Flame Retardant Clothing

An Expert Guide

- Base Layers
- Mid Layers
- Cotton Treated Workwear
- Inherent Workwear
- Weather Protection
- Chemical Disposable Protection
Our Service

Arco is the UK’s leading supplier of personal protective equipment, workwear and workplace safety products offering a world-class range of over 170,000 products.

As Experts in Safety we are widely recognised as a provider of specialist advice through our sales office network and this is further supported by our training and consultancy division. We reach our customers through an extensive product catalogue, interactive website, local Sales Offices and a network of over 40 trade counters. We pride ourselves on providing customers with great availability, performance and price.

Founded in 1884 Arco has a heritage spanning four generations. With traditional family values at the heart of the business we pride ourselves on our core values: respect, hard work, enterprise and excellence in reputation. We fully subscribe to the ETI’s Nine Principles Base Code and have fully incorporated the internationally recognised code of labour practice into our own ethical policy. In 2007 Arco was the first distributor in our industry to become a member of the Ethical Trading Initiative (ETI) and in 2010 we became a member of Sedex, the Supplier Ethical Data Exchange. We continually support local communities and charities donating in excess of 1% of our pre tax profits annually.

Arco’s reputation is backed by a comprehensive range of over 170,000 products, offering a world-class performance and price.

Arco reaches its customers through an extensive product catalogue, an interactive website, local sales offices and a network of over 40 trade counters. We pride ourselves on providing customers with great availability, performance and price.

Arco is the UK’s leading supplier of personal protective equipment, workwear and workplace safety products offering a world-class range of over 170,000 products.

At Arco we pride ourselves on supplying health and safety products to help keep people safe at work. All of our products have been trialled in real life situations and tested to ensure they are fit for purpose and tested and approved to the highest EN Standards.

Most Comprehensive Range

A research project with our customers who work in high risk environments highlighted the requirement for a supplier that could provide a wide range of highly innovative FR garments that offered a choice of protection levels and at various price points.

In order to create one of the most comprehensive ranges of FR clothing available we have developed our own range of garments and complemented them with garments from selected vendor partners. Our vendor partners are specialists in their field and supply market leading brands globally.

ArcoPro

To demonstrate our commitment to providing products of the most demanding safety standards we have created ArcoPro. All ArcoPro PPE and hazardwear offer multi-norm protection and satisfy Category III of the European PPE Directive. The ArcoPro range of FR garments includes base layers, mid layers, workwear, weather protection and chemical protection.

Our Arco design service can provide a bespoke or customer designed garment to meet your specific requirements, we can work with you to remove or add features to our standard garments for example radio loops or pockets.

All Garments Featured in the FR Range Have Undergone Rigorous Testing

Our ArcoPro products have been carefully designed and thoroughly tested both in our Arco Product Assurance Laboratory and externally in an independent test house.

We have conducted two sets of tests on our ArcoPro garments both on individual garments and combinations of garments. The test results clearly show the benefits of layering the garments to achieve a higher level of FR protection for the wearer. For more information on the testing results and regime, please see next page.

Specialist Safety Advice

To demonstrate our commitment to our new FR range we have employed two Technical Sales Specialists who have a deep understanding of the products and suitable applications for them. It is part of their role to attend customer appointments and identify what type of protection is most suitable for the customer in their individual circumstances. If you would like to meet with one of our Technical Sales Specialists please contact your local Arco branch.

www.arco.co.uk
FR Clothing Testing

Here at Arco we pride ourselves on ensuring that our products are tested and approved to the relevant EN standards. All of the garments in our FR range either meet or exceed current EN standards.

At Arco we have strict quality procedures for our own brand garments and we carefully select the partner vendors we work with to ensure their products meet our exceptionally high quality standards.

In order to establish the quality of our ArcoPro garments we conducted two sets of tests on our garments, both individually and on combinations of garments when worn together.

Thermo Mannequin Tests

This extreme test looks at how a fabric performs in a flash fire, by engulfing a mannequin in flames. The Thermo mannequin is a life-sized, instrumented mannequin system which is one of the most advanced thermal burn injury evaluation devices in the world. Covered with 122 heat sensors and dressed in test garments, Thermo mannequin tests help manufacturers ensure optimal product performance. This test simulates the exposure of a garment to a typical excess fuel fire with temperatures rising up to 1,000°C. It predicts the garment’s protective performance and integrity against heat, flame and fire during such a typical fire incident.

The heat sensors record the temperature rise on the surface of the mannequin while a computer programme calculates:

• The predicted percentage of second- and third-degree burns a person might suffer on their body under similar conditions
• The position of the burns, and the percentage of burns compared to the total of the body
• The burn evolution over the measuring time, resulting in the person’s chance to survive the incident (in %) in conjunction with the victim’s age

Thermal Protection Performance (TPP) Test

The results of this test show the difference in time between feeling pain and receiving a second degree burn. We have called this time period ‘response time’ as this is the time a person would have to get themselves away from a hazard should an incident occur.

For example, if your hand were to touch a hot object there is a period of time, however small when you are sustaining a burn but you can’t feel it. If the period of time between first feeling pain and sustaining a burn were longer, then you would have more time to react, you could either remove the hazard or get away from the danger which would result in a lesser injury.

The test simulates circumstances typical for a fire: a constant combination of 50% radiant heat and 50% convective heat. Radiant heat is that which is radiated out from an element, warming an object and convective heat is usually the dominant form of heat transfer in liquids and gases. In this test both forms of heat warm either side of the test garment sample simultaneously.

The test measures the time that elapses and the amount of heat energy per surface area (TPP value) at which the temperature and energy transferred to the back of the fabric (i.e. which would be next to the skin) reaches a level which would cause a second-degree burn to the wearer of the garment.

Layering Garments

When FR garments are worn together or ‘layered’ the time before the wearer sustains a second degree burn is significantly longer than when the garments are worn individually.

The greatest time achieved with our TPP testing when wearing layered garments was 21.28 seconds.

Test Results

We conducted TPP tests on 45 combinations of fabric used in the manufacture of ArcoPro garments. These represent alternative layers of our new garments have been put together to simulate realistic outfits which would be worn in working situations.

The results highlighted two key benefits to wearing ArcoPro garments together as a layering system.

1 Increased Time Before the Wearer Sustains a Second Degree Burn

When FR garments are worn together or ‘layered’ the time before the wearer sustains a second degree burn is significantly longer than when the garments are worn individually.

The greatest time achieved with our TPP testing when wearing layered garments was 21.28 seconds.

The combination of garments was:

• ArcoPro GORE-TEX® PYRAD® garments
• ArcoPro FR Modacrylic Long Sleeve Polo Shirt
• ArcoPro FR Modacrylic Sweatshirt
• ArcoPro GORE-TEX® PYRAD® garments

On average when the garments were tested individually, the time before the wearer would receive a second degree burn was five seconds. By wearing more than one FR layer this time increased to 21.28 seconds, it is approximately four times longer before the wearer of the garment would sustain a burn injury.

2 Greater ‘Response Time’, More Time to React if an Incident Occurs

When the new ArcoPro garments are layered together the wearer benefits from a longer period of time between first feeling pain and sustaining a second degree burn. The greatest ‘response time’ achieved with our testing was 5.93 seconds.

On average when the garments were tested individually, feeling pain and sustaining a second degree burn.

The greater response time gives the wearer a longer period to react before sustaining a second degree burn.

