



ARC FLASH & FLAME RESISTANT GARMENTS

21/22

TRUST THE ARC FLASH SPECIALISTS

WWW.PROGARM.COM



7 REASONS TO CHOOSE PROGARM® TODAY

01

WE'RE THE ARC FLASH SPECIALISTS

We are 100% focussed on arc flash and flame resistant clothing. When the lives of your team are at risk, isn't it better to trust a specialist?

02

INHERENT PROTECTION

Our unique VXS+ fabric is 100% inherent. This means the very fibres provide flame resistant protection for the life of the garment.

03

DURABILITY MATTERS

We're so confident that our arc flash garments last up to 70% longer than other leading brands that we provide a Lifetime Seam Guarantee.

04

QUALITY ASSURANCE

We hold ISO9001 for Quality Management and Module D accreditation for our supply chain, demonstrating our absolute commitment to production quality at every stage.

05

SAFETY ON THE BUTTON

Our anti-static ThermSAFE™ components (such as buttons and zips) are made from military-grade polymers, tested to keep working even after an arc flash incident.

06

PRACTICALLY PERFECT

Soft fabrics and handy pockets are for more than just style; your team are far more likely to wear the right PPE if they're comfortable and the garments are practical while working.

07

WE KEEP INNOVATING

As the industry leaders in innovation, we're always working to make good things better and are constantly working on the next generation of arc flash protection. Constant innovation keeps us well ahead of the pack.

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GREAT GARMENTS
MAKE PROGARM®
THE RIGHT CHOICE

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PRODUCT
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PPE
DIRECTIVE

ARC FLASH PROTECTION: THE NEXT CHAPTER

YOU CAN DEMAND THE BEST

The safety of your team is paramount, and we provide the ultimate flame resistant protection against the life-threatening arc flash risks they face every day.

We're pioneers and we're trailblazers.

I know we are leading the industry with our exciting new ranges and safety innovations.

BLAZING A TRAIL

Specialising in arc flash protection drives us to innovate faster than any generalist PPE supplier and focus 100% on bringing you the best in arc flash protection.

YOUR TEAM DEPEND ON US

To protect them when they need us. That's why we never compromise on safety. On innovation. On comfort, quality or durability. Our garments provide the best possible protection; everyday practicality and comfort.

BUSINESSES DEPEND ON US

We're trusted by some of the UK's largest brands to keep their teams safe.

HOW CAN YOU TELL IF YOU'VE GOT THE BEST?

We take such pride in our work that we're massively proud to put our name on it. If you want the best, it will say ProGARM® on the label.

TALK TO ME

We maintain our industry leading position throughout Europe because we are always listening. If there's something – anything – you want to say, please do get in touch.

Stay safe and don't compromise.




TONY ARNETT
Managing Director

To stay safe, your team need to wear the right protection. That's why we invest heavily in making our clothes comfortable and practical too. That way they will be happy to wear them.

DEMAND THE BEST IN SAFETY AND PROTECTION

All our protective garments conform to UK and EU PPE regulation and display the correct care labels to guarantee certification and traceability.

Often exceeding industry and EN standards, we're always researching and testing materials and designs to lead the way in arc flash protection.

DEMAND THE BEST IN QUALITY, DURABILITY AND VALUE

Our high-quality materials and durable designs mean our garments last up to 70% longer than other brands, providing outstanding value for money.

We have had these trousers for over 6 months and they are still going strong.

Before, we had to replace trousers nearly every three weeks.

DEMAND THE BEST IN COMFORT AND INNOVATION

To make sure your colleagues wear the PPE you provide – and wear it correctly – our specialist in-house team has researched and designed both male and female ranges with practicality and wearer comfort in mind.

Breathable, soft to the touch and versatile with useful pockets and design features to suit wearer needs. That's why some of the world's largest businesses rely on us to deliver the protection and comfort their team needs, day in and day out.

ARC FLASH PROTECTION EXPERTISE IN YOUR SECTOR

It's our business to know your business

ProGARM are one of the largest suppliers of arc flash and flame resistant garments in the UK and, to make sure we're giving you what you need to keep your teams safe, we make it our business to understand yours.

We work with a wide range of sectors, particularly traditional and renewable power generation, civil engineering and utilities, rail and petrochemical. We employ arc flash protection experts who understand your sector and the associated risks.



UTILITIES

HSG47 highlights the significant risk of a cable-strike during groundworks and the potentially life-changing injuries or fatal consequences of an arc flash incident.



INDUSTRIAL ELECTRICAL

The EU and HSE are specifying increasing levels of arc flash and flame resistant protective clothing. We can help you make the right choices.



RAIL

Our comprehensive range of hi-vis orange garments comply with RIS-3279-TOM (replacing UK GO/RT 3279) and are safe, durable and comfortable for groundworks and electrification projects.



WINDPOWER

Not only do we understand the specific risks in this sector, but our garments will provide excellent protection against the elements, keeping your team warm and dry as well as the arc flash protection to keep them safe.



POWER GENERATION

We understand power stations, renewables and transmission environments, and help safeguard your team against both arc flash incidents and the weather as needed.



PETROCHEMICAL

The similarities between arc flash and flash fire incidents mean we've become an established and trusted provider of safety clothing in the petrochemical sector.

WHAT'S NEW?

We're continuing to lead the way.

With more new innovating products and a culture of consistent improvement, there is plenty for us to shout about that's new in our latest catalogue.

LAUNCH OF OUR FIRST EVER WELDING RODUCTS!

Constructed from innovative Siloxane fabric, which provides a good mix of durability, dexterity and comfort. Our premium flame resistant 2205 welding apron with removable and adjustable lower portion and elasticated fastening, is ideally teamed with longer length 2200 welding gaiters, both suitable for use with all types of arc welding and providing protection from molten metal splashes, sparks and slag when welding, grinding or cutting.

Pg 89 →

ADDITIONAL HI-VIS CERTIFICATION FOR THIS JACKET & TROUSERS COMBO

The 5805 AF & FR jacket features extensive hi-vis areas to ensure delivery of Class 2 EN ISO 20471 hi-visibility performance, helping operatives and drivers to be better seen at night. Match these with the Class 1 5815 arc flash trousers (available as 5810 ladies fit) these products are all constructed from super-soft, 300gms, VXS+ Inherent fabric. Pg 34 & 35 →

ARC FLASH DUNGAREES YOU ASKED, WE LISTENED!

New to the ProGARM® range are the 7522 arc dungarees featuring improved fabric performance from our highest quality ripstop weave fabric. We have also added Cordura® knee reinforcements which are good up to 200,000 abrasion cycles. Plus, they offer superb comfort and durability for the wearer - of course! Pg 37 →

FR & AF HI-VIS COMBAT TROUSERS - WITH ADDED STORAGE

Improved garment durability ranks high with the 7715 hi-vis combat trousers. From the innovative ripstop fabric, external kneepad pockets to fit 2240 FR kneepads, stitched on 5cm and 7cm FR/AS industrial wash reflective tape, plus added Cordura® knee and hem reinforcement. Add to this, an assortment of open and secured pockets for safe storage of mobile phones and easy access to tools - these really are a winner! Pg 36 →

PROGARM® QUALITY- THE FACTS

As well as improving safety, our continuous focus on quality means our garments lead the way in comfort, practicality and durability - giving you outstanding value for money by standing up to the rigours of everyday use for longer.



PRODUCT DEVELOPMENT

We listen to our customers and end users, taking on board feedback and suggestions to develop all our styles, ranges and innovations.



UNIQUE PROGARM® DESIGNS

Developing our own designs means we can constantly innovate and improve. We can also accommodate any special design requirements that you need.



ISO9001 AND MODULE D

As well as ISO9001 we are Module D accredited, demonstrating our commitment to high quality standards throughout our supply chain. The result: better materials, efficient manufacturing and an outstanding customer experience.



LIFETIME SEAM GUARANTEE

All our garments carry a market-leading lifetime guarantee on all structural seams.



OEKO-TEX® CERTIFIED

OEKO-TEX® is an independent testing system in textiles, enhancing product safety and sustainable production. Wherever possible, we only use products from OEKO-TEX® approved suppliers.



DURABILITY

50-wash certified, inherent fabrics, tensile strength and abrasion tested, a lifetime seam guarantee... our longer-lasting garments deliver outstanding value for money.



QUALITY FABRICS

Our VXS+ fabrics and quality assured manufacturing processes are the foundation of the ProGARM® product range. As well as protection, fabric is selected for durability, performance, comfort and how well it will wash.



QUALITY COMPONENTS

Our anti-static ThermSAFE™ components (such as buttons, press studs and zips) are made from military-grade polymers, tested and safety approved to continue working after an arc flash incident, allowing quick garment removal for First Aid.



EUROPEAN PRODUCTION

For speed, quality control and traceability, all our garments are made in the EU.



RIGOROUS PRODUCT TESTING

As well as wearer trials, we also test seams, components and fabrics in specialist lab conditions to understand and maximise performance.

ABOUT VXS+ FABRICS



INHERENT VS TREATED FABRICS

VXS+ inherent fabrics provide the ultimate protection. Unlike chemically treated fabrics, the very fibres of inherent fabrics are flame resistant, and because that protection doesn't wash out, the wearer stays safe throughout the life of the garment.

HIGH-PERFORMING, INNOVATIVE FABRICS FOR ULTIMATE COMFORT AND PROTECTION

For decades, flame resistant garments have meant uncomfortable, heavyweight cotton drill fabrics that would shrink extensively with washing. This all changed with the introduction of our VXS+ inherent fabric.

With our ProGARM® VXS+ fabric, wearers can now benefit from:



✓ INSTANT EXTINGUISHING PROPERTIES

The fibre blend of our VXS+ inherent fabrics offers outstanding performance compared to more expensive aramid fabrics.



✓ GREAT COMFORT

Using advanced textile technology, all of our products are designed for optimum softness, breathability and comfort.



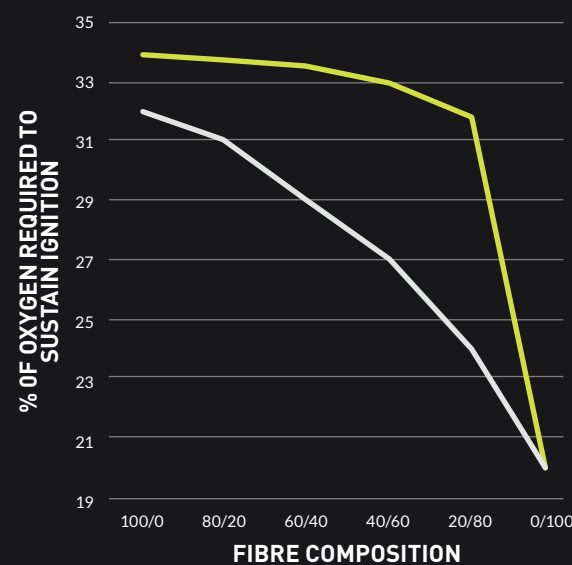
✓ HIGHLY DURABLE

After 50 industrial washes, our garments outlive, outshine and outclass the competition in durability, appearance and strength, with excellent colour fastness and less than 3% shrinkage.

LIMITING OXYGEN INDEX (LOI) TESTING

Limiting Oxygen Index (LOI): is the amount of oxygen required in the atmosphere for a material to ignite. With an oxygen percentage of 21% in the earth's atmosphere, anything that has an LOI of less than 21 will burn quickly and easily. An example of this is cotton, which has an LOI of 17.

VXS+ Modacrylic, with an LOI of 34, is much more flame resistant than other materials including aramid fibres, which have an LOI of 28-29. That's why VXS+ Modacrylic is a top-performing flame resistant solution in the market, especially for severe risks like electric arc.



— VXS+ MODACRYLIC & COTTON
— STANDARD MODACRYLIC/COTTON

	VXS+ MODACRYLIC & COTTON	STANDARD MODACRYLIC/COTTON
100/0	33.8	32
80/20	33.6	31
60/40	33.4	29
40/60	33	27
20/80	31.8	24
0/100	20	20

TOP-CLASS PRODUCTION, TOP-CLASS GARMENTS

“We’re 100% committed to producing the best arc flash and flame resistant safety wear on the market. We’re 100% committed to innovating and producing garments that work and last as they should. And we’re 100% committed to quality control.”

GOING THE EXTRA MILE

ISO9001 accreditation is widely known as the recognition of robust company processes, quality control and customer service.

Module D accreditation goes further, and recognises our commitment to quality control throughout our manufacturing supply chain processes such as fibre manufacture, yarn development and dyeing.

Every partner is regularly audited by an independent accredited body, and every batch of fabric is certified and documented as meeting our exacting standards, with batch numbers being included on garment labels for complete traceability.

RIGOROUS TESTING FOR YOUR REASSURANCE

As part of our rigorous quality control, we test EVERY garment design for protection against arc flash. We repeat testing as often as prescribed under the EN Standard but, in practice, we’re innovating so regularly that we’re usually testing upgraded garments before previously released versions are due to be re-tested.

Even individual components such as zips, buttons and press studs are regularly tested and certified to make sure they’re safe, and will keep working after an incident to allow First Aiders to remove garments easily.

We also test all of our garments for their structural integrity in the seams, testing against flame spread, their strength to withstand an arc flash and also their durability to stand up to the rigours of day-to-day wear. That’s why we confidently offer our Lifetime Seam Guarantee.



**LIFETIME SEAM
GUARANTEE**

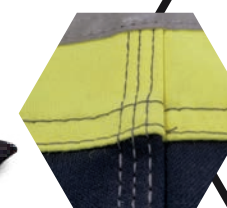
SAFETYICON™ MARKINGS

Clear at-a-glance guide to help people choose the right garment for the job, with instant recognition of the protection capabilities



TRIPLE STITCHED SEAMS

Increases the durability and life of the garment



DOUBLE STITCHED REFLECTIVE TAPE

Ensures reflective tapes stay intact to increase the life of the garment



GREAT GARMENTS MAKE PROGARM® THE RIGHT CHOICE

All of our garments have innovative features, created with the end-user in mind, and benefit from our unique 100% inherent VXS+ fabrics and ThermSAFE™ components. Here are some of the ways our garments set the standard.

EASY- STRETCH PANEL

Improves the range of movement, especially when stretching the arm



INTERNAL ELASTICATED WAISTBAND

Gives improved garment fit for safety and comfort



GAS MONITOR/ RADIO LOOP

A secure location point for a gas monitor, radio or other portable item



INTERNAL KNEEPAD POCKETS

Allows kneepads to be added for wearer comfort and protection



EN STANDARDS AT A GLANCE

You can find more detailed information regarding the above EN standards at the back of the brochure.

For more information on the updated PPE Directive, take a look at our summary on page 92.



RIS-3279

Rail industry standard - high visibility clothing

Page: 95



BS EN 1149-5

Protective clothing - electrostatic properties

Page: 95



IEC 61482-2

Protective clothing against the thermal hazards of electric arc

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BS EN ISO 11611

Protective clothing for use in welding and allied processes

Page: 97



BS EN ISO 20471

High visibility clothing - testing methods and requirements

Page: 98



BS EN ISO 14116

Protection against heat & flame - limited flame spread

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BS EN ISO 11612

Clothing to protect against heat and flame

Page: 99



BS EN 13034

Protective clothing against liquid chemicals

Page: 100



BS EN 342

Protective clothing - protection against cold

Page: 100



BS EN 14404

Personal protective equipment, knee protectors for work in the kneeling position

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BS EN 343

Protective clothing - protection against rain

Page: 101

ARC FLASH PROTECTION IEC 61482 EXPLAINED



IEC 61482-2: 2018

LIVE WORKING - PROTECTIVE CLOTHING AGAINST THE THERMAL HAZARDS OF AN ELECTRIC ARC

This standard is significantly different to FR standard EN ISO 11612. It includes more rigorous and different requirements, and is the standard for garments to protect those at risk of arc flash. The latest update to the standard was in 2018 and contained a couple of important changes to the test methods with regards to the performance ratings of garments.

SCOPE (EXTRACT FROM THE INTERNATIONAL STANDARD)

This part of IEC 61482 is applicable to protective clothing used in work where there is the risk of exposure to an electric arc hazard.

This standard specifies requirements and test methods applicable to materials and garments for protective clothing for electrical workers against the thermal hazards of an electric arc based on:

- Relevant general properties of the textiles, tested with selected textile test methods
- Arc thermal resistance properties

TEST METHODS

There are two test methods commonly referred to under the IEC 61482-2: 2018 European Standards:

ProGARM garments are tested using both methods.

