nomex Delta C

Standards
• EN471 Class 1
• EN469: 2005 Level 2 BUT ONLY WHEN WORN IN CONJUNCTION WITH MULTI-TASK COVERALL
• It is also possible for the ensemble to meet EN471 Level 2 with extra reflective

Features
• Zip front with Velcro fastened flap
• One inside patch pocket
• One jetted pocket under zip flap
• Padded shoulders
• Underarm gussets
• Shaped collar with Velcro flip back tab
• Action pleats in back

Usual fabric combination - coverall:
Coverall - Upper Body: High visibility FR Cotton blend / M12 Crosstech SR / N20PO Nomex Delta C
Waist Down: XR2 Hainsworth TITAN / M13 Crosstech Airlock / N20PO Nomex Delta C

Standard colours - coverall:
High viz yellow / Paris blue

Usual fabric combination - coat:
XR2 Hainsworth TITAN
N20PO Nomex Delta C

Standard colours - coat
Paris blue

Sizes
Chest/waist: small - 4XL
Height fittings: short, regular, tall and extra tall
28 male and female sizes
Based on the Ergotech model, Bristol manufactures firefighter garments which meet the North American standard NFPA. They are tested independently by Underwriters Laboratories Inc. (UL), who carry out rigorous testing on all materials, components and garments.

Not surprisingly, Bristol was the first company to have sold NFPA type garments, manufactured in the UK from European fabrics, into the United States market.

**Coat N2/A**

**Features**
- Bristol design Drag Rescue Device (DRD)
- Underarm gussets
- Flip back throat tab
- Articulated sleeves
- Action pleats on back
- Elbow and shoulder pads
- Two lower box bellow pockets with flaps, pull tabs and drainholes, handwarmer pockets behind
- One inside patch pocket on lining
- Two vertical jetted pockets under front flap
- Radio pocket
- Two microphone loops
- Two D rings on front
- Torch loop
- 75mm triple trim reflective tape

**Trouser TN2/A**

**Features**
- Two box bellow pockets with flaps, pull tabs and drainholes
- Zip fly with Velcro flap
- Detachable ‘H’ braces
- Articulated knees with Arashield centre panel
- High back
- One inside hip patch pocket
- 75mm triple trim reflective tape
- Two side waist adjusters and elastication at back

**Sizes**

Coat 34” - 60”, trousers 30” - 60”

Height fittings: short, regular, tall and extra tall

**Usual fabric combination:**

XR2 Hainsworth TITAN
M09 Crosstech
Q08 Thermal Quilt

**Standard colours**

Paris blue
Yellow
Orange
Red/orange
Desert tan
Grey
N/A coat
TN/A trouser
Detachable braces and elastication in lumbar area
Bellow pockets - trouser thigh
DRD (Drag Rescue Device)
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Staple Hill
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BS16 5LL
UNITED KINGDOM
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F: +44 117 956 5927
E: enquiries@bristoluniforms.com
W: www.bristoluniforms.com

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