Pain Response Time

<table>
<thead>
<tr>
<th>Time (s)</th>
<th>Burn</th>
<th>Pain</th>
<th>Response Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>2.5</td>
<td>2.5</td>
<td>2.5</td>
<td>2.5</td>
</tr>
<tr>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
</tr>
<tr>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
</tr>
<tr>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
</tr>
<tr>
<td>4.5</td>
<td>4.5</td>
<td>4.5</td>
<td>4.5</td>
</tr>
<tr>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
</tr>
<tr>
<td>5.5</td>
<td>5.5</td>
<td>5.5</td>
<td>5.5</td>
</tr>
<tr>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
</tr>
<tr>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
</tr>
<tr>
<td>7.0</td>
<td>7.0</td>
<td>7.0</td>
<td>7.0</td>
</tr>
<tr>
<td>7.5</td>
<td>7.5</td>
<td>7.5</td>
<td>7.5</td>
</tr>
<tr>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
</tr>
</tbody>
</table>

1. Increased Time Before the Wearer Sustains a Second Degree Burn
2. Greater ‘Response Time’, More Time to React if an Incident Occurs

For comparison:

- ArcoPro FR Modacrylic Long Sleeve Polo Shirt
- ArcoPro Nomex Comfort Ripstop garments
- ArcoPro GORE-TEX® PYRAD® garments

The combination of garments was:

- ArcoPro FR Modacrylic Long Sleeve Polo Shirt
- ArcoPro Nomex Comfort Ripstop garments
- ArcoPro GORE-TEX® PYRAD® garments

The greater response time gives the wearer a longer period to react before sustaining a second degree burn.
Customising and modifying garments for corporate identity and safety is common practice with FR garments, it supports corporate identity and personal identification and can improve site safety.

1 Decorating Garments
We badge over two million garments per year at our dedicated Clothing Decoration Centre. We can either heat seal or embroider any company logo to your garments, plus the wearer’s name can be added in a choice of colours and styles.

FR garments require specialist treatment when personalising them to make sure that the process of personalisation does not compromise the safety of the garments. We source our heat seals from a badging expert who is one of the most trusted garment decoration specialists in the UK, and who is unrivalled in their reputation for technical expertise in any type of transfer onto any type of fabric. Heat seals are applied to garments at our own Arco Clothing Centre.

2 Bespoke and/or Modified Garments
Our Arco design service can provide a bespoke or customer designed garment to meet your specific requirements. We work with our customers to remove or add features to our standard garments for example radio loops or pockets. We also work closely with the suppliers of other FR garments in our range and each has experience and expertise in providing bespoke or custom garments.

Any bespoke or custom garment will incur a minimum order quantity, commitment to stock and specific lead times dependent upon design and performance criteria.

The Importance of FR Clothing

Reducing Burn Injury
In 2010-11 there were over 3,000 burn related injuries in the workplace, three of which were fatal*.

If employees are working in a potentially dangerous environment where heat or flame hazards are present, it is the responsibility of the employer to ensure that workers are sufficiently protected. Flame resistant (FR) clothing significantly reduces burn injuries which can save lives in the event of an accident.

Many clothing related injuries due to heat sources or direct contact with flames occur each year. The most severe burns are often not caused by the original hazard, but rather the secondary result of clothing burning. The most serious type of burns in the workplace are caused by workwear igniting and burning onto the wearer’s skin.

FR clothing works by reducing the flammability of materials by either physically blocking the fire or by initiating a chemical reaction that stops the fire. FR clothing does not ignite and continue to burn, it can self extinguish or fail to continue burning after the heat source or flame has been removed. Even single-layer FR work clothing can significantly protect employees.

Flash fires are a rare occurrence but they can happen and if a flash fire or electric arc flash or other incident should take place you need to make sure your employees are protected. FR clothing dramatically reduces the severity of burn injuries which can mean the difference between life and death.

*2010-11 HSE related injuries to employees by type of injury.

Investing in FR Clothing Can Save Both Lives and Money
Although FR clothing may initially cost more than standard workwear, FR fabrics can be more durable and long lasting. FR clothing can be an investment that saves money in the long term.

The cost of a serious burn injury will include not only the physical damage but also treating victims for physiological damage. Direct costs include medical, prolonged recovery and rehabilitation, potential disability, and job retraining. Indirect costs include workers compensation, lost work time, increased insurance premiums and potential liability. It is not only the person who suffers the injury but the co-workers, managers and the business.
The Choice of Fabrics

Understanding the differences between “inherent” and “cotton treated” FR technologies is important for those responsible for evaluating, specifying, and wearing FR garments.

There are two main types of fabric used to manufacture flame resistant (FR) clothing, cotton treated or inherent.

The aim of this Expert Guide is to introduce you to our range of FR clothing, the features and benefits of each garment and assist you in choosing which type of FR protection is most suitable for your needs.

Cotton Treated

The term “treated” refers to a manufacturing process where a mix of chemicals is added to a material to make a new FR fabric. Unlike fabrics made with inherent FR fibres, chemically treated FR fabrics may have their FR properties diminished or removed completely depending on how they are cared for and which chemicals they are exposed to in the work environment. See next page for a guide to care instructions.

Inherent

In inherent fabric FR properties are naturally present; they are part of the fibres which means that the flame retardant properties of the fabric are permanently engrained in the fibres and cannot be washed or worn out.

Care Instructions

In order to preserve the life of your FR garment and ensure that it continues to perform as intended, it is important to adhere to recommended care instructions. If you do not wash and care for your garment properly its FR properties can be diminished.

Each garment will have its specific care instructions printed on the garment label; these will need to be reviewed before garments are laundered.

Example care label:

Care instructions symbols include:

- Wash on a normal cycle at 60°C
- Do not use bleach, or use detergents that include bleach
- Steam iron on a medium setting at 150°C
- Dry clean with any solvent except Trichloroethylene
- Tumble Dry on a low heat
- CE quality mark is a visible sign that the manufacturer of the product conforms will all Directives relating to the product

Laundering

Ideally wash FR garments separately to avoid damaging the luminescent effect or wash them inside out to reduce the abrasion on other garments.
ISO 11612:2008 - Protective Clothing to Protect against Heat and Flame
This standard specifies performance requirements for garments made from flexible materials, which are designed to protect the wearer’s body (except the hands) from heat and/or flame.

The performance requirements set out in ISO 11612:2008 are applicable to garments which could be worn for a wide range of end uses, where there is a need for clothing with limited flame spread properties and where the user can be exposed to radiant or convective or contact heat or to molten metal splashes.

The following parameters are used:
- Code A1 – Limited flame spread to outer surface
- Code A2 – Limited flame spread to edge
- Code B – Convective heat
- Code C – Radiant heat
- Code D – Molten aluminium splash
- Code E – Molten iron splash
- Code F – Contact heat

EN ISO 14116:2008 - Protective Clothing to Protect against Heat and Flame – Limited Flame Spread
This standard specifies the performance requirements for the limited flame spread properties of materials and protective clothing in order to reduce the possibility of the clothing burning and itself constituting a hazard.

Protective clothing complying with ISO 14116:2008 is intended to protect workers against occasional and brief contact with small igniting flames, in circumstances where there is no significant heat hazard and without presence of another type of heat. When protection against heat hazards is necessary in addition to protection against limited spread flammability, then standards, such as ISO 11612, are more appropriate (see above).

EN ISO 20471:2013 High Visibility Clothing - Test Methods and Requirements
Professional clothing must withstand the tough environments in which they are used. High visibility garments can be manufactured from different types of materials and these materials must be sufficiently robust to withstand real life working conditions. The test for the above standard includes six main areas:
- Colour Fastness
- Colour Measurement
- Dimensional Stability
- Tape Testing
- Garment Assessment
- Chemistry Testing

EN471:2003 High Visibility Clothing
There are three classes of garment type based on the levels on conspicuity they provide. On all garments the retro-reflective tape must not be less than 50mm wide.