OPEN ARC TEST METHOD: IEC 61482-1-1

This test method gives a Calorific Value (cal/cm²) for each garment - expressed as an arc thermal protection value (ATPV), breakopen threshold energy value (EBT) or the incident energy limit (ELIM) and in this way, layered garment systems can be built up with testing results that correspond directly to your arc flash Risk Assessments.

BOX TEST METHOD: IEC 61482-1-2

This test method gives results of either 4kA (APC 1) or 7kA (APC 2) with APC 2 being a higher level of protection and is established in the European market. Garments in the ProGARM® collection do get APC/Class ratings, but the results cannot be directly related to arc flash Risk Assessments in the same way that calorific values can be in the Open Arc Test Method.

CALORIFIC VALUES EXPLAINED

There are now 3 different calorific values given to a garment when it undergoes Open Arc Test Method: IEC 61482-1-1: 2019

ATPV

The maximum thermal energy the garment can withstand before the wearer would have a **50% probability of 2nd degree burns.**

EBT50

The value of incident energy at which **breakopen occurs with 50% probability.**

ELIM

The maximum thermal energy the garment can withstand with the wearer having a **0% probability of 2nd degree burns.**

FOR MORE INFORMATION ON ARC FLASH TEST METHODS CALL US ON 01482 679600

PROTECTION IN LAYERS

LAYERED PROTECTION WITH PROGARM®

When arc flash and flame resistant garments are worn in layers, they provide the best "last line of defence against an arc flash incident."

Arc flash garments should not just be an outer protective layer, as wearing the wrong fabrics even under protective garments can result in injury in the event of an arc flash incident. That's why ProGARM® has developed a total range of garments to protect you and your team that are soft, breathable and comfortable.

By layering garments, you can achieve enhanced protection values, higher than merely the sum of the protection values of the garments. This is because air is a poor conductor of heat. It acts as an insulator and so increases the total calorific value of the garment system.

ARC RATED CATEGORIES

An arc rated category number is a method to determine the required arc rating of a garment worn for a given work task. Some work tasks will demand wearing protective garments in multiple layers to reach the required level of arc protection, and this information should be provided by an employer as a result of an arc flash assessment.

The NFPA identified four arc risk category levels, which are numbered by severity from 1 to 4 (1 being the lowest). The arc category is the level of arc flash protective clothing you must wear to protect against a minimum level of incident energy measured in calories/cm².

This means that electrical equipment, depending upon the energy delivering capability, under fault conditions can cause an explosion, or arc fault of a certain level, again measured in calories/cm². The resulting explosion is able to deliver an amount of heat to a certain distance.

Please note that references within this catalogue to ARC 1 to 4 relate to ATPV/EBT ratings.

We have undertaken a number of tests of combinations of popular garments. Any questions, please contact sales@progarm.com

Combination	Box Test Result	Open Arc Result
5280 Polo shirt + 5630 Sweatshirt	Garment & Fabric Class 2	Garment & Fabric 31cal (Category 3)
6458/6100/6101/7480/7482 Coverall + 5850 Jacket	Fabrics (Class 2)	Garment & Fabric 25.6cal (Category 3)
6458/6100/6101/7480/7482 Coverall + 7638/7636/7418/7414 Trousers	Fabrics (Class 2)	Garment & Fabric 25.6cal (Category 3)
6458/6100/6101/7480/7482 Coverall + 5200 Polo shirt	-	Garment & Fabric 28.5cal (Category 3)

ProGARM®
5280 POLO SHIRT AND
5282 POLO SHIRT

ARC 1
7 cal



+

ProGARM®
5630 SWEATSHIRT

ARC 2
14 cal



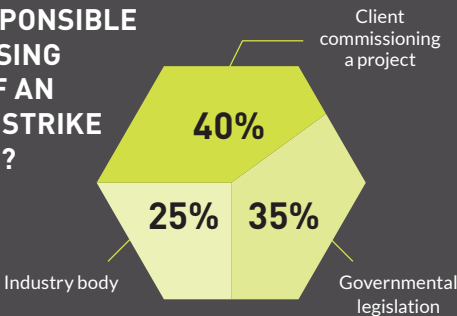
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ARC 3
31 cal

THE UK'S FIRST ARC FLASH SURVEY

57%
ADMITTED THAT THEY (OR
SOMEONE THEY WORK
WITH) HAVE SUFFERED
AN ARC FLASH STRIKE

IN AN ORGANISATION,
WHO IS RESPONSIBLE
FOR MINIMISING
THE RISK OF AN
ARK FLASH STRIKE
OCCURRING?



50%
CONSIDER IT TO BE THE
EMPLOYEE'S RESPONSIBILITY TO
SELF-EDUCATE ON ARC FLASH

90%
believe that there is a pressing need for the
Government to develop more specific guidelines
and legislation surrounding arc flash

Together with the British Safety Industry Federation (BSIF), ProGARM® commissioned a study into electrical safety across the UK in a bid to shine a spotlight on the potentially life-changing and fatal risks of arc flash.

Alarmingly, it reveals a lack of awareness at every level of current safety standards governing arc flash and an apparent failure from employers to properly educate staff about this high-risk threat.

We commissioned the survey to help us better support our customers and their industries in adopting health and safety best practice, and sought the views from 200 UK industry professionals across the rail, power generation, industrial electrical, utilities and petrochemical sectors.

It is thought to be the first national research exercise of its type ever conducted into arc flash, and gathered feedback from site-based employees as well as senior management teams/employers.

80%
BELIEVE EXISTING
GOVERNMENT
LEGISLATION IS
TOO AMBIGUOUS

84%
CLAIMED THEY
UNDERSTAND THE
RISKS ASSOCIATED
WITH ARC FLASH

78%
OF RESPONDENTS DID NOT
KNOW THE CORRECT
GOVERNMENT SAFETY
GUIDANCE HSG47 - FOR AVOIDING
UNDERGROUND SERVICES WHEN
BREAKING GROUND



VXS+
INHERENT™
100%
INHERENT

ProGARM®
PROTECTING LIVES

SINGLE COLOUR COLLECTION

For full Product Matrix outlining EN Standards, see page 102

✓ **INHERENT PROTECTION**

Flame resistant properties last the lifetime of the fabric and do not wash out

✓ **GREAT COMFORT**

Breathable, soft to wear and fantastic to the touch

✓ **INSTANT EXTINGUISHING PROPERTY**

Ultimate protection against flame and arc flash hazards

✓ **HIGHLY DURABLE**

Colourfast with less than 3% washing shrinkage*

*Only applicable for woven fabrics

DAGON
TRADING.,CO.LTD



5200 POLO SHIRT

Page 20



5280 POLO SHIRT

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5630 SWEATSHIRT

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5530 HOODIE

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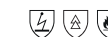
5430 T-SHIRT

Page 24



9931 SOFTSHELL JACKET

Page 25



5850 JACKET

Page 26



5790 LINED FLEECE

Page 26



7638 TROUSER

Page 27



7720 COMBAT TROUSER & 7721 DETACHABLE POCKET

Page 28



6100 COVERALL

Page 29



5200

POLO SHIRT

SIZES: S-4XL

IMPROVED

Colour matched to other navy ProGARM® garments

Enclosed stud placket allows quick fastening

Rib knit cuffs

Natural feel, comfortable and soft



5202

LADIES POLO SHIRT

SIZES: 8-16

Cut in a specific women's fit



PRODUCT INFORMATION

COLOUR: Navy

FABRIC SPECIFICATION:
ProGARM® VXS+ Inherent
Interlock Fabric, Navy - 260gms

LOI: 31.2%

PRODUCT CARE:



5280

POLO SHIRT

SIZES: S-4XL

Colour matched to other navy ProGARM® garments

ThermSAFE™ plastic FR poppers

SafetyICON™ on arm



5282

LADIES POLO SHIRT

SIZES: 8-16

Cut in a specific women's fit



PRODUCT INFORMATION

COLOUR: Navy

FABRIC SPECIFICATION:
ProGARM® VXS+ Inherent Pique
Fabric, Navy - 210gms

LOI: 34.3%




PRODUCT CARE:



PROTECTION IN LAYERS

5280 or 5282 Polo Shirt + 5630 Sweatshirt = ARC 3 protection with 31.0cal/cm²

EN STANDARDS

		
EN ISO 11612: 2015	EN 1149-5: 2008	IEC 61482-2: 2009
A1, B1, C1, F1	Pt. 5:2008 Pt. 3:2004 Charge Decay	Class 1 EBT50= 14.2cal/cm²




BOX TEST

4KA	14.2CAL
CLASS 1	ARC 2

ARC RATING



EN STANDARDS

		
EN ISO 11612: 2015	EN 1149-5: 2008	IEC 61482-2: 2009
A1, B1, C1	Pt. 5:2008 Pt. 3:2004 Charge Decay	Class 1 ATPV= 7cal/cm²

BOX TEST

4KA	7CAL
CLASS 1	ARC 1

ARC RATING



SINGLE COLOUR COLLECTION

Round neck collar with stretch rib

Useful arm pocket

LIFETIME SEAM GUARANTEE

VXS+
INHERENT™

SafetyICON™
EN Standard
identification

PRODUCT INFORMATION

COLOUR: Navy
FABRIC SPECIFICATION:
ProGARM® VXS+ Inherent Sweat
Fabric, Navy - 320gms
LOI: 30.8%
PRODUCT CARE:
40° 100% 100% 100% 100%

5630

SWEATSHIRT

SIZES: S-4XL

- ✓ Brushed fleece inner // Winter warmth
- ✓ VXS+ blend // Natural feel, comfortable and soft
- ✓ Breathable // Good moisture management
- ✓ Round neck collar with stretch rib // Smart appearance
- ✓ 5cm stretch rib hem // Best fit around waist
- ✓ Rib knit cuffs // Close fit
- ✓ Colour matched to other navy ProGARM® garments // Best appearance
- ✓ SafetyICON™ on arm // Visual EN Standard icon system
- ✓ Arm pocket // Useful pocket for phone or small items

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2008	IEC 61482-2: 2009
A1, B1, C1	Pl. 5:2008 Pl. 3:2004 Charge Decay	Class 1 EBT50=14.4cal/cm²

BOX TEST

4KA
CLASS 1

ARC RATING

14.4CAL
ARC 2

**VXS+
INHERENT™**

PROTECTION IN LAYERS

5280 or 5282 Polo Shirt + 5630
Sweatshirt = **ARC 3** protection
with 31.0cal/cm²

Drawstring
hood with warm
neck design

SafetyICON™
EN Standard
identification

Front pockets
for small
items

LIFETIME SEAM
GUARANTEE

VXS+
INHERENT™

NEW

5530

HOODIE

SIZES: S-4XL

- ✓ Brushed fleece inner // Winter warmth
- ✓ VXS+ blend // Natural feel, comfortable and soft
- ✓ Breathable with good moisture management
- ✓ Round neck higher collar // Additional warmth
- ✓ 5cm stretch rib hem // Best fit around waist and cuffs
- ✓ Rib knit cuffs // Close fit
- ✓ Colour matched to other navy ProGARM® garments // Best appearance
- ✓ SafetyICON™ on arm // Visual EN Norm icon system
- ✓ Front pockets // Useful for phone or small items

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2018	IEC 61482-2: 2018	IEC 61482-2: 2018
A1, B1, C1, F1	Pl. 5:2008 Pl. 3:2004 Charge Decay	EBT50=13.2 Cal/cm² APC 1	ELIM=12 Cal/cm²

BOX TEST

4KA
CLASS 1

ARC RATING

13.2CAL
ARC 2

**VXS+
INHERENT™**

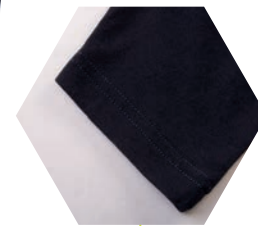
PROTECTION IN LAYERS

5280 or 5282 Polo Shirt +
5530 Hoodie = **ARC 3** protection
with 31.0cal/cm²

Round neck rib knit collar



Colour matched to other navy ProGARM® garments



Open cuffs for a relaxed fit



- ✓ VXS+ blend // Natural feel, comfortable and soft
- ✓ Breathable // Good moisture management
- ✓ Generous length // Maximum protection
- ✓ Colour matched to other navy ProGARM® garments // Best appearance
- ✓ SafetyICON™ on arm // Visual EN Standard icon system

5430

T-SHIRT

SIZES: S-4XL

PRODUCT INFORMATION

COLOUR: Navy
FABRIC SPECIFICATION:
 ProGARM® VXS+ Inherent
 Jersey Fabric, Navy - 200gms
PRODUCT CARE:

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2008	IEC 61482-2: 2009
A1, B1, C1	Pl. 5:2008 Pl. 3:2004 Charge Decay	Class 1

BOX TEST

4KA
CLASS 1

ARC RATING

NOT TESTED



Zipped Napoleon pocket with integrated phone pocket

9931

SOFTSHELL JACKET

SIZES: S-4XL

- ✓ Elasticated inner cuffs // Wind proofing
- ✓ Velcro® fastening tabs on cuffs and back // Improved fit
- ✓ Zipped Napoleon pocket on left breast with incorporated phone pocket // Safe and secure
- ✓ Inner pockets on right breast // Storage space
- ✓ Covered, zipped hand pockets // Keeps out debris and keeps contents secure

Microfleece lining for extra warmth



Radio loop on left breast



IMPROVED

PRODUCT INFORMATION

COLOUR: Navy
FABRIC SPECIFICATION:
 VXS+ Inherent Woven Weave
 Fabric with Waterproof Membrane - 340gms
PRODUCT CARE:

- ✓ Mandarin collar // Maximum neck protection
- ✓ Microfleece lining // Warmth and comfort
- ✓ Easy Stretch side panels // Extra comfort
- ✓ Extended back // Protection when bending over
- ✓ SafetyICON™ on arm // Visual EN standard
- ✓ ThermSAFE™ plastic FR zipper // CE Certified
- ✓ ThermSAFE™ two-way plastic FR zipper // Flexibility

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2008	IEC 61482-2: 2009
A1, B1, C1, F1	Pl. 5:2008 Pl. 3:2004 Charge Decay	Class 2 ATPV= 28cal/cm²

BOX TEST

7KA
CLASS 2

ARC RATING

28CAL
ARC 3





5850

JACKET

SIZES: S-4XL

- ✓ Mandarin collar // Maximum neck protection
- ✓ One front pocket with zippers // Secure storage
- ✓ Gas monitor loop // Secure fixing point
- ✓ SafetyICON™ on arm // Visual EN Standard icon system
- ✓ 5cm FR AS reflective tape // Double stitched for longer life
- ✓ Phone pocket on sleeve with flap // Safe and secure
- ✓ Velcro® secured cuff tabs // Close fit around wrist or gloves
- ✓ Side access pockets with flaps // Prevents entry of debris
- ✓ ThermSAFE™ plastic FR zipper // CE Certified
- ✓ Extended back // Protection when bending over
- ✓ Triple stitched side seams // Lifetime quality assurance
- ✓ Easy-Stretch™ side panels // Maximum wearer comfort

PRODUCT INFORMATION

COLOUR: Navy
FABRIC SPECIFICATION:
VXS+ 250W 250g/m² Woven Inherent Fabric
LOI: 30.6%
PRODUCT CARE:

EN STANDARDS			
EN ISO 11612: 2015	EN 1149-5: 2008	IEC 61482-2: 2009	EN ISO 11611: 2015
Class 1, A1	Pl. 5: 2008 Pl. 3: 2004 Charge Decay	Class 1 EBT50= 9.5cal/cm²	Class 1, A1

BOX TEST	ARC RATING	FABRIC
4KA	9.5CAL	
CLASS 1	ARC 2	

5790

LINED FLEECE

SIZES: S-4XL

- ✓ Mandarin collar // Maximum neck protection
- ✓ Two front pockets with zippers // Secure storage
- ✓ Internal pocket // Secure Velcro® tab
- ✓ Fully lined // Extra warmth & protection
- ✓ Drawcord waist adjustment with toggles // Close waist fit
- ✓ SafetyICON™ on arm // Visual EN Standard icon system
- ✓ Elasticated cuff // Close fit around wrist
- ✓ ThermSAFE™ plastic FR zipper // CE Certified
- ✓ Extended back // Protection when bending over