Class 3: Highest Level of conspicuity
- Minimum background material 0.8m²
- Minimum Retro-reflective material 0.2m²

Class 2
- Minimum background material 0.5m²
- Minimum Retro-reflective material 0.13m²

Class 1
- Minimum background material 0.14m²
- Minimum Retro-reflective material 0.10m²
EN 14360:2004 - Protective Clothing against Rain

Suitable protection against bad weather conditions is one of the central functions of protective clothing. This European standard defines test conditions under which readymade garments are exposed to heavy rain, and it is a positive addition to EN343. EN 14360:2004 creates a basis on which the waterproofness of rain-protective clothing can be tested throughout the EU under appropriate practical conditions. Impermeability to rain is an important characteristic that is tested on the complete garment in order to test, in particular, its constructional design characteristics. To do so, a stationary test mannequin is exposed to artificial rain.

EN 14360 applies to the testing of jackets, trousers, coats and one or two piece suits.

GO/RT 3279 Approved High Visibility Workwear

On the UK railway networks it is a mandatory requirement for all people working on the track or lineside to wear High Visibility workwear as part of their Personal Protective Equipment (PPE). This workwear is fluorescent orange in colour and has the addition of retro reflective stripes incorporated in the manufacture. The GO/RT 3279 standard ensures garments meet at least class 2 of EN 471 for the minimum area of high visibility materials used within a garment.

BS EN 13034:2005 - Protective Clothing against Liquid Chemicals

This standard specifies the minimum requirements for limited use and re-useable limited performance chemical protective clothing. Limited performance chemical protective clothing is intended for use in cases of a potential exposure to a light spray, liquid aerosols or low pressure, low volume splashes, against which a complete liquid permeation barrier (at the molecular level) is not required.

Chemical protective suits (Type 6) cover and protect at least the trunk and the limbs, e.g. one-piece coveralls or two piece suits, with or without hood, boot-socks or boot-covers.

EN 11611:2008 - Protective Clothing for use in Welding and Allied Processes

Clothing is intended to protect the wearer against spatter (small splashes of molten metal), short contact time with flame, radiant heat from the arc, and minimise the possibility of electrical shock by short-term, accidental contact with live electrical conductors at voltages up to approximately 100v in normal conditions of welding.


This European Standard specifies material and design requirements for electrostatic dissipative protective clothing, used as part of a total earthed system, to avoid incendiary discharges.

The standard specifies three areas -
1) Performance requirements of materials
2) Design requirements
3) Marking and guidance

IEC 61482 - Protective Clothing against Thermal Hazards of Electric Arc

This standard specifies requirements applicable to materials and garments (excluding head, hands and feet) for protective clothing for electrical workers against the thermal hazards of an electric arc. The requirements do not address electric shock hazards or the effects of noise, UV emissions, pressure shrapnel or toxic influences.

An electric arc or blast as a result of a disruption (e.g. a short circuit) in an electric installation generates a sudden release of intense heat and light causing serious burns, blindness or even death.
Base Layer

When exposure to heat and flame is involved, safety managers are faced with the critical task of selecting FR clothing that provides the best protection without exceeding their budget. While standards and requirements for PPE solutions may vary across environments, the goal of all FR clothing remains the same: protect the skin and prevent it from getting burned. One of the most important pieces of clothing in achieving this goal is the base layer garment, the last line of defence between flame and heat and bare skin.

Selecting the Correct Base Layer

Millions of workers who confront extreme conditions on a day-to-day basis wear cotton garments as their base “protective” layer. While inexpensive and permitted under current industry safety standards, this has some serious drawbacks, even if the cotton is chemically treated to be flame-resistant.

Firstly, the cotton in these base layer garments absorbs moisture and holds it close to the skin, creating an uncomfortable situation and creating the possibility of significant steam burns. Also, in an emergency situation, undergarments such as these may actually ignite, resulting in more severe injuries than if the wearer had been wearing no base layer at all. Fabrics that comprise of a blend of carbonised fibres offer the highest level of protection and exceed FR clothing test standards. Base layer garments made of these fabrics are inherently non-flammable; will not burn, melt or ignite when exposed to direct flame; are impervious to molten metal splash and have exceptional electrical resistance. These fabrics are comfortable, dry quickly and wick moisture efficiently, even when worn in extreme conditions.

ArcoPro FR Accessories

These garments are inherently flame retardant and anti-static which makes them ideal for use in hazardous working environments.


Size: One Size

Ref: Grey Balaclava 18B2600
Grey ArcoPro FR Neck Tube 18B2500

The Unique Protal Blend - Protal’s inherent flame retardant properties will not deteriorate or diminish; they are literally ‘built-in’ to the fabric. Garments made with Protal fibres are high performing even after repeated laundering (including industrial), dry or spot-cleaning.

To achieve maximum protection, wear this garment with:
• ArcoPro FR Modacrylic Long Sleeve Polo Shirt
• ArcoPro FR Fleece

Technological fabric - helps to wick away sweat and regulate body temperature.

Lightweight stretchable fabric - helps to provide a great fit.

Perforated areas for additional breathability in usual areas that generate heat, for example the back of the neck.

Reduced number of seams - makes the garments as comfortable as possible.

Technological fabric - helps to wick away sweat and regulate body temperature.

Lightweight stretchable fabric - helps to provide a great fit.

Reduced number of seams - makes the garments as comfortable as possible.

Technological fabric - helps to wick away sweat and regulate body temperature.

Lightweight stretchable fabric - helps to provide a great fit.

Perforated side areas - provides additional areas of breathability to allow the body to breathe.

Single taped seams - makes the garments as comfortable as possible.

Elasticated waist and hem – ensures secure, comfortable fit.

Thumb holes in sleeve – ensures sleeves don’t ride up.
Mid Layer

A comprehensive FR clothing compliance program needs to be present to educate workers on the value of layering appropriate FR clothing and accessories to provide maximum personal comfort, while still maintaining appropriate protective qualities for all items of clothing worn.

Historically there was little choice in FR garments, just a selection of coverall choices. Some of the more popular new options for FR workwear that work well as layered garments include knits, such as sweatshirts. Knitted garments are more flexible and provide less resistance to movement.

By choosing mid layer options you can provide higher levels of protection against heat and flame risks, but also provide a system for different weather and temperature conditions, ultimately offering comfort and flexibility to the wearer whilst providing adequate protection.

ArcoPro FR Polo Shirt made with Dupont™Nomex®/FR Viscose

Made from a new inherent fibre blend using Dupont “Nomex” and FR Viscose to provide ideal electric arc and flame retardant protection. Can be worn in conjunction with other ArcoPro FR clothing made with Dupont “Nomex” to enable greater levels of electric arc protection without compromising on comfort and flexibility.

Offers electric arc and FR protection as a stand alone product, can be worn as part of a layering system which increases the level protection significantly.


Sizes: S - 3XL

Ref: 18B1600

ArcoPro FR Modacrylic Long Sleeve Polo Shirt

Inherently flame retardant, anti-static, lightweight long sleeved polo shirt. Ideal as a layering system for additional protection without compromising on comfort, could also be worn as a lighter weight more comfortable layer underneath a jacket, fleece or sweatshirt. Made with Protal® Modacrylic fibre.


Sizes: S – 3XL

Ref: 1884900

The Unique Protal Blend - Protal’s inherent flame retardant properties will not deteriorate or diminish; they are literally ‘built-in’ to the fabric. Garments made with Protal fibres are high performing even after repeated laundering (including industrial), dry or spot-cleaning.

To achieve maximum protection, wear this garment with:
• ArcoPro FR Base Layer
• ArcoPro GORE-TEX® PYRAD® garments

To achieve maximum protection, wear this garment with:
• ArcoPro FR Modacrylic Sweatshirt
• ArcoPro GORE-TEX® PYRAD® garments
ArcoPro FR Fleece
This fleece is flame retardant and anti-static offering thermal protection. It can be used as part of a layering system as a mid layer garment and is fully certified to EN FR standards.

Conforms to:

Sizes:
- S – 3XL

Ref:
- 18B1500

To achieve maximum protection, wear this garment with:
- ArcoPro FR Modacrylic Long Sleeve Polo Shirt
- ArcoPro GORE-TEX® PYRAD® garments

ArcoPro FR Modacrylic Sweatshirt
Inherently flame retardant, anti-static, lightweight sweatshirt. Ideal as a layering system for cold environments, or to add additional protection without compromising on comfort. Made with Protal® Modacrylic fibre.

Conforms to:
- (A1 B1 C1) and EN 1149-5:2008

Sizes:
- S – 3XL

Ref:
- 18B2200

To achieve maximum protection, wear this garment with:
- ArcoPro FR Modacrylic Long Sleeve Polo Shirt
- ArcoPro GORE-TEX® PYRAD® garments

The Unique Protal Blend - Protal's inherent flame retardant properties will not deteriorate or diminish; they are literally 'built-in' to the fabric. Garments made with Protal fibres are high performing even after repeated laundering (including industrial), dry or spot-cleaning.

55% Modacrylic, 45% cotton.

Dapro® Defender Fleece
This fleece is flame retardant and anti-static offering thermal protection and can be used as a mid layer garment that is fully certified to FR standards.

- Interactive YKK zipper - allows the fleece to be zipped into the Dapro® Blaze (18D1200) and Infinity Jackets (18D0300 and 18D0600)
- Elasticated cuffs - offer a comfortable and secure fit
- Multiple storage options including - two external side pockets and one internal pocket

Conforms to:

Sizes:
- S – 3XL

Ref:
- 18D0200

Roots FR Anti-Static Fleece
Providing flame-retardant and anti-static protection with the advantage of being interactive with the Full-Option coat. Made from 300g Modacryl fleece.

Conforms to:
- (A1 B1 C1 D0 E0 F1): 5 washes and
- EN 1149-5:2008

Sizes:
- S – XXL

Ref:
- 18R1300

Roots Liner
100% polyester liner. Interacts with the Roots Full option shell jacket (Yellow - 18RD900/Orange - 18RE000).

FR Liner Conforms to:

Non FR Liner Conforms to:
- EN 340: 2003 only

Ref:
- FR Liner 18RE200
- Roots non FR Liner 18RE100

www.arco.co.uk
Cotton Treated Workwear

Flame retardant workwear needs to be hard wearing, comfortable, cost effective and provide suitable protection for the wearer. There are lots of different cotton treated FR workwear garments available on the market and Arco has ensured that our garments meet all required EN Standards and provide you with the assurance you need when choosing garments to offer protection from some of the toughest environments and highest risk scenarios.

ArcoPro FR Cotton Treated Nordic Coverall

Heavyweight cotton treated flame retardant and anti-static coverall with FR reflective tape. Concealed button and YKK two way zipper closure to the front, multiple pockets with zipper and button closure flaps and elasticated waist come as standard.


Sizes: 38" – 60"

Ref: Orange Regular 18A9800
Orange Short 18A9900
Red Regular 18B0000
Red Short 18B1000
Navy Regular 18B0200
Navy Short 18B0300
Royal Blue Regular 18B2100
Royal Blue Short 18B2000

Additional fray prevention band inside the bottom hem - reduces fraying in a traditional area of hard wear on coveralls, and offers increased longevity of the garment.

Kneepad pockets - offer the wearer the option of adding knee pads if extra protection and comfort is required.

Bartack reinforcement at numerous stress points on the garment - adds strength and durability.

Action armpits - reduce the amount of ‘ride-up’ of the coverall when working over head or when arms are in the vertical position.

Two radio/gas loops - allows radio or gas detectors to be easily attached and used ambidextrously.

FR reflective tapes – provides additional visibility for the wearer.

To achieve maximum protection, wear this garment with:
• ArcoPro FR Modacrylic Long Sleeve Polo Shirt
• ArcoPro GORE-TEX® PYRAD® garments

ArcoPro FR Cotton Treated Coverall

Heavyweight cotton treated flame retardant and anti-static coverall. Concealed button and YKK two way zipper closure to the centre front, multiple storage pockets with zipper and button closure flaps, double fabric reinforcements and kneepad pockets come as standard.


Sizes: 38" – 60"

Ref: Orange Regular 18A9200
Orange Short 18A9300
Red Regular 18A9400
Red Short 18A9500
Navy Regular 18A9600
Navy Short 18A9700

Elasticated waist - ensures improved comfort and better garment fit.

Bartack reinforcement at numerous stress points on the garment - adds strength and durability.

Two radio/gas loops - allows radio or gas detectors to be easily attached and used ambidextrously.

To achieve maximum protection, wear this garment with:
• ArcoPro FR Modacrylic Long Sleeve Polo Shirt
• ArcoPro GORE-TEX® PYRAD® garments

FR reflective tapes – provides additional visibility for the wearer.

Kneepad pockets – offer the wearer the option of adding knee pads if extra protection and comfort is required.

Additional fray prevention band inside the bottom hem - reduces fraying in a traditional area of hard wear on coveralls, and offers increased longevity of the garment.
ArcoPro FR Cotton Treated Contractor Coverall

Entry level heavyweight cotton treated flame retardant and anti-static coverall.


Sizes: 38” – 54”
Ref: Orange Regular 18A8900
Orange Short 18A8900

Additional fray prevention band inside the bottom hem - reduces fraying in a traditional area of hard wear on coveralls, and offers increased longevity of the garment.

To slant the side pockets with button closure flaps - offers a secure place for storage of essential equipment.

Concealed button closure to the centre front - allows overall to be easily donned and taken off.

Elasticated waist - ensures improved comfort and better garment fit.

Slanted side pockets with safety flaps and side vents - allow safe access to under garments.

Bartack reinforcement at numerous stress points on the garment - adds strength and durability.

To achieve maximum protection, wear this garment with:
• ArcoPro FR Modacrylic Long Sleeve Polo Shirt
• ArcoPro GORE-TEX® PYRAD® garments

ArcoPro FR Cotton Treated Nordic Jacket and Trousers

Heavyweight cotton treated flame retardant and anti-static jacket and trousers, with FR reflective tape. Multiple pockets with zip and button closure flaps, offers a safe storage options for your personal items. Designed to be worn together.


Jacket Sizes: 38” – 54”
Trouser Sizes: 30” – 46”

Jacket Ref: Navy 18A8100
Trouser Ref: Navy Regular 18A8700
Navy Short 18A8800

Slanted side pockets - allow for comfort and safe storage of items.

Kneepad pockets - offer the wearer the option of adding knee pads when required for extra protection and comfort.

Elasticated waist - ensures improved comfort and better garment fit.

Part elasticated waist - ensures improved comfort and better garment fit.

Two radio/gas loops - allows radio or gas detectors to be easily attached and used ambidextrously.