PRODUCT INFORMATION

COLOUR: Navy
FABRIC SPECIFICATION:
Outer Layer: VXS+ 310F 300g/m² Fleece Inherent Fabric
Lining: VXS+ 230C 230g/m² Woven Fabric
PRODUCT CARE:

EN STANDARDS		
EN ISO 11612: 2015	EN 1149-5: 2008	IEC 61482-2: 2009
A1, B1, C1	Pl. 5: 2008 Pl. 3: 2004 Charge Decay	Class 1 EBT50= 32.3cal/cm²

BOX TEST	ARC RATING	FABRIC
4KA	32.3CAL	
CLASS 1	ARC 3	

7638

TROUSER

SIZES:
30" - 52" Reg leg (32"/81cm)
32" - 44" Tall leg (34"/86cm)
30" - 42" Short leg (30"/76cm)



Extra wide belt loop at rear



Triple needle stitch seams for extra longevity



Kneepad pockets for extra protection



- ✓ Combat pocket with flap // Safe storage space
- ✓ Mobile phone pocket // Keep your phone safe
- ✓ Side access pockets // Traditional style
- ✓ Extra wide belt loop at rear // Prevents belt riding up
- ✓ ThermSAFE™ plastic FR zipper // CE Certified
- ✓ SafetyICON™ on leg pocket // Visual EN Standard icon system
- ✓ Rear pockets with flap // Secure storage space
- ✓ Triple stitched side seams // Lifetime quality assurance
- ✓ Reinforced crotch // Improved longevity
- ✓ ThermSAFE™ jeans button // Jeans style fastening

EN STANDARDS

EN ISO 11611: 2015	EN ISO 11612: 2015	EN 1149-5: 2008	IEC 61482-2: 2009
Class 1, A1	A1, B1, C1	Pl. 5: 2008 Pl. 3: 2004 Charge Decay	Class 1 EBT50= 9.5cal/cm²

BOX TEST

4KA
CLASS 1

ARC RATING

9.5CAL
ARC 2



7636

LADIES TROUSERS

SIZES:
8-16 Reg leg (30"/76cm)



Cut in a specific women's fit

PRODUCT INFORMATION

COLOUR: Navy
FABRIC SPECIFICATION:
VXS+ 250W 250g/m² Woven Inherent Fabric
LOI: 30.6%
PRODUCT CARE:

7720

COMBAT TROUSER

SIZES:
30"- 52" Reg leg (31"/80cm)
32"- 44" Tall leg (33"/85cm)
32"- 42" Short leg (30"/76cm)



7721

DETACHABLE HOLSTER POCKET

SIZES: One Size



Order Separately

PRODUCT INFORMATION

COLOUR: Navy
FABRIC SPECIFICATION:
VXS+ Woven Inherent Fabric,
300gms
PRODUCT CARE:
60°C, No Iron, No Dry Clean, No Bleach, No Tumble Dry

- ✓ Combat pocket with flap // Safe storage space
- ✓ External kneepad pockets // Wear with ProGARM® 2240 kneepads for extra protection
- ✓ Mobile phone pocket // Keeps your phone safe
- ✓ Side access pockets // Additional storage
- ✓ Extra wide belt loop at rear // Prevents belt riding up
- ✓ ThermSAFE™ plastic FR zipper // CE Certified
- ✓ SafetyICON™ on leg pocket // Visual EN Standard icon system
- ✓ Reinforced crotch // Improved longevity
- ✓ Reinforced long hem // Stronger leg hem, ability to extend/shorten leg
- ✓ ThermSAFE™ jeans button // Jeans style fastening

EN STANDARDS			BOX TEST		ARC RATING	FABRIC
EN ISO 11612: 2015	EN 1149-5: 2008	IEC 61482-2: 2009	CLASS 1			
A1, B1, C1, F1	Pt. 5:2008 Pt. 3:2004 Charge Decay	Class 1 EBT50= 12.8cal/cm²				

6100

COVERALL

SIZES:
S-4XL Reg leg (31"/80cm)
M-2XL Tall leg (33"/85cm)
Short leg by re-hemming



6101

LADIES COVERALL

SIZES:
8-16 Reg leg (29"/75cm)



PRODUCT INFORMATION

COLOUR: Navy
FABRIC SPECIFICATION:
VXS+ 250W 250g/m²
Woven Inherent Fabric
LOI: 30.6%
PRODUCT CARE:
60°C, No Iron, No Dry Clean, No Bleach, No Tumble Dry

- ✓ Mandarin collar // Maximum neck protection
- ✓ Kneepad pockets // Wear with kneepads for extra protection
- ✓ Chest pockets with zippers // Secure storage
- ✓ Gas monitor loop // Secure fixing point
- ✓ SafetyICON™ on arm // Visual EN Standard icon system
- ✓ Phone pocket on sleeve with flap // Safe and secure
- ✓ Side access pockets // With access inside the coverall
- ✓ ThermSAFE™ plastic FR zippers // CE Certified
- ✓ Internal elastic 2 point adjustable waistband // Ensures close fit
- ✓ Triple stitched side seams // Lifetime quality assurance
- ✓ Easy-Stretch™ side panels // Maximum wear comfort
- ✓ Action back for improved comfort

EN STANDARDS				BOX TEST		ARC RATING	FABRIC
EN ISO 11611: 2015	EN ISO 11612: 2015	EN 1149-5: 2008	IEC 61482-2: 2009	CLASS 1			
Class 1, A1	A1, B1, C1, F1	Pt. 5:2008 Pt. 3:2004 Charge Decay	Class 1 EBT50= 9.5cal/cm²				

TWO TONE COLOUR COLLECTION

For full Product Matrix outlining EN Standards, see page 102

✓ **INHERENT PROTECTION**

Flame resistant properties last the lifetime of the fabric and do not wash out

✓ **GREAT COMFORT**

Breathable, soft to wear and fantastic to the touch

✓ **INSTANT EXTINGUISHING PROPERTY**

Ultimate protection against flame and arc flash hazards

✓ **HIGHLY DURABLE**

Colourfast with less than 3% washing shrinkage*

*Only applicable for woven fabrics



5808 JACKET

Page 32



5816 TROUSER

Page 33



5805 HI-VIS JACKET

Page 34



5815 HI-VIS TROUSER

Page 35



7715 HI-VIS COMBAT TROUSER

Page 36



7522 HI-VIS DUNGAREE

Page 37



6458 COVERALL

Page 38



6444 COVERALL

Page 39



6460 COVERALL

Page 40



4658 COVERALL

Page 41





5808

JACKET

SIZES: S-4XL

- ✓ Mandarin collar // Maximum neck protection
- ✓ Two front pockets with zippers // Secure storage
- ✓ SafetyICON™ on arm // Visual EN Standard icon system
- ✓ 5cm FR AS reflective tape // Double stitched for longer life
- ✓ Phone pocket on sleeve with flap // Safe and secure
- ✓ Velcro® secured cuff tabs // Close fit around wrist or gloves
- ✓ Side access pockets // With entry inside coverall
- ✓ ThermSAFE™ plastic FR zippers // CE Certified
- ✓ Extended back // Protection when bending over
- ✓ Triple stitched side seams // Lifetime quality assurance
- ✓ Easy-Stretch™ side panels // Maximum wear comfort

EN STANDARDS				
EN ISO 11612: 2015	EN 1149-5: 2018	IEC 61482-2: 2009	EN ISO 11611: 2015	EN 13034:2005 +A1:2009
A1, B1, C1, D1, E1, F1	Pl. 5:2008 Pt. 3:2004 Charge Decay	Class 1 EBT50= 12cal/cm²	Class 1, A1	Part 6

BOX TEST	ARC RATING	FABRIC
CLASS 1	ARC 2	

PRODUCT INFORMATION

COLOUR: Navy/HV Yellow
FABRIC SPECIFICATION:
 VXS+ 300W 300g/m2 Woven
 Inherent Fabric with FC Finish
LOI: 29.3%
PRODUCT CARE:

5816

TROUSER

SIZES:
 30"- 52" Reg leg (32"/81cm)
 32"- 44" Tall leg (34"/86cm)
 30"- 42" Short leg (30"/76cm)



LIFETIME SEAM GUARANTEE

VXS+ INHERENT

- ✓ 5cm FR AS reflective tape // Double stitched for longer life
- ✓ Kneepad pockets // Wear with kneepads for extra protection
- ✓ Combat pocket with flap // Safe storage space
- ✓ Mobile phone pocket // Keep your phone safe
- ✓ Side access pockets with flaps // Protects from debris entry
- ✓ Extra wide belt loop at rear // Prevents belt riding up
- ✓ ThermSAFE™ plastic FR zipper // CE Certified
- ✓ SafetyICON™ on leg pocket // Visual EN Standard icon system
- ✓ Two rear pockets with flaps // Secure storage space
- ✓ Triple stitched side seams // Lifetime quality assurance
- ✓ Reinforced crotch // Improved longevity
- ✓ ThermSAFE™ jeans button // Jeans style fastening

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2018	IEC 61482-2: 2009	EN ISO 11611: 2015	EN 13034:2005 +A1:2009
A1, B1, C1, D1, E1, F1	Pl. 5:2008 Pt. 3:2004 Charge Decay	Class 1 EBT50= 12cal/cm²	Class 1, A1	Part 6

BOX TEST

CLASS 1

ARC RATING

ARC 2

FABRIC

5814

LADIES TROUSER

SIZES:
 8-16 Reg leg (30"/76cm)



PRODUCT INFORMATION

COLOUR: Navy/HV Yellow
FABRIC SPECIFICATION:
 VXS+ 300W 300g/m2 Woven
 Inherent Fabric with FC Finish
LOI: 29.3%
PRODUCT CARE:



5805

HI-VIS JACKET

SIZES: S-4XL

- ✓ Mandarin collar // Maximum neck protection
- ✓ Extended back // Protection when bending over
- ✓ Adjustable waist tabs // Creates a good fit
- ✓ Adjustable wrist tabs // Provides a snug fit over gloves and protection
- ✓ Two front chest bellows pockets with flaps // Secure storage
- ✓ Side access pockets with zips // For hands and secure storage
- ✓ Phone and pen pocket on sleeve with flap // Safe and secure

- ✓ 5cm and 7cm FR AS reflective tape, industrial wash // Heated applied, moves with the garment
- ✓ ThermSAFE™ plastic FR zipper and components // CE Certified
- ✓ SafetyICON™ on arm // Visual EN Norm icon system
- ✓ Triple stitched side seams // Lifetime seam guarantee for confidence
- ✓ 2 x gas monitor and/or radio loops // Secure fixing points

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2018	IEC 61482-2: 2018	EN ISO 11611: 2015	EN ISO 20471: 2013	EN 13034:2005 +A1:2009
A1, B1, C1, D1, E1, F1	Pt. 5:2008 Pt. 3:2004 Charge Decay	Class 1 EBT50= 12cal/cm²	Class 1, A1	Class 2	Part 6

BOX TEST

4KA
CLASS 1

ARC RATING

12CAL
ARC 2

FABRIC



PRODUCT INFORMATION

COLOUR: Navy/HV Yellow
FABRIC SPECIFICATION:
 VXS+ 300W 300g/m2 Woven
 Inherent Fabric with FC Finish
LOI: 29.3%
PRODUCT CARE:

5815

HI-VIS TROUSER

SIZES:

30"- 52" Reg leg (32"/81cm)
 32"- 44" Tall leg (34"/86cm)
 30"- 42" Short leg (30"/76cm)



NEW



Combat pockets
 with flaps for
 secure storage

Triple needle
 stitched
 structural
 seams have a
 Lifetime Seam
 Guarantee

External kneepad pockets
 to fit ProGARM™
 2240 Kneepad

5810

LADIES HI-VIS TROUSER

SIZES:

8-16 Reg leg (30"/76cm)



PRODUCT INFORMATION

COLOUR: Navy/HV Yellow
FABRIC SPECIFICATION:
 VXS+ 300W 300g/m2 Woven
 Inherent Fabric with FC Finish
LOI: 29.3%
PRODUCT CARE:

- ✓ 5cm and 7cm FR AS reflective tape, industrial wash // Heated applied, moves with the garment
- ✓ External kneepad pockets // For extra comfort and knee protection
- ✓ 2 x combat pockets with flaps // Safe storage space
- ✓ Mobile phone pocket on leg // Keep your phone safe
- ✓ Side access pockets // For easy access storage
- ✓ Extra wide belt loop at rear // Prevents belt riding up
- ✓ ThermSAFE™ plastic FR zipper and jeans button // CE Certified
- ✓ SafetyICON™ on leg pocket // Visual EN Norm icon system
- ✓ Two rear pockets with flaps // Secure storage space
- ✓ Triple stitched structural seams // Lifetime quality assurance
- ✓ Reinforced crotch // Improves garment durability

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2018	IEC 61482-2: 2018	EN ISO 11611: 2015	EN ISO 20471: 2013	EN 13034:2005 +A1:2009
A1, B1, C1, D1, E1, F1	Pt. 5:2008 Pt. 3:2004 Charge Decay	Class 1 EBT50= 12cal/cm²	Class 1, A1	Class 1	Part 6

BOX TEST

4KA
CLASS 1

ARC RATING

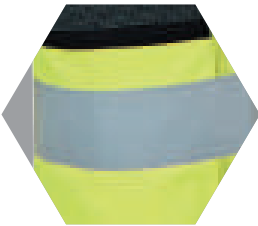
12CAL
ARC 2

FABRIC





Triple needle stitched structural seams have a Lifetime Seam Guarantee



Combat pockets with flaps for secure storage



External kneepad pockets to fit ProGARM™ 2240 Kneepad

PRODUCT INFORMATION

COLOUR: Navy/HV Yellow
FABRIC SPECIFICATION: VXS+ 300W 300g/m2 Woven Inherent Fabric, VXS+ 300W 300g/m2 Woven Ripstop Fabric
PRODUCT CARE:

7715

HI-VIS COMBAT TROUSER

SIZES: 30" - 52" Reg leg (32"/81cm)
32" - 44" Tall leg (34"/86cm)
30" - 42" Short leg (30"/76cm)

- ✓ 5cm and 7cm FR AS industrial wash reflective tape // Stitched on for durability
- ✓ External kneepad pockets // For extra comfort and knee protection
- ✓ Cordura® knee & hem reinforcement // Up to 200,000 abrasion cycles
- ✓ Combat pocket with flap // Safe storage space for phone
- ✓ Open tool/pen pocket on leg // Easy access/storage for tools
- ✓ Two rear pockets with flaps // Secure storage space
- ✓ Side access pockets // For easy access storage
- ✓ Extra wide belt loop at rear // Prevents belt riding up
- ✓ ThermSAFE™ plastic FR zipper and jeans button // CE Certified
- ✓ SafetyICON™ on leg pocket // Visual EN Norm icon system
- ✓ Triple stitched structural seams // Lifetime quality assurance
- ✓ Reinforced crotch // Improves garment durability

EN STANDARDS				
EN ISO 11612: 2015	EN 1149-5: 2018	BS EN 61482-2: 2020	BS EN 61482-2: 2020	EN ISO 20471: 2013
A1, B1, C1, F1	Pl. 5:2008 ATPV = Charge Decay	APC 1 ATPV = 12cal/cm²	ELIM = 9cal/cm²	Class 1

BOX TEST	ARC RATING	FABRIC
CLASS 1	ARC 2	



Triple needle stitched structural seams have a Lifetime Seam Guarantee



Combat pockets with flaps for secure storage



External kneepad pockets to fit ProGARM™ 2240 Kneepad

PRODUCT INFORMATION

COLOUR: Navy/HV Yellow
FABRIC SPECIFICATION: VXS+ 300W 300g/m2 Woven Inherent Fabric, VXS+ 300W 300g/m2 Woven Ripstop Fabric
PRODUCT CARE:

7522

HI-VIS DUNGAREE

SIZES: 30" - 52" Reg leg (32"/81cm)
32" - 44" Tall leg (34"/86cm)
30" - 42" Short leg (30"/76cm)