Bartack reinforcement at numerous stress points on the garments - adds strength and durability.

FR reflective tape – offers the wearer increased visibility.

Bartack reinforcement at numerous stress points on the garment - adds strength and durability.
**Dapro® Multirisk Coverall**

Heavyweight cotton treated flame retardant and anti-static coverall with a chemical splash protective finish, offers electric arc protection to Class 1 of IEC 61482-2:2009.

- Concealed button closure to the centre front - allows coverall to be easily put on
- Two chest pockets with button closure flaps and double fabric reinforcements - offers a secure place for storage of essential equipment
- Slanted side pockets with safety flaps and side vents - allow safe access to under garments
- Kneepad pockets - offer the wearer the option of adding knee pads when required
- Bartack reinforcement at numerous stress points on the garment - adds strength and durability
- Two radio/gas loops - allows radio or gas detectors to be easily attached

*Action armpits - reduce the amount of ‘ride-up’ of the coverall when working over head or when arms are in the vertical position.*


**Sizes:** 38” - 56”

**Ref:** Royal 18D0500

---

**Dapro Blizzard Coverall**

Heavyweight cotton treated flame retardant and anti-static coverall with subzero insulation offering thermal protective properties for cold conditions.

- Concealed button and YKK two way zipper closure to the centre front - allows coverall to be easily put on
- Two chest pockets with zipper and button closure flaps - offer a secure place for storage of essential equipment
- Slanted side pockets with safety flaps and side vents - allow safe access to under garments
- Kneepad pockets - offer the wearer the option of adding knee pads when required for extra protection and comfort
- Elasticated waist - ensures improved comfort and better garment fit
- Bartack reinforcement at numerous stress points on the garment - adds strength and durability
- Radio/gas loops - allows radio or gas detectors to be easily attached


**Sizes:** 38” - 56”

**Ref:** Orange 18D0800, Navy 18D0900

---

**Dapro Diamond Coverall**

Heavyweight cotton treated flame retardant and anti-static coverall with a chemical splash protective finish, FR reflective tape and offers electric arc protection to Class 1 of IEC 61482-2:2009.

- Concealed button and YKK two way zipper closure to the centre front - allows coverall to be easily put on
- Two chest pockets with zipper and button closure flaps - offer a secure place for storage of essential equipment
- Slanted side pockets with safety flaps and side vents - allow safe access to under garments
- Kneepad pockets - offer the wearer the option of adding knee pads when required for extra protection and comfort
- Elasticated waist - ensures improved comfort and better garment fit
- Bartack reinforcement at numerous stress points on the garment - adds strength and durability
- Radio/gas loops - allows radio or gas detectors to be easily attached


**Sizes:** 38” - 56”

**Ref:** Navy 18D0700, Orange 18D0400
Roots Flamebuster Nordic Anti-Static Coverall
99% cotton Pyrovatex FR-treated 350 g/m² sateen weave material with 1% Negastat anti-static yarn. Tape - flame-retardant reflective material.
- Zip-front coverall with stud closure to the neck – allows the coverall to be easily put on and taken off
- Two zipped chest pockets, two side swing pockets with trouser access, two hip patch pockets with rule pocket in right leg – for safe storage of personal items
- Pen pocket on left sleeve – for quick access to a pen when needed
Sizes: 38” - 54”
Ref: Royal Regular 18RA700
    Navy Regular 18RMA800
    Red Regular 18R6400
    Red Tall 18R6800

Roots Flamebuster Nordic Classic Anti-Static Zip Coverall
- FR reflective tape – provides an additional safety feature for the wearer.
- Two large zipped breast pockets – for safe storage of personal items.
- Action back - for ease of movement.
- Two side wing pockets with trouser access – to allow the wearer to access personal items while wearing the coverall
- Adjustable elasticated waist – provides additional comfort for the wearer.
- Pen pocket on left sleeve - for fast access to a pen when needed
- Zip-front coverall (zip to neck) – allows the coverall to be easily put on and taken off
Sizes: 38” - 54”
Ref: Orange Regular 18RB300
    Orange Tall 18RB400
    Navy Regular 18RB500
    Navy Tall 18RB600
    Red Regular 18RA600
    Red Tall 18RA500

Roots Flamebuster Anti-Static Coverall
99% cotton Pyrovatex FR-treated 350 g/m² sateen weave material with 1% Negastat anti-static yarn.
- Zip-front coverall with stud closure to the neck – allows the coverall to be easily put on and taken off
- Two zipped chest pockets, two side swing pockets with trouser access, two hip patch pockets with rule pocket in right leg – for safe storage of personal items
- Pen pocket on left sleeve – for fast access to a pen when needed
Sizes: 38” - 54”
Ref: Royal Regular 18RA700
    Royal Tall 18R6300
    Orange Regular 18RA800
    Orange Tall 18R6600
    Navy Regular 18RA900
    Navy Tall 18R6700
    Red Regular 18R6000
    Red Tall 18R6800

Roots Flamebuster Classic Anti-Static Coverall
- Two breast pockets with zip fastening. – for safe storage of personal items.
- Action back - for ease of movement.
- Two side wing pockets with trouser access- to allow the wearer to access personal items while wearing the coverall
- Adjustable elasticated waist for comfort - provides additional comfort for the wearer.
- Pen pocket on left sleeve - for fast access to a pen when needed
- Zip-front coverall (zip to neck) – allows the coverall to be easily put on and taken off
Sizes: 38” - 54”
Ref: Orange Regular 18RB100
    Orange Tall 18RB200
**Roots Flamebuster Nordic Classic Jacket**

- Multi-pocketed with large zipped breast pockets and two lower pockets with angled opening – to allow the wearer to safely store their personal items
- Action back - for ease of movement and additional comfort for the wearer
- FR reflective tape on arms and shoulders – an additional safety feature to ensure the wearer can be clearly seen.

**Conforms to:**
- EN ISO 11612:2008
- (A1 B1 C0 D0 E0 F1):50 washes

**Sizes:**
- 38" - 54"

**Ref:**
- Navy 18R1500

---

**Roots R01829R Classic Trouser Two Band**

- Multi-pocketed design with side and back pockets – which allow the wearer safe access to their personal items
- Kneepad pockets – provide the option of adding kneepads if required
- Two band FR reflective tape – an additional safety feature to ensure the wearer can be clearly seen.

**Conforms to:**
- EN ISO 11612:2008
- (A1 B1 C1 D0 E1 F1):50 washes

**Sizes:**
- 30" - 46"

**Ref:**
- Navy Regular 18RA400
- Navy Tall 18RA300

---

**Roots Arcbuster Coverall**

Designed for the professional welder, utilising Weldprotector fabric where sparks and spatter simply bounce off the fabric. Weldprotector 100% cotton Pyrovatex FR treated 450 g/m Moleskin sateen weave material

- Concealed heavy-duty jeans button fastening
- Lots of pocket options including - two internal chest pockets, two front swing pockets and two large hip pockets with flap allowing the safe storage of personal items for the wearer
- Two internal kneepad pockets to suit Trojan kneepad (8M1000) – allow the option of inserting additional knee protection

**Conforms to:**
- EN ISO 11612:2008
- (A1 B1 C1 D0 E3 F1):50 washes, EN ISO 11612:2008
  - (A1 B1 C2 D0 E3 F1):50 washes
  - and IEC 61482-2:2009 (Class 1)

**Sizes:**
- 38" - 54"

**Ref:**
- Navy 18A6800

---

**Roots Hotworker Coverall**

The Hotworker coverall is packed full of features for people who work all day carrying tools, welding rods and other equipment, the Hotworker features Weldprotector fabric for comfort and durability.

Weldprotector 100% cotton Pyrovatex FR treated 450 g/m Moleskin sateen weave material

- KEE zip fastening concealed behind double flap – provides additional protection in the zip area
- Oversized breast pockets – allow for safe storage of personal items
- Toolbar feature above left breast pocket
- Two side swing pockets with concealed zip closing trouser access
- Two oversized rear pockets with flap
- Two internal kneepad pockets to suit Trojan Kneepad (8M1000)

**Conforms to:**
- EN ISO 11611:2007 (Class 2-A1):50 washes,
- EN ISO 11612:2008
  - (A1 B1 C2 D0 E3 F1):50 washes
  - and IEC 61482-2:2009 (Class 1)

**Sizes:**
- 38" - 54"

**Ref:**
- Navy 18A7500
Roots Multi-Protector Coverall
Flame-retardant, welding-approved and anti-static multi-protector coverall, features the superb new Roots CR8020 fabric.
320g/m 80% cotton, 19% polyester, 1% negastat anti-static yarn. Suitable for commercial laundry up to 95°C.
• Concealed stud front fastening
• Adjustable elasticated waist - for additional wearer comfort.
• Action back - for ease of movement.
• Radio or gas detector loop/toolbar above left breast pocket.
• Two hip pockets and two chest pockets with flap.
• Two front swing pockets with trouser access.
• External kneepad pockets to suit Trojan kneepad (8M1000) – provides optional additional protection if required
Sizes: 38" - 54"
Ref: Navy 18A7600

Roots Welding Hood
For additional neck and head protection when welding in confined spaces, or in areas where there is heavy spatter.
Weld protector 100% cotton Pyrovatex FR treated 450 g/m Moleskin sateen weave material.
Sizes: One size
Ref: Navy 18A7800

Roots All Weather FR Anti-static Jacket
The first welding jacket in the market to provide dual protection against molten metal as well as foul weather.
80% cotton / 19% polyester / 1% antistat – 320 g/m2
• FR reflective tape – for additional wearer protection
• Concealed zip with velcro
• Radio/gas detector loop above left and right chest pocket
• Multiple storage pockets including two large chest pockets and two large side pockets – for the safe storage of personal items
• FR properties guaranteed for 50 washing cycles
Sizes: S - XXL
Ref: Navy 18R1400

Molten Metal Splash Suit
• All wool Melton fabric, 660 g/m.
• Resists molten metal splash up to 1600°C and slag up to 1500°C.
Conforms to: British Steel (Corus) specification PES120.
EN531 (A, B2, C1, D3, E3)
Sizes: M - XL
Ref: Jacket M- L 1826100
Jacket XL 1826200
Trousers M-L 1826300
Trousers XL 1826400
Inherent Workwear

Inherent FR fabrics provide comfort for the wearer and specifier as the flame resistant properties cannot be washed out or removed by abrasion of the fabric. Inherent fabrics usually include either Aramid fibres (Dupont™ or Nomex®) or Modacrylics such as Protal®. Sometimes these can be a blend or mix of fibres which provide different characteristics but with the same inherently flame resistant properties. Inherent fibres offer the best level of protection in both flash fire and electric arc hazards and often are available in lighter weight fabric compositions.

Arco has put together the most comprehensive range of inherent workwear garments in the UK, including 100% Dupont™ Nomex® garments and Modacrylic garments. Whatever your budget there will be a suitable garment to choose.

ArcoPro FR Coverall made with Nomex® Comfort Ripstop
An inherent flame-resistant, anti-static Nomex® Comfort ripstop fabric construction, which helps to limit the development of rips and tears to the garment. Made from Nomex® Comfort Ripstop 225g/m fabric. (93% Nomex® / 5% Kevlar® / 2% P-140 carbon fibre).
Conforms to: EN ISO 11612:2008 (A1, B1, C1), EN1149-5:2008, IEC 61482-2:2009 (Class 1, ATPV 7.6 cal/cm²)
Sizes: Regular (31” inside leg): S - XXL
Ref: Navy  18T1000
     Orange  18T0900

Flame-retardant, retro-reflective tape to shoulders, sleeves and legs – additional safety feature for the wearer offers increased visibility.

ArcoPro FR Jacket and Trousers made with Nomex Comfort Ripstop
An inherent flame-resistant and anti-static Nomex® Comfort ripstop fabric construction to help limit the development of rips and tears in the Garment. Wear life tests have proven Nomex® to retain its FR performance over the lifetime of the garment (when correct laundry guidelines are followed). Made from Nomex® Comfort Ripstop 225g/m fabric. (93% Nomex® / 5% Kevlar® / 2% P-140 carbon fibre).
Conforms to: EN ISO 11612:2008 (A1, B1, C1), EN1149-5:2008, IEC 61482-2:2009 (Class 1, ATPV 7.6 cal/cm²)
Jacket Sizes: S - XXL
Trousers Sizes: Regular (31” inside leg): 30” - 46”
        Tall (33” inside leg): 30” - 46”
Jacket Ref: 18T1100
Trousers Ref: Regular   18T1200
             Tall   18T1300

To achieve maximum protection, wear this garment with:
• ArcoPro FR Modacrylic Long Sleeve Polo Shirt
• ArcoPro GORE-TEX® PYRAD® garments

Design for high performance in industrial laundry – provides exceptional performance and appearance after multiple washes.


Concealed two-way moulded plastic zip fastening to neck – for easy donning and garment removal.

Flame-retardant, retro-reflective tape across back provides an additional safety feature for the wearer.

To achieve maximum protection, wear this garment with:
• ArcoPro FR Modacrylic Long Sleeve Polo Shirt
• ArcoPro GORE-TEX® PYRAD® garments

Side waist adjustment with plastic stud fastening.

Multiple storage options including two breast pockets with plastic stud-fastening flaps and two lower pockets with angled opening allows safe storage of the wearer’s personal items.

Flame-retardant, retro-reflective tape to shoulders, sleeves and legs – additional safety feature for the wearer.

Seven belt loops – allows the wearer to add a belt to gain a comfortable fit.

To achieve maximum protection, wear this garment with:
• ArcoPro FR Modacrylic Long Sleeve Polo Shirt
• ArcoPro GORE-TEX® PYRAD® garments

Two side pockets and one back hip pocket – provide storage space for personal items.


Plastic stud fastening waist – for wearer comfort.

Designed for high performance in industrial laundry – provides exceptional performance and appearance after multiple washes.

Kneepad pockets with Velcro fastening – provides the wearer with the option of adding additional knee protection.

Designed for high performance in industrial laundry – provides exceptional performance and appearance after multiple washes.

Side waist adjustment with plastic stud fastening.
ArcoPro FR Modacrylic Coverall

Heavyweight Modacrylic Coverall, using Inherent FR fibre ensuring that the FR properties in this garment cannot be washed or abraded out. Excellent for users who launder garments at home or in an uncontrolled environment.

Conforms to:

Sizes:
- 38” – 60”

Ref:
- Navy Regular 18B0600
- Navy Short 18B1200
- Orange Regular 18B1300
- Orange Short 18B1400

Additional fray prevention band inside the bottom hem - reduces fraying in a traditional area of hard wear on coveralls, increasing the longevity of the garment.

Elasticated waist - ensures improved comfort and better fit of the garment.

Action amplitudes - reducing the amount of ‘ride-up’ of the coverall when working over head or when arms are in the vertical position.