- ✓ Cordura® knee & hem reinforcement // Up to 200,000 abrasion cycles
- ✓ 5cm and 7cm FR AS industrial wash reflective tape // Stitched on for durability
- ✓ External kneepad pockets // For extra comfort and knee protection
- ✓ Open tool/pen pocket on leg // Easy access to tools
- ✓ Combat pocket with flap // Safe storage space for phone
- ✓ Two rear pockets with flaps // Secure storage space
- ✓ Side access pockets // For easy access storage
- ✓ Large chest pocket with flap // Safely stores mobile phone
- ✓ Extra wide belt loop at rear // Prevents belt riding up
- ✓ Adjustable braces attached to bib rear // Provides comfort-fit
- ✓ ThermSAFE™ plastic FR zipper and brace buttons // CE Certified
- ✓ SafetyICON™ on leg pocket // Visual EN Norm icon system
- ✓ Triple stitched structural seams // Lifetime quality

EN STANDARDS				
EN ISO 11612: 2015	EN 1149-5: 2018	BS EN 61482-2: 2020	BS EN 61482-2: 2020	EN ISO 20471: 2013
A1, B1, C1, F1	Pl. 5:2008 ATPV = Charge Decay	APC 1 ATPV = 12cal/cm²	ELIM = 9cal/cm²	Class 1

BOX TEST	ARC RATING	FABRIC
CLASS 1	ARC 2	



6458 COVERALL

SIZES: S-4XL Reg leg (31"/80cm)
M-2XL Tall leg (33"/85cm)

- ✓ Mandarin collar // Maximum neck protection
 - ✓ Kneepad pockets // Wear with kneepads for extra protection
 - ✓ Expandable ankle opening with zippers // Easy removal
 - ✓ SafetyICON™ on arm // Visual EN Standard icon system
 - ✓ 5cm heat applied reflective tape // Lighter weight
 - ✓ Combat pocket on leg plus sleeve pocket // Ample space
- ✓ Velcro® secured cuff tabs // Close fit around wrist or gloves
 - ✓ Side access pockets // With entry inside coverall
 - ✓ ThermSAFE™ plastic FR zippers // CE Certified
 - ✓ Internal elastic 2 point adjustable waistband // Ensures close fit
 - ✓ Triple stitched side seams // Lifetime quality assurance
 - ✓ Easy-Stretch™ side panels // Maximum wearer comfort

EN STANDARDS				
EN ISO 11612: 2015	EN 1149-5: 2008	IEC 61482-2: 2009	EN ISO 11611: 2015	EN ISO 20471: 2013
A1, B1, C1, F1	Pt. 5:2008 Pt. 3:2004 Charge Decay	Class 1 EBT50= 9.5cal/cm²	Class 1, A1	Class 3

BOX TEST	ARC RATING	FABRIC
CLASS 1	ARC 2	

PRODUCT INFORMATION

COLOUR: Navy/HV Yellow
FABRIC SPECIFICATION:
VXS+ 240W 240g/m² Woven
Inherent Fabric
LOI: 30.6%
PRODUCT CARE:

6444

COVERALL

SIZES:
S-4XL Reg leg (31"/80cm)
M-2XL Tall leg (33"/85cm)



IMPROVED

6446

LADIES COVERALL

SIZES:
8-16 Reg leg (76cm)



IMPROVED

- ✓ Mandarin collar // Maximum neck protection
 - ✓ Kneepad pockets // Wear with kneepads for extra protection
 - ✓ Chest pockets with zippers // Secure storage
 - ✓ Gas monitor loop // Secure fixing point
 - ✓ SafetyICON™ on arm // Visual EN Standard icon system
 - ✓ 5cm FR AS reflective tape // Double stitched for longer life
 - ✓ Phone pocket on sleeve with flap // Safe and secure
- ✓ Velcro® secured cuff tabs // Close fit around wrist or gloves
 - ✓ Side access pockets // With entry inside coverall
 - ✓ ThermSAFE™ plastic FR zippers // CE Certified
 - ✓ Internal elastic 2 point adjustable waistband // Ensures close fit
 - ✓ Triple stitched side seams // Lifetime quality assurance
 - ✓ Easy-Stretch™ side panels // Maximum wear comfort
 - ✓ Action back for improved comfort

PRODUCT INFORMATION

COLOUR: Navy/HV Yellow
FABRIC SPECIFICATION:
VXS+ 300W 300g/m² Woven
Inherent Fabric with FC Finish
LOI: 29.3%
PRODUCT CARE:

EN STANDARDS				
EN ISO 11612: 2015	EN 1149-5: 2008	IEC 61482-2: 2009	EN ISO 11611: 2015	EN ISO 20471: 2013
A1, B1, C1, D1, E1, F1	Pt. 5:2008 Pt. 3:2004 Charge Decay	Class 1 EBT50= 12cal/cm²	Class 1, A1	Class 3

BOX TEST	ARC RATING	FABRIC
CLASS 1	ARC 2	

*6446 meets Class 2 and 6444 meets Class 3



PRODUCT INFORMATION

COLOUR: Navy/HV Yellow

FABRIC SPECIFICATION:
 VXS+ 160W 160g/m² Woven
 Inherent Fabric

PRODUCT CARE:



6460

COVERALL

SIZES: S-4XL Reg leg (31"/80cm)
 M-2XL Tall leg (33"/85cm)

- ✓ Mandarin collar // Maximum neck protection
- ✓ Kneepad pockets // Wear with kneepads for extra comfort
- ✓ Vertical zip chest pockets // Accessible when wearing a harness
- ✓ Expandable ankle opening with zippers // Easy removal
- ✓ SafetyICON™ on arm // Visual EN Norm icon system
- ✓ 5cm heat applied reflective tape // Lighter weight
- ✓ Combat pocket on leg plus sleeve pocket // Ample space
- ✓ Cuff tabs with Velcro® brand fasteners // Close fit around
- ✓ Side access pockets // With entry inside coverall
- ✓ ThermSAFE™ plastic FR zippers // CE Certified
- ✓ Internal elastic 2 point adjustable waistband // Ensures close fit
- ✓ Triple stitched side seams // Lifetime quality assurance
- ✓ Easy-Stretch™ side panels // Maximum wear comfort

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2018	EN ISO 20471: 2013	IEC 61482-2: 2018
A1, B1, C1, F1	Pt. 5:2008 Pt. 3:2004 Charge Decay	Class 3	APC1 ELIM = 5cal/cm ² EBT50 = 5.8cal/cm ²

BOX TEST

4KA	5CAL
CLASS 1	ARC 1

ARC RATING

FABRIC



4658

COVERALL

SIZES:
 S-4XL Reg leg (31"/80cm)
 M-2XL Tall leg (33"/85cm)


- ✓ Mandarin collar // Maximum neck protection
- ✓ Kneepad pockets // Wear with kneepads for extra comfort
- ✓ Vertical zip chest pockets // Accessible when wearing a harness
- ✓ Gas monitor loop // Secure fixing point
- ✓ SafetyICON™ on arm // Visual EN Norm icon system
- ✓ 5cm heat applied reflective tape // Lighter weight
- ✓ Phone pocket on sleeve with flap // Safe and secure
- ✓ Velcro® secured cuff tabs // Close fit around wrist or gloves
- ✓ Side access pockets with flaps // With entry inside coverall
- ✓ ThermSAFE™ plastic FR zippers // CE Certified
- ✓ Internal elastic 2 point adjustable waistband // Ensures close fit
- ✓ Triple stitched side seams // Lifetime quality assurance
- ✓ Easy-Stretch™ side panels // Maximum wear comfort
- ✓ Combat pocket on leg plus sleeve pocket // Ample space
- ✓ Expandable ankle opening with zippers // Easy removal

PRODUCT INFORMATION

COLOUR: Navy/HV Orange

FABRIC SPECIFICATION:
 ProGARM VXS+ Inherent Woven
 Fabric, HV Orange - 290gms
 ProGARM VXS+ Inherent Woven
 Fabric, Navy - 240gms

PRODUCT CARE:



EN STANDARDS

EN ISO 11612: 2015	EN ISO 20471: 2013	IEC 61482-2: 2018	Compliant	EN ISO 11611: 2015	EN 1149-5: 2018
A1, B1, C1, F1	Class 3	ATPV = 8cal/cm ² APC 1	Issue 1	Class 1, A1	Pt. 5:2008 Pt. 3:2004 Charge Decay

BOX TEST

4KA	8CAL
CLASS 1	ARC 2

ARC RATING

FABRIC





HI VIS YELLOW COLLECTION

For full Product Matrix outlining EN Standards, see page 102

✓ INHERENT PROTECTION

Flame resistant properties last the lifetime of the fabric and do not wash out

✓ GREAT COMFORT

Breathable, soft to wear and fantastic to the touch

✓ INSTANT EXTINGUISHING PROPERTY

Ultimate protection against flame and arc flash hazards

✓ HIGHLY DURABLE

Colourfast with less than 3% washing shrinkage*

*Only applicable for woven fabrics



5286 POLO SHIRT

Page 44



5626 SWEATSHIRT

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9930 SOFTSHELL JACKET

Page 46



7418 TROUSER

Page 47



9750 WATERPROOF JACKET

Page 48



9880 WATERPROOF SALOPETTES

Page 49



7480 COVERALL

Page 50



9720 LIGHTWEIGHT WATERPROOF JACKET

Page 51



9820 LIGHTWEIGHT WATERPROOF SALOPETTES

Page 52



5286

POLO SHIRT

SIZES: S-4XL



- ✓ Enclosed stud placket // Allows quick fastening
- ✓ VXS+ blend // Natural feel, comfortable and soft
- ✓ Breathable // Good moisture management
- ✓ ThermSAFE™ plastic FR poppers // CE Certified
- ✓ Knitted collar with tipping // Ensures best appearance after washing
- ✓ Contrast colour collar // Stylish and practical
- ✓ Rib knit cuffs // Close fit
- ✓ SafetyICON™ on arm // Visual EN Standards icon system
- ✓ 5cm FR AS reflective tape // Heat applied to improve flexibility

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2018	IEC 61482-2: 2018	EN ISO 20471: 2013
A1, B1, C1, F1	Pt. 5:2008 Pt. 3:2004 Charge Decay	ELIM=5.6cal/cm² ATPV=6.2cal/cm² APC1	Class 3

*5287 meets Class 2 and 5286 meets Class 3

BOX TEST



FABRIC



5287

LADIES POLO SHIRT

SIZES: 8-16



PRODUCT INFORMATION

COLOUR: HV Yellow

FABRIC SPECIFICATION:
ProGARM® VXS+ Inherent Pique
Fabric, HV Yellow - 210gms

PRODUCT CARE:



SWEATSHIRT

SIZES: S-4XL



PRODUCT INFORMATION

COLOUR: HV Yellow

FABRIC SPECIFICATION:
ProGARM® VXS+ Inherent Sweat
Fabric, HV Yellow - 320gms

LOI: 30.8%

PRODUCT CARE:



- ✓ VXS+ blend // Natural feel, comfortable and soft
- ✓ Breathable // Good moisture management
- ✓ Rib knit cuffs // Close fit
- ✓ SafetyICON™ on arm // Visual EN Standards icon system
- ✓ 5cm FRAS reflective tape // Heat applied to improve flexibility

- ✓ Brushed fleece inner // Winter warmth
- ✓ Round neck collar with stretch rib // Smart appearance
- ✓ 5cm stretch rib hem // Best fit around the waist
- ✓ Arm pocket // Useful pocket for phone or small items

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2008	IEC 61482-2: 2009	EN ISO 20471: 2013
A1, B1, C1	Pt. 5:2008 Pt. 3:2004 Charge Decay	Class 1 EBT50=13.2cal/cm²	Class 3

BOX TEST



ARC RATING



FABRIC





9930

SOFTSHELL JACKET

SIZES: S-4XL

- ✓ Two tone design // Practical and stylish
- ✓ Elasticated inner cuffs // Wind proofing
- ✓ Velcro® fastening tabs on cuffs and back // Improved fit
- ✓ Radio loop attaching point on left breast
- ✓ Zipped Napoleon pocket on left breast with incorporated phone pocket // Safe and secure
- ✓ Inner pockets on right hand breast // Storage space
- ✓ Covered, zipped hand pockets // Keeps out debris and keeps contents secure
- ✓ Mandarin collar // Maximum neck protection
- ✓ 50mm double stitched reflective tape // Increased durability
- ✓ Microfleece lining // Warmth and comfort
- ✓ Easy Stretch side panels // Wearer comfort
- ✓ Extended back // Protection when bending over
- ✓ SafetyICON™ on arm // Visual EN Standards
- ✓ ThermSAFE™ plastic FR zipper // CE Certified
- ✓ ThermSAFE™ two-way plastic FR zipper // Flexibility

EN STANDARDS			
EN ISO 11612: 2015	EN 1149-5: 2008	IEC 61482-2: 2009	EN ISO 20471: 2013
A1, B1, C1, E1	Pl. 5:2008 Pl. 3:2004 Charge Decay	Class 2 EBT50= 28cal/cm²	Class 3 excludes Clause 5.6

BOX TEST	ARC RATING	FABRIC
7KA	28CAL	VXS+ INHERENT™
CLASS 2	ARC 3	

7418

TROUSER

SIZES: 30" - 52" Reg leg (31"/80cm)
32" - 44" Tall leg (33"/85cm)
30" - 42" Short leg (30"/76cm)



- ✓ Combat pocket with flap // Safe storage space
- ✓ Kneepad pockets // Wear with kneepads for extra protection
- ✓ Mobile phone pocket // Keeps your phone safe
- ✓ Side access pockets with flaps // Protects from debris entry
- ✓ Extra wide belt loop at rear // Prevents belt riding up
- ✓ ThermSAFE™ plastic FR zipper // CE Certified
- ✓ SafetyICON™ on leg pocket // Visual EN Standards icon system
- ✓ Rear pockets with flap // Secure storage space
- ✓ Triple stitched side seams // Lifetime quality assurance
- ✓ Reinforced crotch // Improved longevity
- ✓ ThermSAFE™ jeans button // Jeans style fastening

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2008	IEC 61482-2: 2009	EN ISO 11611: 2015	EN ISO 20471: 2013
A1, B1, C1, E1	Pl. 5:2008 Pl. 3:2004 Charge Decay	Class 1 EBT50= 9.5cal/cm²	Class 1, A1	Class 2

*7414 meets class 1 and 7418 meets class 2

BOX TEST ARC RATING FABRIC

4KA	9.5CAL	VXS+ INHERENT™
CLASS 1	ARC 2	

7414

LADIES TROUSER

SIZES: 8-16 Reg leg (30"/76cm)



PRODUCT INFORMATION

COLOUR: HV Yellow
FABRIC SPECIFICATION: VXS+ HVY250W 250g/m² Woven Inherent Hi-Visibility Fabric
LOI: 30.6%
PRODUCT CARE:

9880

WATERPROOF SALOPETTES

SIZES: S-4XL

PRODUCT INFORMATION

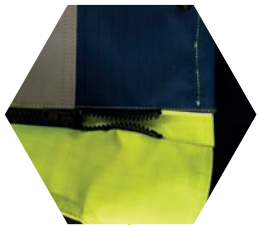
COLOUR: HV Yellow / Navy
FABRIC SPECIFICATION:
Outer Layer: VXS+ Inherent Special Weave Fabric with Waterproof Membrane - 395gms
Lining Layer: VXS+ Inherent Woven Fabric - 200gms
LOI: 27.0%
PRODUCT CARE:



Salopettes are part of 2 garment set and should be worn with the compatible jacket (9750)



Removable and adjustable braces



Expandable ankle opening with zipper



- ✓ 70mm double stitched reflective tape // Increased durability
- ✓ Removable & adjustable suspenders
- ✓ Combat pocket with phone pocket // Convenience and storage space
- ✓ Suspenders back plate // Adjustable for comfort
- ✓ 2 side pockets // Storage space
- ✓ SafetyICON™ on arm // Visual EN Certified
- ✓ Side access // For use as overtrousers
- ✓ ThermSAFE™ plastic FR zipper // CE Certified
- ✓ Fully lined // Warmth and comfort
- ✓ Extra wide belt loop at rear // Prevents belt riding up

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2008	EN ISO 11611: 2015	EN ISO 20471: 2013	EN 343:2003 +A1:2007	EN 13034: 2005	IEC 61482-2: 2009	IEC 61482-2: 2009
A1, B1, C1, D2, E3, F1	Pl. 5:2008 Pt. 3:2004 Charge Decay	Class 2, A1	Class 2	Class 3/3	Type PB (6) +A1:2009	ATPV= 47cal/cm²	Class 2