To achieve maximum protection, wear this garment with:
- ArcoPro FR Modacrylic Long Sleeve Polo Shirt
- ArcoPro GORE-TEX® PYRAD® garments

ArcoPro FR Modacrylic Jacket and Trousers

Heavyweight Modacrylic Jacket, using Inherent FR fibre ensuring that the FR properties in this garment cannot be washed or abraded out. Excellent for users who launder garments at home or in an uncontrolled environment.

Conforms to:

Jacket Sizes:
- 38” – 54”

Trouser Sizes:
- 32” – 46”

Jacket Ref:
- Navy 18B1900

Trousers Ref:
- Navy Regular 18B1700
- Navy Tall 18B1800

Elasticated waist - ensures improved comfort and better fit of the garment.

To achieve maximum protection, wear this garment with:
- ArcoPro FR Modacrylic Long Sleeve Polo Shirt
- ArcoPro GORE-TEX® PYRAD® garments

33 www.arco.co.uk
34
Roots R019095 Flamebuster (IFR) Coverall
Inherent FR protection developed by Roots in this coverall combining quality, comfort and strength and the extra assurance of not being able to wash out the FR properties. Flamebuster Xtreme 310 g/m² fabric 60% modacryl, 33% long fibred cotton, 5% polyamide and 2% anti-static fibres.
• Multiple storage options including -multi-pocketed with two large zipped breast pockets, two side pockets with trouser access, two rear pockets and pen pocket – allows the safe storage of personal items.
• Knee pockets – provides the option of adding additional knee protection if required.
• Radio/gas detector loop above left and right breast pocket
• Action back- for ease of movement
• FR reflective tape on arms, legs and shoulders - provides an additional safety feature for the wearer. 
• Concealed front zip – allows for easy putting on and taking off.
Conforms to:
(A1 B1 C1 D0 E1 F1):50 washes,
EN ISO 11611:2007 (Class 1-A1):50 washes,
EN 13034:2005+A1:2009 Type 6
Sizes:
38” - 54”
Ref:
Navy Regular 18RA000
Navy Tall 18RB800

Roots R019190 Flamebuster (IFR) Jacket
• Multi-pocketed with large zipped breast pockets and two lower pockets with angled opening – allow the safe storage of personal items.
• FR reflective tape on arms and shoulders – provides an additional safety feature for the wearer.
Conforms to:
(A1 B1 C1 D0 E1 F1):50 washes,
EN ISO 11611:2007 (Class 1-A1):50 washes,
Sizes:
38” - 54”
Ref: Navy 18RA200

Roots R019290 Flamebuster (HR) Trouser
• Multiple storage options including two side and back pockets, and knee and rule pockets – allows for the safe storage of personal items.
• One band reflective FR tape – provides an additional safety feature for the wearer.
Conforms to:
EN 340:2003, EN ISO 11612:2008,
EN ISO 11612:2008 (A1 B1 C1 D0 E1 F1):
50 washes, EN ISO 11611:2007 (Class 1-A1):
50 washes, EN 1149-5:2008, IEC 61482-2:2009 (Class 1),
Sizes:
30” - 46” Regular (31” inside leg)
30” - 46” Tall (33” inside leg)
Ref: Navy Regular 18RA100
Navy Tall 18RB700
Weather Protection

Weather protective FR garments are a key factor for a number of industries where the working environment can be harsh due to inclement weather conditions. Weather protective garments are often the outer layer of protection and therefore the first line of defence from any heat or flame risk or hazard. It is vitally important that the correct level of protection from heat and flames as well as other hazards such as visibility or wind and rain are identified and protected against.

Arco’s range of FR weather protective garments provide various products suitable for numerous risks and hazards for differing levels of protection.

Introducing the New ArcoPro GORE-TEX® PYRAD® Fabric, an innovative and extremely lightweight fully waterproof, windproof and breathable flame retardant material. Complying to six European Norms this jacket is truly a unique garment offering multi-norm protection in a number of challenging and extreme environments.

ArcoPro GORE-TEX® PYRAD® Jacket

This jacket offers an extremely high level of protection and looks stylish too. Made from 220g/m² lightweight two layer fabric it is functional and durable, it is the lightest weight GORE-TEX® Fabric available offering heat and flame resistance to ISO 11612.

Conforms to:
- EN ISO 20471:2012 Class 2,

Sizes:
- S-X XL

Ref:
- Yellow/Navy 18G2500
- Orange/Navy 18G2600

ArcoPro GORE-TEX® PYRAD® Salopettes

When worn together with the ArcoPro GORE-TEX® PYRAD™ jacket, these salopettes offer full body protection from heat and flame. Made from the lightest weight fabric, they are easy to wear and very comfortable.

Conforms to:
- EN ISO 204:2012 Class 1,

Sizes:
- S-X XL

Ref:
- Yellow/Navy 18G2400
- Orange/Navy 18G2700

To achieve maximum protection, wear this garment with:
- ArcoPro FR Modacrylic Long Sleeve Polo Shirt
- ArcoPro FR Modacrylic Sweatshirt
**Dapro Blaze Jacket**

Inherently flame retardant, anti-static and electric arc protective, fully waterproof, windproof and breathable hi-vis jacket, with oil, grease and dirt repellent finish.

- Concealed YKK zipper and Velcro closure – provides a secure fit and ultimate protection from the elements.
- Lower pockets with safety flap and Velcro closure - for secure, safe containment of necessary equipment.
- Goggle pocket behind storm flap - ensures easy access to vital equipment.
- Adjustable Velcro closure at cuffs - offers secure, comfortable fit on the sleeves.
- Radio/gas loop- allows radio or gas detector to be easily attached and used without hindrance.


Sizes: S - XXL
Ref: Yellow/Navy 18D1200

---

**Dapro Infinity Jacket**

A fully waterproof, windproof and breathable hi-vis flame retardant jacket with anti-static and chemical splash protection properties.

- Concealed YKK zipper and Velcro closure - for secure fit and ultimate protection from the elements.
- 2 chest pockets with safety flap and Velcro closure- offers additional pocket space for necessary equipment.
- Lower pockets including safety flap and side entry through zipper enclosure - allows more storage and comfort to the wearer.
- Goggle pocket behind storm flap - ensures easy access to vital equipment.
- Adjustable puller at the hem - provides comfort and a secure fit for the wearer.
- Can be interacted with the Dapro Defender FR fleece - offering additional thermal and FR protection in cold conditions.
- 2 radio/gas loops - allows radio or gas detectors to be easily attached and used ambidextrously.


Sizes: S - XXL
Ref: Yellow/Navy 18D0300
Orange/Navy 18D0600

---

**Dapro Protector Salopette**

Fully waterproof, windproof and breathable hi-vis flame retardant salopette with anti-static and chemical splash protection properties.

- 1 large chest pocket with safety flap and Velcro closure - offers additional pocket space for necessary equipment.
- Slanted side pockets with safety flaps and side vents - allow safe access to undergarments.
- Elasticated waist - provides additional comfort and secure fit.


Sizes: S - XXL
Ref: Yellow/Navy 18D1000
Orange/Navy 18D1100

---

**Roots RO1517 Full Option Coat**

Premium protection from Roots which combines hi-vis, flame-retardant, chemical-resistant, anti-static, waterproof and breathable protection. The Full Option Coat is interactive with the Roots flame retardant anti-static fleece which makes this jacket suitable for use in all weather conditions.

Full-option, waterproof fabric with 100%-cotton pyrovatex drop liner.

- Two band-and-brace retro-reflective FR tape configuration – provides an additional safety feature for the wearer.
- Two chest loops for portable gas detector/radio mouthpiece - allows the wearer easy access to equipment.
- Chest pocket – for safe storage of personal items.
- Concealed detachable hood – for times when you may get caught in bad weather.
- Interactive zip - allows Roots FR Anti-Static Fleece to be zipped in, and garment to be layered for additional protection.

Please note: this product must be purchased with a liner.

The outer coat (not including the liner) conforms to:

Orange also conforms to:
GO/RT 3279:2008

Sizes: S - XXL
Ref: Orange/Navy 18R1000
Yellow 18R0900

---

**Roots Full-Option Salopettes**

Salopettes which combine the benefits of hi-vis, flame-retardant, chemical-resistant, waterproof and breathable protection!

Conforms to:

Orange also conforms to:
GO/RT 3279:2008

Sizes: S - XXL
Ref: Orange 18R1000
Yellow 18R0900
Chemical Disposable Protection

Disposable chemical FR protective garments offer an additional level of chemical protection and limited FR protection. These garments should never be worn in isolation for FR protection, but in conjunction with other FR garments conforming to EN ISO 11612:2008. In environments where particulate or liquid chemical protection is required plus a heat or flame risk and hazard present these disposable coveralls will provide additional protection. These disposable FR coveralls can also prolong the life of an FR garment when undertaking a specific operation which could be particularly dirty. They will also provide and add increased levels of protection against burns.

MICROCHEM® CFR Coverall
Coverall with elasticated cuff, waist, wrist and ankles. Using MICROCHEM® CFR in conjunction with durable flame-retardant protective clothing produces a system of both chemical and FR protection.

Conforms to:

Sizes: L - XXL
Ref: 1783400

MICROGARD® 1500 PLUS FR
MICROGARD® 1500 PLUS FR is a highly breathable, flame retardant and anti-static SMMS polypropylene nonwoven coverall designed for protection from particulates and light non-flammable liquid spray or splash applications

Intended to be worn over heat and flame protective clothing, Microgard® 1500 plus FR offers wearers protection from particulates (Type 5) and non-flammable, non-pressurised liquid sprays or splashes (Type 6):

• Flame retardant and anti-static SMMS nonwoven coverall provides a good barrier to particulates and low hazard liquid sprays or splashes
• Air and water vapour permeable to help reduce the risk of heat stress
• 3 piece hood
• 2 way front zipper with re-sealable storm flap
• Finger loops
• Elasticated wrists, waist and ankles
• Red stitching for ease of identification

Note: MICROGARD 1500 PLUS FR should never be worn in isolation for flame retardant protection. Always wear over the top of garments which achieve EN ISO 14116 Index 2 or above.

Conforms to:
EN ISO 13982-1 Type 5 particulate protection, EN 13034 Type 6 reduced spray, EN 1073-2 barrier to radioactive particulates – Class 2, EN ISO 14116 Index 1/0/0 and EN 1149-5 anti-static

Sizes: M-SXL
Ref: 1786900
Over 40 branches nationwide

<table>
<thead>
<tr>
<th>Region</th>
<th>Branches</th>
<th>Telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scotland</td>
<td>Aberdeen</td>
<td>01224 249 494</td>
</tr>
<tr>
<td></td>
<td>Bellshill</td>
<td>01698 841 697</td>
</tr>
<tr>
<td></td>
<td>Glasgow</td>
<td>0141 419 3231</td>
</tr>
<tr>
<td></td>
<td>Irvine</td>
<td>01294 315 908</td>
</tr>
<tr>
<td></td>
<td>Linlithgow</td>
<td>01506 841 510</td>
</tr>
<tr>
<td>Oil &amp; Gas Aberdeen</td>
<td></td>
<td>01224 249 454</td>
</tr>
<tr>
<td>North of England</td>
<td>Blaydon-on-Tyne</td>
<td>0191 499 1556</td>
</tr>
<tr>
<td></td>
<td>Carlisle</td>
<td>01228 591 100</td>
</tr>
<tr>
<td></td>
<td>Stockton-on-Tees</td>
<td>01642 617 441</td>
</tr>
<tr>
<td>North West England</td>
<td>Darwen</td>
<td>01254 776 680</td>
</tr>
<tr>
<td></td>
<td>Ellesmere Port</td>
<td>0161 326 2600</td>
</tr>
<tr>
<td></td>
<td>Stoke</td>
<td>01782 279 254</td>
</tr>
<tr>
<td></td>
<td>Trafford Park</td>
<td>0161 869 5807</td>
</tr>
<tr>
<td></td>
<td>Warrington</td>
<td>01925 636 139</td>
</tr>
<tr>
<td>Yorkshire and the Humber</td>
<td>Bradford</td>
<td>01274 735 211</td>
</tr>
<tr>
<td></td>
<td>Doncaster</td>
<td>01302 341 195</td>
</tr>
<tr>
<td></td>
<td>Grimsby</td>
<td>01472 361 756</td>
</tr>
<tr>
<td></td>
<td>Hull</td>
<td>01482 611 611</td>
</tr>
<tr>
<td></td>
<td>Leeds</td>
<td>01132 429 331</td>
</tr>
<tr>
<td></td>
<td>Ossett</td>
<td>01924 266 800</td>
</tr>
<tr>
<td></td>
<td>Sheffield</td>
<td>0114 253 6367</td>
</tr>
<tr>
<td>East Midlands</td>
<td>Burn St Edmonds</td>
<td>01284 773 030</td>
</tr>
<tr>
<td></td>
<td>Leicester</td>
<td>0116 231 8700</td>
</tr>
<tr>
<td></td>
<td>Northampton</td>
<td>01604 783 805</td>
</tr>
<tr>
<td></td>
<td>Nottingham</td>
<td>0115 938 0456</td>
</tr>
<tr>
<td>West Midlands</td>
<td>Coventry</td>
<td>02476 386 780</td>
</tr>
<tr>
<td></td>
<td>West Bromwich</td>
<td>0121 500 6060</td>
</tr>
<tr>
<td>South of England</td>
<td>Avonmouth</td>
<td>0117 982 3751</td>
</tr>
<tr>
<td></td>
<td>Basildon</td>
<td>01268 526 847</td>
</tr>
<tr>
<td></td>
<td>Brentford</td>
<td>01923 204 141</td>
</tr>
<tr>
<td></td>
<td>Heathrow</td>
<td>01753 885 192</td>
</tr>
<tr>
<td></td>
<td>Hedge End</td>
<td>020 822 0000</td>
</tr>
<tr>
<td></td>
<td>Orpington</td>
<td>01569 872 411</td>
</tr>
<tr>
<td></td>
<td>Park Royal</td>
<td>01923 204 141</td>
</tr>
<tr>
<td></td>
<td>Plymouth</td>
<td>01752 757 690</td>
</tr>
<tr>
<td></td>
<td>Poole</td>
<td>01202 545 458</td>
</tr>
<tr>
<td></td>
<td>Portsmouth</td>
<td>023 9273 4995</td>
</tr>
<tr>
<td></td>
<td>Watford</td>
<td>01923 204 141</td>
</tr>
<tr>
<td>Wales</td>
<td>Cardiff</td>
<td>02920 475 810</td>
</tr>
<tr>
<td></td>
<td>Swansea</td>
<td>01792 792 390</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>Newtownabbey</td>
<td>028 9083 0850</td>
</tr>
<tr>
<td>Republic of Ireland</td>
<td>Dublin</td>
<td>(+353) 1 409 5000</td>
</tr>
</tbody>
</table>

To order online visit [www.arco.co.uk](http://www.arco.co.uk)