BOX TEST

7KA
CLASS 2

ARC RATING

47CAL
ARC 4



No seams on shoulders to improve durability and comfort whilst wearing harness

PRODUCT INFORMATION

COLOUR: HV Yellow / Navy
FABRIC SPECIFICATION:
Outer Layer: VXS+ Inherent Special Weave Fabric with Waterproof Membrane - 395gms
Lining Layer: VXS+ Inherent Woven fabric - 200gms
LOI: 27.0%
PRODUCT CARE:



9750

WATERPROOF JACKET

SIZES: S-4XL

- ✓ Two tone design // Practical and stylish
- ✓ Elasticated inner cuffs // Wind proofing
- ✓ Velcro® fastening tabs on cuffs and back // Improved fit
- ✓ Fully adjustable, fold away hood with Velcro® // Safety and comfort
- ✓ Radio loop attaching point on left breast
- ✓ Storm flap // Wind proofing
- ✓ Zipped Napoleon pocket on left breast with incorporated phone pocket // Safe and secure
- ✓ Taped seams // Waterproof and windproof
- ✓ Inner pockets on right hand breast // Storage space
- ✓ Covered, zipped hand pockets // Keeps out debris and keeps contents secure
- ✓ Mandarin collar // Maximum neck protection
- ✓ 50mm double stitched reflective tape // Increased durability
- ✓ Fully lined // Warmth and comfort
- ✓ Easy-Stretch™ side panels // Wearer comfort
- ✓ Extended back // Protection when bending over
- ✓ SafetyICON™ // Visual EN standards
- ✓ ThermSAFE™ plastic FR zipper // CE Certified

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2008	EN ISO 11611: 2015	EN ISO 20471: 2013	EN 343:2003 +A1:2007	EN 13034: 2005	IEC 61482-2: 2009	IEC 61482-2: 2009
A1, B1, C1, D2, E3, F1	Pl. 5:2008 Pt. 3:2004 Charge Decay	Class 2, A1	Class 3	Class 3/3	Type PB (6) +A1:2009	ATPV= 47cal/cm²	Class 2

BOX TEST

7KA
CLASS 2

ARC RATING

47CAL
ARC 4



7480

COVERALL

SIZES:
S-4XL Reg leg (31"/80cm)
M-2XL Tall leg (33"/85cm)

Featuring
flame resistant
ThermSAFE™
hook and loop

Double
stitched
5cm FR AS
reflective
tape

Side access
pockets



7482

LADIES
COVERALL

SIZES:
8-16 Reg leg (29"/175cm)



Cut in a
specific
women's fit

PRODUCT INFORMATION

COLOUR: HV Yellow
FABRIC SPECIFICATION:
VXS+ HVY250W 250g/m² Woven
Inherent Hi-Visibility Fabric
LOI: 30.6%
PRODUCT CARE:



- ✓ Mandarin collar // Maximum neck protection
- ✓ Kneepad pockets // Wear with kneepads for extra protection
- ✓ Chest pockets with flaps // Secure storage
- ✓ Gas monitor loop // Secure fixing point
- ✓ SafetyICON™ on arm // Visual EN Standards icon system
- ✓ 5cm FR AS reflective tape // Double stitched for longer life
- ✓ Phone pocket on sleeve with flap // Safe and secure
- ✓ Velcro® secured cuff tabs // Close fit around wrist or gloves
- ✓ Side access pockets // With entry inside coverall
- ✓ ThermSAFE™ plastic FR zippers // CE Certified
- ✓ Internal elastic 2 point adjustable waistband // Ensures close fit
- ✓ Triple stitched side seams // Lifetime quality assurance
- ✓ Easy-Stretch™ side panels // Maximum wear comfort

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2008	IEC 61482-2: 2009	EN ISO 11611: 2015	EN ISO 20471: 2013
A1, B1, C1	Pt. 5:2008 Pt. 3:2004 Charge Decay	Class 1 EBT50= 9.5cal/cm²	Class 1, A1	Class 3

BOX TEST



ARC RATING



FABRIC



9720

No seams on shoulders
to improve durability
and comfort whilst
wearing harness



PRODUCT INFORMATION

COLOUR: HV Yellow / Navy
FABRIC SPECIFICATION:
Outer Layer: VXS+ Inherent
Special Weave Fabric with
Waterproof Membrane - 250gms
Lining Layer: VXS+ Inherent
Woven Fabric - 120gms
PRODUCT CARE:



LIGHTWEIGHT
WATERPROOF JACKET

SIZES: S-4XL

- ✓ Elasticated inner cuffs // Wind proofing
- ✓ Cuff tabs with Velcro® brand fasteners // Improved fit
- ✓ Fully adjustable, fold away hood with Velcro® // Safety and comfort
- ✓ Storm flap // Wind proofing
- ✓ Removable hood
- ✓ Radio loop attaching point on left breast
- ✓ Zipped Napoleon pocket on left breast with incorporated phone pocket // Safe and secure
- ✓ Inner pockets on right hand breast // Storage space
- ✓ Taped seams // Waterproof and windproof
- ✓ Covered, zipped hand pockets // Keeps out debris and keeps contents secure
- ✓ No seams on shoulder // Improved durability and comfort whilst wearing a harness
- ✓ Mandarin collar // Maximum neck protection
- ✓ 50mm FR reflective tape // Increased durability
- ✓ 120gms lining // Lightweight
- ✓ Easy-Stretch™ side panels // Wear comfort
- ✓ Extended back // Protection when bending over
- ✓ SafetyICON™ // Visual EN Standards
- ✓ ThermSAFE™ plastic FR zipper // CE Certified

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2008	EN ISO 11611: 2015	EN ISO 20471: 2013	EN 343: 2019	EN 13034: 2005	IEC 61482-2: 2018	IEC 61482-2: 2018
A1, B1, C1 D1, E1, F1	Pt. 5:2008 Pt. 3:2004 Charge Decay	Class 1, A1	Class 3	Class 3/3	Type PB (6) +A1:2009	ATPV 25cal/cm² ELIM 23cal/cm²	APC 2

BOX TEST



ARC RATING



FABRIC



9820

LIGHTWEIGHT WATERPROOF SALOPETTES

SIZES: S-4XL



Removable and adjustable braces

Expandable ankle opening with zipper

PRODUCT INFORMATION

COLOUR: HV Yellow / Navy

FABRIC SPECIFICATION:
Outer Layer: VXS+ Inherent Special Weave Fabric with Waterproof Membrane - 250gms

Lining Layer: VXS+ Inherent Woven Fabric -120gms

PRODUCT CARE:



- ✓ 50mm FR reflective tape // Increased durability
- ✓ Combat pocket with phone pocket // Convenience and storage space
- ✓ 2 side pockets // Storage space
- ✓ Side access // For use as overtrousers
- ✓ 120gms lining // Lightweight
- ✓ Removable & adjustable suspenders
- ✓ Suspender back plate // Adjustable for comfort
- ✓ SafetyICON™ on arm // Visual EN Certified
- ✓ ThermSAFE™ plastic FR zipper // CE Certified
- ✓ Extra wide belt loop at rear // Prevents belt riding up

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2018	EN ISO 11611: 2015	EN ISO 20471: 2013	EN 343: 2019	EN 13034: 2005	IEC 61482-2: 2018	IEC 61482-2: 2018
A1, B1, C1, D1, E1, F1	Pt. 5:2008 Pt. 3:2004 Charge Decay	Class 1, A1	Class 1	Class 3/3	Type PB (6) +A1:2009	ATPV 25cal/cm², ELIM 23cal/cm²	APC 2

BOX TEST



ARC RATING



FABRIC



“ We have had these trousers for over 6 months and they are still going strong whereas before we had to replace trousers nearly every three weeks! ”

HI VIS ORANGE COLLECTION

For full Product Matrix outlining EN Standards, see page 102

✓ **INHERENT PROTECTION**

Flame resistant properties last the lifetime of the fabric and do not wash out

✓ **GREAT COMFORT**

Breathable, soft to wear and fantastic to the touch

✓ **INSTANT EXTINGUISHING PROPERTY**

Ultimate protection against flame and arc flash hazards

✓ **HIGHLY DURABLE**

Colourfast with less than 3% washing shrinkage*

*Only applicable for woven fabrics

VXS+
INHERENT™

**100%
INHERENT**



5290 POLO SHIRT

Page 56



5648 SWEATSHIRT

Page 57



4608 JACKET

Page 58



4616 TROUSER

Page 59



**9440 WATERPROOF
JACKET**

Page 60



**9660 WATERPROOF
SALOPETTES**

Page 61



4690 COVERALL

Page 62



**9422 LIGHTWEIGHT
WATERPROOF JACKET**

Page 63



**9622 LIGHTWEIGHT
WATERPROOF
SALOPETTES**

Page 64



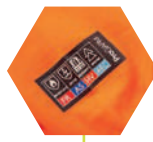
5290

POLO SHIRT

SIZES: S-4XL

IMPROVED

Ultra-soft and durable VXS+ Fabric



Safety ICON
EN Standard
identification



Contrast
cuffing

5292

LADIES POLO SHIRT

SIZES: 8-16



PRODUCT INFORMATION

COLOUR: HV Orange

FABRIC SPECIFICATION:
ProGARM® VXS+ Inherent Pique
Fabric, HV Orange - 220gms

PRODUCT CARE:



- ✓ Enclosed stud placket // Allows quick fastening
- ✓ VXS+ blend // Natural feel, comfortable and soft
- ✓ Breathable with good moisture management
- ✓ ThermSAFE™ plastic FR poppers // CE Certified
- ✓ Knitted collar with tipping // Ensures best appearance after washing
- ✓ Contrast colour collar // Stylish and practical
- ✓ Rib knit cuffs // Close fit
- ✓ SafetyICON™ on arm // Visual EN Standard icon system
- ✓ 5cm FR AS reflective tape // Heat applied to improve flexibility

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2018	IEC 61482-2: 2018	EN ISO 20471: 2013	Compliant
A1, B1, C1	Pt. 5:2008 Pt. 3:2004 Charge Decay	APC1 ATPV=6cal/cm²	Class 3	Issue 1

*5292 meets Class 2 and 5290 meets Class 3

BOX TEST



ARC RATING



FABRIC



5648

SWEATSHIRT

SIZES: S-4XL



Useful arm
pocket for
phone or
small items

Fleece lined for
extra warmth



- ✓ Brushed fleece inner // Winter warmth
- ✓ VXS+ blend // Natural feel, comfortable and soft
- ✓ Breathable with good moisture management
- ✓ Round neck collar with stretch rib // Smart appearance
- ✓ Contrast colour collar // Stylish and practical
- ✓ Rib knit cuffs // Close fit
- ✓ 5cm stretch rib hem // Best fit around the waist
- ✓ SafetyICON™ on arm // Visual EN Standard icon system
- ✓ Arm pocket // Useful pocket for phone or small items
- ✓ 5cm FR AS reflective tape // Heat applied to improve flexibility

EN STANDARDS

EN ISO 11612: 2015	Compliant	IEC 61482-2: 2009	EN ISO 20471: 2013
A1, B1, C1	Issue 1	CEBT50=21.6 Cal/cm² Class 1	Class 3

BOX TEST



ARC RATING



FABRIC





IMPROVED

PRODUCT INFORMATION

COLOUR: HV Orange
FABRIC SPECIFICATION:
ProGARM VXS+ Inherent Woven
Fabric, HV Orange - 290gms
PRODUCT CARE:
60 30 X P



4608

JACKET

SIZES: S-4XL

- ✓ Mandarin collar for maximum neck protection
- ✓ Vertical chest pocket with zipper // Discreet design
- ✓ Gas monitor loop // Secure fixing point
- ✓ SafetyICON™ on arm // Visual EN Standard icon system
- ✓ 5cm FRAS reflective Tape // Double stitched for longer life
- ✓ Phone pocket on sleeve with flap // Safe and secure
- ✓ Velcro® secured cuff tabs // Close fit around wrist or gloves
- ✓ Side access pockets with flaps // Prevents entry of debris
- ✓ ThermSAFE™ plastic FR zipper // CE Certified
- ✓ Extended back // Protection when bending over
- ✓ Double stitched side seams // Lifetime quality assurance
- ✓ Easy-Stretch™ side panels // Maximum wear comfort

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2018	IEC 61482-2: 2018	EN ISO 11611: 2015	EN ISO 20471: 2013	Compliant
A1, B1, C1, F1	Pt. 5:2008 Pt. 3:2004 Charge Decay	ATPV = 8cal/cm² APC 1	Class 1, A1	Class 3	Issue 1

BOX TEST



ARC RATING



FABRIC



4616

TROUSER

SIZES: 30"- 52" Reg leg (32"/81cm)
32"- 44" Tall leg (34"/86cm)
30"- 42" Short leg (30"/76cm)



Combat pocket on right leg with SafetyICON™ EN Standard identification



IMPROVED

Reinforced crotch panel



Triple stitched side seams

4614

LADIES TROUSER

SIZES:
8-16 Reg leg (30"/76cm)



PRODUCT INFORMATION

COLOUR: HV Orange
FABRIC SPECIFICATION:
ProGARM VXS+ Inherent Woven
Fabric, HV Orange - 290gms
PRODUCT CARE:
60 30 X P

- ✓ Combat pocket with flap // Safe storage space
- ✓ Kneepad pockets // Wear with kneepads for extra protection
- ✓ Mobile phone pocket // Keeps your phone safe
- ✓ Side access pockets with flaps // Protects from debris entry
- ✓ Extra wide belt loop at rear // Prevents belt riding up
- ✓ ThermSAFE™ plastic FR zipper // CE Certified
- ✓ SafetyICON™ on leg pocket // Visual EN Standard icon system
- ✓ Rear pockets with flap // Secure storage space
- ✓ Triple stitched side seams // Lifetime quality assurance
- ✓ Reinforced crotch // Improved longevity
- ✓ ThermSAFE™ jeans button // Jeans style fastening
- ✓ 5cm FR AS reflective tape // Double stitched for longer life

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2018	IEC 61482-2: 2018	EN ISO 11611: 2015	EN ISO 20471: 2013	Compliant
A1, B1, C1, F1	Pt. 5:2008 Pt. 3:2004 Charge Decay	ATPV = 8cal/cm² APC 1	Class 1, A1	Class 1	Issue 1

BOX TEST



ARC RATING



FABRIC





No seams on shoulders to improve durability and comfort whilst wearing harness

PRODUCT INFORMATION

COLOUR: HV Orange
FABRIC SPECIFICATION:
Outer Layer: VXS+ Inherent Special Weave Fabric with Waterproof Membrane - 395gms
Lining Layer: VXS+ Inherent Woven Fabric - 200gms
LOI: 27.0%
PRODUCT CARE:

9440

WATERPROOF JACKET

SIZES: S-4XL

- ✓ Elasticated inner cuffs // Wind proofing
- ✓ Storm flap // Wind proofing
- ✓ Taped seams // Waterproof and windproof
- ✓ Velcro® fastening tabs on cuffs and back // Improved fit
- ✓ Fully adjustable, fold away hood with Velcro® // Safety and comfort
- ✓ Radio loop attaching point on left breast
- ✓ Zipped Napoleon pocket on left breast with incorporated phone pocket // Safe and secure
- ✓ Inner pockets on right hand breast // Storage space
- ✓ Covered, zipped hand pockets // Keeps out debris and keeps contents secure
- ✓ No seams on shoulder // Improved durability and comfort whilst wearing a harness
- ✓ Mandarin collar // Maximum neck protection
- ✓ 50mm double stitched reflective tape // Increased durability
- ✓ Fully lined // Warmth and comfort
- ✓ Easy stretch side panels // Wearer comfort
- ✓ Extended back // Protection when bending over
- ✓ SafetyICON™ // Visual EN Standard
- ✓ ThermSAFE™ plastic FR zipper // CE Certified

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2008	EN ISO 11611: 2015	EN ISO 20471: 2013	EN 343:2003 +A1:2007	EN 13034: 2005	IEC 61482-2: 2009	IEC 61482-2: 2009	Compliant
A1, B1, C1, D2, E3, F1	Pl. 5:2008 Pl. 3:2004 Charge Decay	Class 2, A1	Class 3	Class 3/3	Type PB (6) +A1:2009	ATPV= 47cal/cm²	Class 2	Issue 1

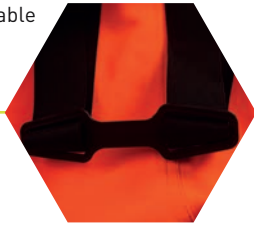
BOX TEST

7KA	47CAL
CLASS 2	ARC 4

ARC RATING



Removable braces



Expandable ankle opening with zipper

WATERPROOF SALOPETTES

9660

SIZES: S-4XL

PRODUCT INFORMATION

COLOUR: HV Orange
FABRIC SPECIFICATION:
Outer Layer: VXS+ Inherent Special Weave Fabric with Waterproof Membrane - 395gms
Lining Layer: VXS+ Inherent Woven Fabric - 200gms
LOI: 27.0%
PRODUCT CARE:

Salopettes are part of 2 garment set and should be worn with the compatible jacket (9440)



- ✓ 70mm double stitched reflective tape // Increased durability
- ✓ Combat pocket with phone pocket // Convenient storage space
- ✓ 2 side pockets // Storage space
- ✓ Side access // For use as overtrousers
- ✓ Fully lined // Warmth and comfort
- ✓ Removable and adjustable suspenders
- ✓ Suspender back plate // Adjustable for comfort
- ✓ SafetyICON™ on arm // Visual EN Standard
- ✓ ThermSAFE™ plastic FR zipper // CE Certified
- ✓ Extra wide belt loop at rear // Prevents belt riding up

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2008	EN ISO 11611: 2015	EN ISO 20471: 2013	EN 343:2003 +A1:2007	EN 13034: 2005	IEC 61482-2: 2009	IEC 61482-2: 2009	Compliant
A1, B1, C1, D2, E3, F1	Pl. 5:2008 Pl. 3:2004 Charge Decay	Class 2, A1	Class 2	Class 3/3	Type PB (6) +A1:2009	ATPV= 47cal/cm²	Class 2	Issue 1

BOX TEST

7KA	47CAL
CLASS 2	ARC 4

ARC RATING



4690

COVERALL

SIZES:
S-4XL Reg leg (31"/80cm)
M-2XL Tall leg (33"/85cm)

Internal elasticated waistband for improved fit

Double stitched 5cm FR AS reflective tape

Wear with kneepads for extra protection

IMPROVED



4692

LADIES COVERALL

SIZES:
8-16 Reg leg (29"/75cm)



Cut in a specific women's fit

PRODUCT INFORMATION

COLOUR: HV Orange
FABRIC SPECIFICATION:
ProGARM® VXS+ Inherent Woven Fabric, HV Orange - 290gms
PRODUCT CARE:

- ✓ Mandarin collar // Maximum neck protection
- ✓ Kneepad pockets // Wear with kneepads for extra protection
- ✓ Chest pockets with flaps // Secure storage
- ✓ Gas monitor loop // Secure fixing point
- ✓ SafetyICON™ on arm // Visual EN Standard
- ✓ 5cm FR AS reflective tape // Double stitched for longer life
- ✓ Phone pocket on sleeve with flap // Safe and secure
- ✓ Velcro® secured cuff tabs // Close fit around wrist or gloves
- ✓ Side access pockets // With entry inside coverall
- ✓ ThermSAFE™ plastic FR zippers // CE Certified
- ✓ Internal elastic 2 point adjustable waistband // Ensures close fit
- ✓ Triple stitched side seams // Lifetime quality assurance
- ✓ Easy-Stretch™ side panels // Maximum wear comfort

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2018	IEC 61482-2: 2018	EN ISO 11611: 2015	EN ISO 20471: 2013	Compliant
A1, B1, C1, F1	Pt. 5:2008 Pt. 3:2004 Charge Decay	ATPV = 8cal/cm² APC 1	Class 1, A1	Class 3	Issue 1

BOX TEST



ARC RATING



FABRIC



9422



No seams on shoulders to improve durability and comfort whilst wearing harness

PRODUCT INFORMATION

COLOUR: HV Orange
FABRIC SPECIFICATION:
Outer Layer: VXS+ Inherent Special Weave Fabric with Waterproof Membrane - 250gms
Lining Layer: VXS+ Inherent Woven Fabric - 120gms
PRODUCT CARE:



LIGHTWEIGHT WATERPROOF JACKET

SIZES: S-4XL

- ✓ Elasticated inner cuffs // Wind proofing
- ✓ Storm flap // Wind proofing
- ✓ Taped seams // Waterproof and windproof
- ✓ Cuff tabs with Velcro® brand fasteners // Improved fit
- ✓ Fully adjustable, fold away hood with Velcro® // Safety and comfort
- ✓ Removable hood
- ✓ Radio loop attaching point on left breast
- ✓ Zipped Napoleon pocket on left breast with incorporated phone pocket // Safe and secure
- ✓ Inner pockets on right hand breast // Storage space
- ✓ Covered, zipped hand pockets // Keeps out debris and keeps contents secure
- ✓ No seams on shoulder // Improved durability and comfort whilst wearing a harness
- ✓ Mandarin collar // Maximum neck protection
- ✓ 50mm FR reflective tape // Increased durability
- ✓ 120gms lining // Lightweight
- ✓ Easy-Stretch™ side panels // Wear comfort
- ✓ Extended back // Protection when bending over
- ✓ SafetyICON™ // Visual EN standards
- ✓ ThermSAFE™ plastic FR zipper // CE Certified

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2018	EN ISO 11611: 2015	EN ISO 20471: 2013	EN 343: 2019	EN 13034: 2005	IEC 61482-2: 2018	IEC 61482-2: 2018	Compliant
A1, B1, C1, D1, E1, F1	Pt. 5:2008 Pt. 3:2004 Charge Decay	Class 1, A1	Class 3	Class 3/3	Type PB (6) +A1:2009	ATPV= 25cal/cm², ELIM 23cal/cm²	APC 2	Issue 1

BOX TEST



ARC RATING



FABRIC



9622

LIGHTWEIGHT WATERPROOF SALOPETTES

SIZES: S-4XL



Removable and adjustable braces



Expandable ankle opening with zipper

PRODUCT INFORMATION

COLOUR: HV Orange

FABRIC SPECIFICATION:

Outer Layer: VXS+ Inherent Special Weave Fabric with Waterproof Membrane - 250gms

Lining Layer: VXS+ Inherent Woven Fabric -120gms

PRODUCT CARE:



- ✓ 50mm FR reflective tape // Increased durability
- ✓ Combat pocket with phone pocket // Convenience and storage space
- ✓ 2 side pockets // Storage space
- ✓ Side access // For use as overtrousers
- ✓ 120gms lining // Lightweight
- ✓ Removable & adjustable suspenders
- ✓ Suspender back plate // Adjustable for comfort
- ✓ SafetyICON™ on arm // Visual EN Certified
- ✓ ThermSAFE™ plastic FR zipper // CE Certified
- ✓ Extra wide belt loop at rear // Prevents belt riding up

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2018	EN ISO 11611: 2015	EN ISO 20471: 2013	EN 343: 2019	EN 13034: 2005	IEC 61482-2: 2018	IEC 61482-2: 2018	Compliant
A1, B1, C1 D1, E1, F1	Pl. 5:2008 Pl. 3:2004 Charge Decay	Class 1, A1	Class 1	Class 3/3	Type PB (6) +A1:2009	ATPV= 25cal/cm² ELJM 23cal/cm²	APC 2	Issue 1

BOX TEST



ARC RATING

FABRIC



“

Following trials, ProGARM® were the clear winner of the ARC Protection garments we needed. Having trialled nearly every supplier in the UK, ProGARM® were clear winners - shrinkage was minimal and the garment kept its shape - overall a fantastic product.

”



ProGARM®
PROTECTING LIVES

BASELAYERS COLLECTION

For full Product Matrix outlining EN Standards, see page 102

✓ **INHERENT PROTECTION**

Flame resistant properties last the lifetime of the fabric and do not wash out

✓ **GREAT COMFORT**

Breathable, soft to wear and fantastic to the touch

✓ **INSTANT EXTINGUISHING PROPERTY**

Ultimate protection against flame and arc flash hazards

✓ **HIGHLY DURABLE**

Colourfast with less than 3% washing shrinkage*

*Only applicable for woven fabrics



8210 BASELAYER TOP

Page 68



8220 BASELAYER LEGGINGS

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8100 BALACLAVA

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8300 SNOOD

Page 70



8400 HELMET LINER

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LADIES AVAILABLE
8700F

8700 BOXER BRIEFS

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8770 FR BRA

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2101 COMPRESSION SOCKS

Page 72



2102 GENERAL BOOT SOCKS

Page 72





8210

BASELAYER TOP

SIZES: S-4XL

- ✓ Garment layering benefits for extra protection
- ✓ Extra soft flame resistant fabric
- ✓ Contrast threads
- ✓ Elastic fabric to fit all shapes and sizes
- ✓ Thumb hole for extra hand protection
- ✓ Extended back
- ✓ L-shaped seams for wearer comfort
- ✓ Fully machine washable

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2018	IEC 61482-2: 2009
A1, B1, C1	Pl. 5:2008 Pl. 3:2004 Charge Decay	EBT50= 4.9cal/cm²

ARC RATING

4.9CAL
ARC 1

FABRIC



PRODUCT INFORMATION

COLOUR: Navy
FABRIC SPECIFICATION:
VXS+ Inherent Jersey Fabric, Navy
- 220gms
PRODUCT CARE:



8220

BASELAYER LEGGINGS

SIZES: S-4XL

- ✓ Extra soft fabric
- ✓ Contrast threads
- ✓ Fully machine washable

EN STANDARDS

EN ISO 11612: 2015	EN 1149-5: 2018	IEC 61482-2: 2009
A1, B1, C1	Pl. 5:2008 Pl. 3:2004 Charge Decay	EBT50= 4.9cal/cm²

ARC RATING

4.9CAL
ARC 1

FABRIC



PRODUCT INFORMATION

COLOUR: Navy
FABRIC SPECIFICATION:
VXS+ Inherent Jersey Fabric, Navy
- 220gms
PRODUCT CARE:

8100

BALACLAVA

SIZES: One Size



- ✓ Extra soft fabric
- ✓ Elastic fabric to fit all shapes and sizes

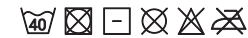
PRODUCT INFORMATION

COLOUR: Navy

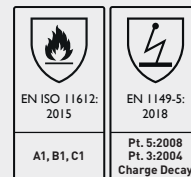
FABRIC SPECIFICATION:

VXS+ Inherent Jersey Fabric, Navy - 220gms

PRODUCT CARE:



EN STANDARDS



8300

SNOOD

SIZES: One Size

Elastic fabric to fit all shapes and sizes

Can be worn in multiple forms

Double stitching for longevity



- ✓ Contrast threads
- ✓ Clear label with batch traceability
- ✓ Extra soft fabric

PRODUCT INFORMATION

COLOUR: Navy

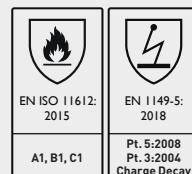
FABRIC SPECIFICATION:

VXS+ Inherent Jersey Fabric, Navy - 220gms

PRODUCT CARE:



EN STANDARDS



8400

HELMET LINER

SIZES: One Size



- ✓ Extra soft fabric
- ✓ Contrast threads
- ✓ Elastic fabric to fit all shapes and sizes

PRODUCT INFORMATION

COLOUR: Navy

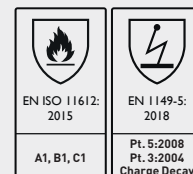
FABRIC SPECIFICATION:

VXS+ Inherent Jersey Fabric, Navy - 220gms

PRODUCT CARE:



EN STANDARDS



8700-M

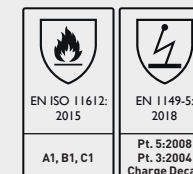
MENS BOXER BRIEFS

SIZES: S/M, L/XL, 2XL/3XL



- ✓ Mesh stripes on side of garment for increased breathability
- ✓ Very light fabric for increased comfort
- ✓ Elasticated waist band
- ✓ Seamless sides for additional comfort

EN STANDARDS



8700-F

LADIES BOXER BRIEFS

SIZES: S/M, L/XL, 2XL/3XL



PRODUCT INFORMATION

COLOUR: Navy

FABRIC SPECIFICATION:

ProGARM® VXS+ Inherent Knitted Fabric, Navy - 180gms

PRODUCT CARE:



8770

FR BRA

SIZES: XS-2XL



- ✓ Extra soft fabric
- ✓ Elastic fabric to fit all shapes and sizes

PRODUCT INFORMATION

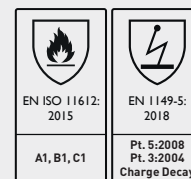
COLOUR: Black

FABRIC SPECIFICATION: 330gms

PRODUCT CARE:



EN STANDARDS



2101

COMPRESSION SOCKS

SIZES:

UK: 4-7
EU: 38/41 S/M

UK: 8-11
EU: 40/46 L/XL

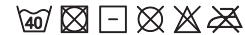


- ✓ Improves performance, as worn by top athletes
- ✓ Improved blood circulation, reduces tiredness in the legs

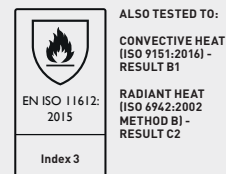
PRODUCT INFORMATION

COLOUR: Navy

PRODUCT CARE:



EN STANDARDS



IMPORTANT NOTE

Not to be worn by diabetics.
Not to be worn by anyone with a heart condition or anyone who has previously suffered a stroke.

2102

GENERAL BOOT SOCKS

SIZES:

UK: 4-7
EU: 38/41 S/M

UK: 8-11
EU: 40/46 L/XL



- ✓ Extra soft fabric
- ✓ Contrast threads
- ✓ Elastic fabric to fit all shapes and sizes

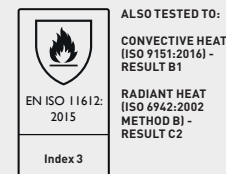
PRODUCT INFORMATION

COLOUR: Navy

PRODUCT CARE:



EN STANDARDS



“Non-arc flash base layers can compromise the protection given by arc flash layers worn on top of them. Protect your team with our arc rated baselayers.”

HEAD PROTECTION PRODUCTS

✓ **INHERENT PROTECTION**

Flame resistant properties last the lifetime of the fabric and do not wash out

✓ **GREAT COMFORT**

Breathable, soft to wear and fantastic to the touch

✓ **INSTANT EXTINGUISHING PROPERTY**

Ultimate protection against flame and arc flash hazards

✓ **HIGHLY DURABLE**

High quality products give excellent value for money



**2660 SAFETY
HELMET CLASS 1
& 2668 REPLACEMENT VISOR**

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**2688 SAFETY
HELMET 8.4 CAL
& 2687 REPLACEMENT VISOR**

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**2690 SAFETY
HELMET 24CAL
& 2667 REPLACEMENT VISOR**

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2676 EAR MUFFS

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2674 HEAD HARNESS

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2664 CHIN STRAP

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**2671 PHOTON
HEADLIGHT**

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**2662 FRONT
SWEATBAND**

Page 80



**2666 BACK
SWEATBAND**

Page 80



**2682 ZONE EAR
DEFENDER ADAPTORS**

Page 81



2677 STORAGE BAG

Page 81



**2672 VISOR
CLEANING CLOTH**

Page 81



9700 ARC4 HOOD

Page 82



2660

SAFETY HELMET CLASS 1

SIZES: One Size



REAR

2668

REPLACEMENT VISOR

SIZES: One Size
Resistance to fogging (N)



HELMET

- ✓ Stroke absorption after conditioning in temperatures of (-30°C) and (0°C)
- ✓ Resistance to penetration after conditioning in temperatures of (-30°C) and (+50°C)
- ✓ Live working symbol (Two Triangles)
- ✓ Working temperature range (-30°C) and (+50°C)
- ✓ Wheel ratchet adjustment
- ✓ Adjustable head circumference from 53-63cm
- ✓ Two level height adjustment feature
- ✓ Electrical insulation (Class 0) 1000V AC, 1500V DC
- ✓ Protection against molten metal splash - symbol MM
- ✓ Protection against lateral deformations - symbol LD

VISOR

- ✓ Level of protection 1.2 (transparent face shield)
- ✓ Level of protection 1.7 (dimmed face shield)
- ✓ Protection against droplets and splashes of liquids (3)
- ✓ Optical powers, light transmission factor, luminance factor of dispersed light Optical Class 1
- ✓ Resistance to medium energy impact (speed stroke up to 120m/s, mass of ball 0.86kg) (B)
- ✓ Protection against short circuit electric arc (8)
- ✓ Protection against thermal hazards of an electric arc, Class 1 (box test; 4kA/0.5s) VLT factor → 75% for class 0
- ✓ Protection against molten metal and hot solids (9)
- ✓ Resistance to surface damage by fine particles (K)

EN STANDARDS



PRODUCT INFORMATION

LIFETIME: 5 Years
SIZES: One Size
COLOUR: White (other colours available)

2688

SAFETY HELMET 8.4CAL

SIZES: One Size



REAR

2687

REPLACEMENT VISOR

SIZES: One Size
Resistance to fogging (N)



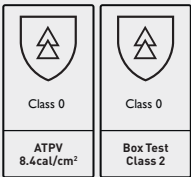
HELMET

- ✓ Shock absorption, tested after artificial ageing, wet conditioning and thermal conditioning in temperatures (-30°C) and (+50°C)
- ✓ Resistance to penetration, tested after artificial ageing, wet conditioning and thermal conditioning in temperatures (-30°C) and (+50°C)
- ✓ Resistance to flame
- ✓ Protection against lateral deformations - symbol LD
- ✓ Protection against molten metal splash - symbol MM
- ✓ Protection against electrical shock (Class 0)

VISOR

- ✓ Optical powers, light transmission factor, luminance factor of dispersed light - optical Class 1
- ✓ Resistance to medium energy impact (speed of stroke up to 120 m/s, mass of the ball 0.86g) - symbol B
- ✓ Protection against droplets and splashes of liquids - symbol 3
- ✓ Level of protection 2-1.4 (yellow - green face shield)
- ✓ Face shield with enhanced colour recognition: red, yellow, green and blue according to p. 4.2.3 standard EN 172:2000 - symbol C
- ✓ Protection against short circuit electric arc - symbol 8
- ✓ Protection against thermal hazards of an electric arc - Class 2 (box test)
- ✓ VLT factor 50% ⇐ VLT 75% ⇐ - Class 1
- ✓ Protection against molten metals and hot solids - symbol 9
- ✓ Protection against thermal hazards of an electric arc - ATPV = 8.4cal/cm²

EN STANDARDS



PRODUCT INFORMATION

LIFETIME: 4 Years
SIZES: One Size
COLOUR: White (other colours available)

Protection against lateral deformations

Protection against electrical shock

2690



SAFETY HELMET 24 CAL

SIZES: One Size

HELMET

- ✓ Shock absorption, tested after artificial ageing, wet conditioning and thermal conditioning in temperatures (-30°C) and (+50°C)
- ✓ Resistance to penetration, tested after artificial ageing, wet conditioning and thermal conditioning in temperatures (-30°C) and (+50°C)
- ✓ Resistance to flame
- ✓ Protection against molten metal splash - symbol MM
- ✓ Protection against lateral deformations - symbol LD

EN STANDARDS

	
Class 0	Class 0
ATPV 24cal/cm²	Box Test Class 2

VISOR

- ✓ Optical powers, light transmission factor, luminance factor of dispersed light - optical Class 1
- ✓ Resistance to medium range energy impact (speed of stroke up to 120 m/s, mass of the ball 0.86g - symbol B)
- ✓ Protection against droplets and splashes of liquids - symbol 3
- ✓ Resistance to UV radiation - symbol 2
- ✓ Level of protection 2-1.7 (green face shield)
- ✓ Face shield with enhanced colour recognition: red, yellow, green and blue according to p. 4.2.3 EN 172:2000 - symbol C
- ✓ Protection against short circuit electric arc - symbol 8
- ✓ Protection against thermal hazards of an electric arc, ATPV=24Cal/cm² / HAF=91%
- ✓ VLT Factor VLT<50% for Class 2

REAR



2667

REPLACEMENT VISOR

SIZES: One Size



Protection against thermal hazards of an electric arc - Class 2 (box test)

PRODUCT INFORMATION

LIFETIME: 4 Years

SIZES: One Size

COLOUR: White (other colours available)

2676

EAR MUFFS

SIZES: One Size



- ✓ Fit adjustable ear muffs for attachment to the ProGARM® helmet with soft PVC cushions
- ✓ SNR: 23dB. CE EN 352-3 Certified
- ✓ Suitable for all ProGARM® arc flash helmets

2674

HEAD HARNESS

SIZES: One Size

- ✓ Complete replacement 4-point harness with textile webbing, front and rear sweatbands and ratchet mechanism for practical and easy one-hand size adjustment



2664

CHIN STRAP

SIZES: One Size

- ✓ Replacement chin strap with quick release fasteners
- ✓ Adjust and 4-point fitting



2671

PHOTON HEADLIGHT

SIZES: One Size

- ✓ Waterproof and shock resistant headlight with adjustable head



2682

ZONE EAR DEFENDER ADAPTORS

SIZES: One Size

- ✓ Adaptors to fit the popular zone ear defenders to the arc helmets



2662

FRONT SWEATBAND

SIZES: One Size

- ✓ Replacement soft velour and foam sweatband for comfort and moisture absorption
- ✓ Velcro® fastening

2677

STORAGE BAG

SIZES: One Size

- ✓ Storage bag to transport and protect ProGARM® arc flash helmets and other accessories

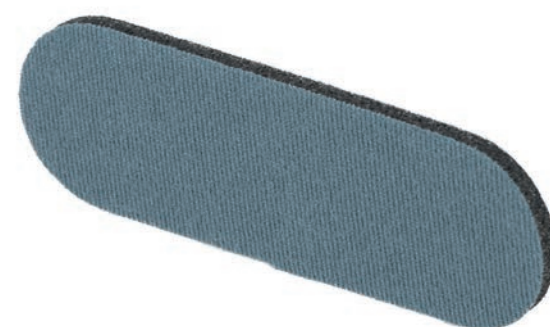


2666

BACK SWEATBAND

SIZES: One Size

- ✓ Replacement soft velour and foam sweatband for comfort and moisture absorption
- ✓ Velcro® fastening



2672

VISOR CLEANING CLOTH

SIZES: One Size

- ✓ Replacement soft cotton cloth to clean the visor
- ✓ For use with either of ProGARM® 2660, 2688 or 2690 arc flash helmets



Protection
against
electrical
shock

Ultimate
protection
against flame
& arc flash
hazards

9700

ARC4 HOOD

SIZES: One Size

PRODUCT INFORMATION

SIZES: One Size

COLOUR: Navy

PRODUCT CARE:



ASSEMBLY

The assembly of hood, visor and helmet has been tested to and certified to EN 166:2002, GS-ET-29:2011 (APC 2), and ASTM F2178-ATPV 47cal/cm²

FABRIC

- ✓ VXS+ inherent special weave 395gms outer shell fabric with VXS+ inherent
- ✓ 200gms lining woven fabric, meeting the following standards:
- ✓ EN ISO 11612:2015 - A1, B1, C1, D2, E3, F1
- ✓ EN ISO 11611:2015 - Class 2, A1
- ✓ EN 1149-5:2008
- ✓ IEC 61482-2 : Open Arc ATPV = 47cal/cm² - Category 4
- ✓ IEC 61482-2 : Box Test = Class 2

VISOR

Premium anti-fog coated highly transparent arc flash protective shield, colour grey, meeting the following standards:

- ✓ NFPA 70E, ASTM F2178 - 47cal/cm²
- ✓ ANSI Z87.1

HELMET

Manufactured from high quality strong ABS material, up to 20% lighter than most other helmets, features Dry-Tech sweatband for maximum comfort, adjustable ratchet. Meeting the following standards:

- ✓ EN 397 - LD, MM, -40°C
- ✓ EN 50365
- ✓ ANSI/ISEA Class C



“Provide total protection and optimum comfort by choosing tested, compliant and appropriate accessories.”



OTHER ACCESSORIES

✓ **INHERENT PROTECTION**
Flame resistant properties last the lifetime of the fabric and do not wash out

✓ **GREAT COMFORT**
Breathable, soft to wear and fantastic to the touch

✓ **INSTANT EXTINGUISHING PROPERTY**
Ultimate protection against flame and arc flash hazards

✓ **HIGHLY DURABLE**
High quality products give excellent value for money



2000 KIT BAG

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2678 ARC GLOVES

Page 86



2240 FR KNEEPADS

Page 87



7721 DETACHABLE HOLSTER POCKET

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2700 ARC GLOVES

Page 88



2400 FR BELT

Page 88



8050 FR BEANIE HAT

Page 88



2205 WELDING APRON

Page 89



2200 WELDING GAITERS

Page 89

2000

KIT BAG

SIZES: One Size

Large capacity



- ✓ Zipped front pockets
- ✓ Zipped main compartment pocket
- ✓ Internal baseboard for rigidity
- ✓ Protective base feet for longer bag life

Detachable adjustable
shoulder strap

PRODUCT INFORMATION

SIZES: 50cm x 25cm x 25cm (34 Litres)
COLOUR: Black
CODE: 2000

2678

ARC GLOVES

SIZES: L (9), XL (10), XXL (11)

Winterized,
waterproof and
windproof

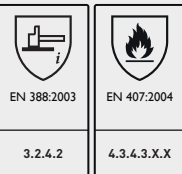


18oz/yd²
goatgrain
leather

PRODUCT INFORMATION

SIZES: L (9), XL (10), XXL (11)
COLOUR: Tan
CODE: 2678

EN STANDARDS



ARC RATING



7721

DETACHABLE HOLSTER POCKET

SIZES: One Size

VXS+ Woven
Inherent Fabric,
300gms



PRODUCT INFORMATION

SIZES: One Size
COLOUR: Navy
CODE: 7721

Detachable holster pocket does not meet any EN standards on its own, must be worn with 7720 combat trousers.



- ✓ EN ISO 11612 Certified // Optimum safety
- ✓ High impact absorption from high grade cellular rubber
- ✓ Wash tested to ISO 15797, 12 cycles // Perfect stability

PRODUCT INFORMATION

SIZES: Width: 145mm x Length: 235mm
COLOUR: Black
CODE: 2240

EN STANDARDS



2240

FR KNEEPADS

SIZES: One Size

Notched
sides for
maximum
flexibility



Excellent
breathability
due to air holes
in the foam

2700

ARC GLOVES

SIZES: M (8), L (9), XL (10), XXL (11)



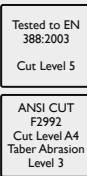
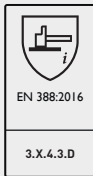
Suitable for
high risk
environments

- ✓ Category 2 Arc rated
- ✓ Level 5 (EN388:2003 withdrawn) - Level D TDM (EN388:2016 current)
- ✓ Excellent dry and wet grip
- ✓ Good abrasion resistance
- ✓ Excellent oil, grease, glue and chemical resistance
- ✓ Dexterity, touch, elasticity and hand conformity similar to natural rubber

PRODUCT INFORMATION

SIZES: M (8), L (9), XL (10), XXL (11)
COLOUR: Khaki

EN STANDARDS



ARC RATING



2205

WELDING APRON

SIZES: One Size



PRODUCT INFORMATION

SIZES: M/L, XL/2XL
COLOUR: Silver

2200

WELDING GAITERS

SIZES: One Size



PRODUCT INFORMATION

SIZES: XS/S - XL/2XL
COLOUR: Silver

- ✓ Highly molten metal splash resistant fabric
- ✓ Adjustable cuff
- ✓ Removable and position adjustable lower apron
- ✓ Elastic fastening on the back

EN STANDARDS



- ✓ Highly molten metal splash resistant fabric
- ✓ Elastic band below the foot
- ✓ Flame resistant Velcro® fastening on the back for adjustment

EN STANDARDS



2400

FR BELT

SIZES: Waists 30"-38" (110cm)
Waists 40"-48" (130cm)



8050

FR BEANIE HAT

SIZES: One Size

USEFUL INFORMATION

MADE TO PERFORM... EVEN IN THE WASHING MACHINE

TRIED AND TESTED

It's essential to us that you have absolute confidence in your garments and know they'll continue to perform and keep your team safe, long after purchase.

To achieve EN certification, we extensively wash-test all our VXS+ fabrics before releasing them to market, paying close attention to colour fastness, how tear and tensile strength is affected, pulling resistance and dimensional change or shrinkage.

And, because our VXS+ fabrics are 100% inherent, they are arc flash and flame resistant for the life of the garment; protection doesn't wash out like it will with treated garments. In fact, we regularly test other garments and fabrics on the market to ensure our products remain at the forefront of arc flash protection.

DON'T JUST TAKE OUR WORD FOR IT

Our garments have undergone wash trials at several commercial laundry companies on behalf of customers, so that they can see how our garments perform. In every case, our garments have passed those rigorous tests with flying colours.

Many of our fabrics have been certified to EN11612 after 50 industrial wash cycles, as specified in ISO 15797:2004. This involves being washed at 75°C and tunnel dried at 150°C for five minutes.

Many aramid fabrics are sensitive to high pH values in detergents and are more susceptible to colour change during industrial laundry.

However, our VXS+ fabric dye processes mean they're easier to wash and dry at home or through industrial laundry, extending the lifespan of the garment with low shrinkage and maintained hi-vis and brand standards.

INDUSTRIAL WASHING PROCEDURE ACCORDING TO ISO 15797		VXS+ 300W 300G/M2	ARAMID FABRIC
WASHING (75°C) AND TUMBLE DRYING (80°C)		COLOUR FASTNESS AFTER INDUSTRIAL WASHING (ISO 105 A02)	
INITIAL		5	5
25X		4-5	1-2
50X		3-4	1

Colour performance is measured on a level of 1 to 5 (with 5 being the maximum.)
Note: Garments should be washed according to the care label.

As part of our commitment to quality, ongoing performance and customer confidence, we rigorously test reflective tapes and components (such as zips and press studs) too.

If you intend to commercially wash your ProGARM® garments, we're happy to talk with your laundry partner so that we're all confident in the processes they're using and that your team remains protected.

EN STANDARDS AROUND GARMENT WASHING METHODS

EN ISO 6330: 2012 DOMESTIC

TEXTILES - DOMESTIC WASHING AND DRYING
PROCEDURES FOR TEXTILE TESTING

This international standard defines the washing and drying procedures for textiles being washed at home with consideration for wash loads, drying procedures, chemicals and detergents and many other variables. The standard was reviewed in 2012, after 10 years of amendments with industry influencers, to ensure the standard was based on global practices.

All our garments meet or exceed this standard, with many fabrics and accessories in our collection also tested to the Industrial Wash standard EN ISO15797 – see below.

EN ISO15797: 2004 INDUSTRIAL

TEXTILES - INDUSTRIAL WASHING AND FINISHING
PROCEDURES FOR TESTING OF WORKWEAR

This international standard defines the suitability of textiles for industrial washing, factoring in industrial washing machinery, larger wash loads, more demanding wash detergents, eight washing procedures (with hotter and tougher temperatures) and for two drying procedures including tunnel drying with temperatures up to 150°C. Some fabrics and accessories within the our range meet this standard for industrial washing in accordance with the correct procedures. For more information, please ask your ProGARM® representative.



IMPORTANT CHANGES REPLACE THE PPE DIRECTIVE WITH AN EU REGULATION

Past issues of our catalogue provide information relating to Personal Protective Equipment (PPE) and the European Directive that regulates it, 89/686/EU.

On 21 April 2016, the PPE Directive was converted to a regulation (completely effective from 21 April 2018) with increased scope for the type of products and processes covered. It also now applies to the whole supply chain and not just the product manufacturer.

This places stronger obligations on manufacturers to regulate and audit their supply chain, which is something we at ProGARM® had already been doing for years.

The definition of PPE has also been expanded to be "Equipment designed and manufactured to be worn or held by a person for protection against one or more risks to that person's health or safety."

Certificates for existing PPE items remain valid until 21 April 2023, but all new PPE items need to be certified under the new regulation from 21 April 2018. Category 3 PPE items need to be recertified before 21 April 2023.



ALWAYS READ THE LABEL

CE

THE CE MARK

Category 2 and 3 PPE should always bear the CE mark, followed by a four-digit number. This shows the garment is Type Approved by a notified body and complies with the requirements of either the PPE Directive (while still valid), or the new PPE Regulation (EU) 2016/425.

All our products comply with the requirements of the PPE Directive or with the new PPE Regulation as applicable.

CE CERTIFIED GARMENTS COMPARED WITH 'CE CERTIFIED FABRICS'

When purchasing any arc flash or other protective clothing, always check that the finished garment has been tested.

Any garment correctly certified and CE marked should also display the relevant visual symbol for the standard with which it complies, such as the arc flash EN Standard symbol.

Where the fabric has been tested, but not the finished garment, the relevant EN Standard symbols will be missing from the garment label and replaced with text detailing the standard to which only the fabric has been tested.

All our garments are fully certified to the standards displayed on them. (An example care label is shown below.)

Style Number

CE Marking **CE 0338** **9750** **ProGARM®**

EN Standards to which the garment meets

EN ISO 11611: 2015 Class 2, A1	EN ISO 14116: 2015 A1, B1, C1, D2, E3, F1	EN 1149-5: 2008 Pl: 5:2008 Pl: 3:2004 Charge Decay	IEC 61482-2: 2009 ATPV= 47 Cal/cm² Class 2	EN ISO 20471: 2013 Class 3	EN 343:2003 + A1:2007 Type 3	EN 13034:2005 + A1:2009 Type 6
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Wash Care Instructions

Aftercare: • Do not bleach, do not boil, do not use soap based products - only detergents.
• Company will not accept liability for garments where care labels have been ignored, neglected, defaced or removed.
• Always store in clean, dry conditions.

Fabric Compositions

Fabric Composition:
Outer Layer: 50% Polyester/ 27% VXS+ Modacrylic / 22% Cotton/ 1% Antistatic - PU Laminated
Lining Layer: 55% VXS+ Modacrylic / 44% Cotton/ 1% Antistatic
Cuff: 45% Cotton/ 36% VXS+ Modacrylic / 10% Elastomer/ 9% Viscose
This Jacket must be worn with ProGARM 9880 Salopette to offer Full Protection.

Clear Washing Care Symbols

60

Washing instructions symbols: 60, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000, 1010, 1020, 1030, 1040, 1050, 1060, 1070, 1080, 1090, 1100, 1110, 1120, 1130, 1140, 1150, 1160, 1170, 1180, 1190, 1200, 1210, 1220, 1230, 1240, 1250, 1260, 1270, 1280, 1290, 1300, 1310, 1320, 1330, 1340, 1350, 1360, 1370, 1380, 1390, 1400, 1410, 1420, 1430, 1440, 1450, 1460, 1470, 1480, 1490, 1500, 1510, 1520, 1530, 1540, 1550, 1560, 1570, 1580, 1590, 1600, 1610, 1620, 1630, 1640, 1650, 1660, 1670, 1680, 1690, 1700, 1710, 1720, 1730, 1740, 1750, 1760, 1770, 1780, 1790, 1800, 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HOW PROGARM® PROTECTS YOUR TEAM AND EN STANDARDS

Our protective clothing is designed specifically for working in environments where heat, flame, low light, open arc, chemicals or static electricity are all potential hazards.

To ensure our garments protect in these environments, each item is certified and manufactured to a European Standard. These standards ensure that the design, materials used and performance after washing are maintained and reach minimum requirements.

ALWAYS AHEAD OF THE GAME

When new - often more stringent - EN Standards are made available, we ensure our garments are certified to meet or exceed these requirements.

WE'RE HERE TO HELP

Read on for information about the most relevant EN Standards that relate to the garments in our collection, together with some explanatory notes. We've done our best to ensure the information in this section is correct at the time of going to print - May 2021. For the exact wording and terminology of the standard, please refer to the relevant British Standards Institute (BSI) document available to purchase from the BSI or other sellers online.

To discuss the implications of these EN Standards for your business, or for an assessment of your current garments, please get in touch to speak to a specialist in your sector.



RIS-3279-TOM

GO/RT 3279 was a high visibility standard that only applied to the rail industry in the UK, as opposed to the EU-wide nature of other EN Standards. It has now been officially replaced by a new Rail Industry Standard (RIS-3279-TOM) which reproduces the content of GO/RT 3279 in its entirety.

The aim of GO/RT 3279 and the new RIS-3279-TOM is to ensure that rail workers on or near the tracks are sufficiently visible to trains approaching at speed or any other traffic.

Stated in the standard is that: 'The colour specific requirements within this standard conform to the range specified within BS EN 20471 clause 5.1.2.'. In order to confine this to a specific orange colour and to prevent the selection of a colour at the red end of the spectrum, the precise chromaticity co-ordinates for the colour are specified as: Fluorescent orange, X:0.588, Y:0.371, with a luminance factor of at least 0.4. The accepted tolerance in colour is laid out in EN 20471. There is no tolerance for the luminance factor.

Also stipulated in the RIS 3279 standard is the need for retro-reflective materials, with photometric and physical performance aligned with EN 20471.

Mentioned in the RIS 3279 standard is the accepted use of a mini vest where the nature of the work being carried out will not obscure the high visibility clothing, and thus reduce the surface area that is visible. The same applies to company logos; these are permitted where they do not compromise the surface area of background colour, and compensation may have to be made for this.



EN1149-5

PROTECTIVE CLOTHING WITH
ELECTROSTATIC PROPERTIES

ABOUT THIS EN STANDARD

This is the European Standard for garments that protect against electrostatic discharge in areas where there is a risk of explosion (ATEX Environments) such as in petrochemical refineries or when fuel is being delivered.

Annex II art 2.3 of the ATEX Directive 99/92/CE concerning the protection of workers likely to be exposed to the risk of explosive atmospheres says: "Workers must be provided with appropriate working clothing consisting of materials which do not give rise to electrical discharges that can ignite explosive atmospheres." As a consequence, the outer fabrics of these garments are made from antistatic materials and components.

Under the scope of the PPE Manufacturers Directive 89/686/EEC, a series of EN Standards have been developed relating to electrostatic properties. Key parts of these standards that relate to the protective garments we produce are noted here:

EN1149-5 PERFORMANCE REQUIREMENTS

Antistatic PPE is certified to EN1149-5 as this standard covers the performance requirements of the garments and refers to the choice of two different methods (EN1149-1 or EN1149-3).

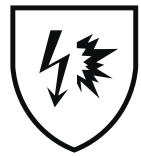
EN1149-1 MEASUREMENTS OF SURFACE RESISTIVITY

This test method is most appropriate for materials for which the electrostatic dissipative behaviour is based on surface conductivity. That is materials containing surface conductive yarns or a homogeneous conductive outside PVC coating layer. This method is not appropriate for core conductive fibres.

EN1149-3 MEASUREMENTS OF CHARGE DECAY

This test method is referenced as the most relevant for materials for which the electrostatic dissipative behaviour is based on core conducting fibres but can also be used for surface conducting materials.

In the EN1149 series there is also EN 1149-2 (measurement of electrical resistance through a material; the vertical resistance) which is also used as a test method in EN ISO 11611 (welders' clothing) and which is also mentioned in Annex H of EN469:2005. A further part of EN1149 is still under development which will cover the testing of the full garment - this part of the standard will be EN1149-4.



EN 61482-2

PROTECTIVE CLOTHING AGAINST THE THERMAL HAZARDS OF ELECTRIC ARC

We produce garments that protect workers against the thermal hazards of an electric arc. Each garment style is carefully designed to offer the maximum protection whilst ensuring comfort and outstanding durability. As arc flash garments come under the requirements of Category 3 Protective Clothing, these garments are manufactured under Module D Quality Control Procedures.

WHAT IS AN ELECTRIC ARC?

Electric arc, and the arc flash created, is an extremely dangerous and perhaps the least understood electrical hazard. They occur as a result of extreme discharges of voltage or electrical current from equipment including switchgear, transformers and heavy electrical equipment. The arc generates a high level of energy for a very short span of time (up to 1 second). The intense heat can create temperatures of more than 19,000°C and it also produces electric shock, extraordinary force and large quantities of thermal radiant energy.

WHAT IS THE RISK?

Anywhere your employees are working with electricity, an arc flash can occur. To ensure adequate protection, you must be able to determine the maximum energy of default circuits in any electrical installation. The risks of an electric arc exposure are significant and potentially fatal through:

- Electrocution
- Extremely high levels of radiant heat
- Secondary fire or explosions (ignition to the surroundings)
- 1st, 2nd or 3rd degree burns – 3rd degree burns cause permanent damage

BS EN 61482-2:2020 PERFORMANCE AND DESIGN REQUIREMENTS

The standard outlines the performance requirements for materials and design requirements for garments, as well as the external marking of garments and other user information that should be made available to wearers. All ProGARM® arc flash protective garments carry prominent external markings to indicate that is the case.

The standard also specifies the requirements and test methods applicable to materials and garments for protective clothing worn by electrical workers to protect them against the thermal hazards of electric arc. There are two main ways to test a garment's ability to protect a worker from the dangers of an arc flash.

BS EN IEC 61482-1-1:2019 'OPEN ARC' TEST METHOD

The 'Open Arc' test method (ATPV test and garment test) replaces IEC 61482-1:2002. The 'Open Arc' test method is the same as the original North American method for measuring the Arc Thermal Performance Value (ATPV), as used in ASTM F1959. Materials or assemblies are given an ELIM, ATPV or EBT value, expressed in kilojoules per square metre (kJ/M2), which can be converted into the familiar Cal/cm².

BS EN 61482-1-2:2014 'BOX ARC' TEST METHOD

The 'Box Arc' test method (Fabric classification and garment test) is based on the original European method described in ENV 50354, with a heat transfer measurement. Materials or assemblies are classified as Class 1 (4 kA) or Class 2 (7kA) (APC 1 or APC 2 if certified to BS EN 61482-2:2020).

During this test, a fabric sample is exposed to an electrical arc produced by a 4kA or 7kA short circuit. In the test, the arc does not last any longer than 500ms. The amount of heat transmitted through the sample is measured during and after the test. On the basis of the resulting data and a Stoll curve, the length of time it would take to cause the onset of 2nd degree burns is determined. Samples are also assessed for after-flaming, hole formation, melting.

GARMENT TESTING AND FABRIC TESTING

It is important to note that not only should the fabric be tested to make sure it conforms to the Standard, but also the complete garment or garment assembly. The garment test is not testing for energetic value but to ensure the garment structure remains intact after the arc exposure and that components such as zips, press studs and buttons are still functional and don't cause further injury to the wearer by melting or heat transfer.

LIMITATIONS OF USE

With arc protection, the environmental conditions and the risks at the working site need to be considered. For example, a test under the standard using a 4kA test current (Class 1) subjects the garment/fabric to an incident energy of 135kJ/m² +/-56 KJ/m² (3.2 +/-1.2 Cal/cm²) over a 500ms exposure at 18-28°C and at 45-75% relative humidity (RH). If the working environment deviates from this temperature/humidity range, the level of protection may be reduced. Exposure to higher incident energies or longer duration arcs may also result in the garment providing insufficient protection. Therefore it's essential to conduct comprehensive risk assessments before live working.

For full body protection, the protective clothing needs to be worn fully fastened and closed and other suitable protective equipment (e.g. helmet with protective face screen, protective gloves and boots) should be used. No garments, such as shirts, undergarments or underwear, should be used which melt under arc exposures – e.g. those made of polyamide, polyester or acrylic fibres. For maximum protection against arc flash exposure, multiple flame-resistant garments should be worn in layers.

REPAIR INSTRUCTIONS

WARNING: tears to arc flash certified garments should not be repaired by the user. A flammable (not flame proof) thread or non-heat-proof element likely to melt would be extremely dangerous in the event of exposure to flame. Should there be any need to repair a garment, please contact us for guidance and safety advice.



EN ISO 11611

PROTECTIVE CLOTHING FOR WELDING AND ALLIED PROCESSES

All of our safety garments are certified in accordance with this EN Standard and are designed to protect workers in welding processes. Parts of this EN Standard are also used in conjunction with the arc flash Standard for which ProGARM® has an enviable reputation for high performance garments.

ABOUT THIS EN STANDARD

Within this EN Standard is a series of tests - the most important of which are described in ISO 6942, ISO 9150, ISO 15025 and EN 1149-2.

ISO 11611 has two classes - if the fabric passes all the tests, it is designated as Class 1. If the fabric also receives a Class 2 rating for the ISO 6942 and ISO 9150 tests, it is designated as Class 2.

CLASS 1 - Lower Hazard Welding Applications.

CLASS 2 - Higher Hazard Welding Applications.

EXPLAINING THE DIFFERENT TESTS

ISO 6942: This is a test method for assessing fabrics and fabric combinations exposed to radiant heat. In this test, a fabric sample is exposed to radiant heat (infrared rays). The temperature on the reverse (unexposed) side of the sample is registered using a calorimeter. The length of time the sample can remain exposed before the temperature on the unexposed side rises by 24°C is measured. This test is also used for EN 531C and has two different classes as follows:

CLASS 1 - Temperature increase occurs after more than 7 seconds.

CLASS 2 - Temperature increase occurs after more than 16 seconds.

ISO 9150: Determines the behaviour of fabrics when exposed to small spatters of molten metal. In this test, droplets of molten metal are spattered on a vertically suspended fabric sample. The number of droplets it takes to cause an increase in temperature of 40°C on the reverse side of the sample is determined. This test also has two classes as follows:

CLASS 1 more than 15 droplets of molten metal.

CLASS 2 more than 25 droplets of molten metal.

ISO 15025: This is the test method for limited flame spread. This test involves applying a flame to a fabric sample for 10 seconds. To pass the test, the after flame and smoulder times, together with the formation of holes, must be within the tolerances set in the standard. This test is also used for EN 531A.

The application of a flame can take place in two ways: in procedure A (leads to Class A1), the flame is applied horizontally (similarly to EN 470 and EN 531) in procedure B (leads to Class A2), the flame is applied laterally.

EN 1149-2: This is a test method for measuring the electrical resistance of a fabric sample and determining whether an electrical charge passes through the sample from the outside to the inside. For further information on this EN Standard please refer to the EN1149 section earlier in this section.

TYPICAL EXAMPLES OF PROCESSES AND WHICH CLASS OF GARMENT MIGHT BE MOST RELEVANT

CRITERIA FOR CHOICE BASED ON THE TYPE OF PROCESS

CLASS 1

Manual welding operations during which small amounts of spatter or droplets of molten metal are formed such as:

- Gas welding
- TIG welding
- MIG welding
- Micro plasma welding
- Soldering brass
- Spot welding
- Shielded electrode MMA welding

CLASS 2

Manual welding operations during which large amounts of spatter or droplets of molten metal are formed such as:

- MMA welding (using alkaline or cellulose electrodes)
- MAG welding (with CO2 or mixed gasses)
- MIG (high-voltage) welding
- Flux-cored arc welding
- Plasma cutting
- Gouging
- Oxygen cutting
- Thermal spraying

CRITERIA FOR CHOICE BASED ON THE TYPE OF WORK

CLASS 1

Operating machines such as:

- Oxygen cutting machines
- Plasma cutting machines
- Resistance pressure welding machines
- Thermal spraying
- Welding tables

CLASS 2

Operating machines such as:

- In enclosed spaces
- When welding/cutting operations require reaching above head height or take place in comparable difficult positions



EN ISO 20471

HIGH VISIBILITY CLOTHING

This international standard specifies the requirements for clothing designed to emphasise the wearer's presence visibly in order to make the wearer more noticeable in hazardous situations during the day and at night (illumination in car headlights). It has replaced EN 471 which has now been withdrawn.

THE CONTENTS OF THIS EN STANDARD

This standard's icon is a safety vest placed adjacent to a number which represents the design classification of the garment. The classification is 1, 2 or 3 where Class 1 provides the minimal level of visibility and class 3 provides the highest level prescribed by the standard.

THE CLASSIFICATION

The classification is derived from the number of square metres of fluorescent fabric and the number of square metres of reflective strip incorporated in a garment.

	CLASS 1	CLASS 2	CLASS 3
FLUORESCENT MATERIAL	0,14	0,50	0,80
REFLECTIVE MATERIAL	0,10	0,13	0,20
COMBINED MATERIAL	0,20		

EN ISO 20471 provides the following guidance on risk factors and selection of clothing:

RISK LEVEL	FACTORS RELATED TO THE RISK LEVEL		RISK LEVEL
	VEHICLE SPEED	TYPE OF ROAD USER	
HIGH RISK ISO 20471 CLASS 3	> 60 km/hr	PASSIVE	High Visibility
HIGH RISK ISO 20471 CLASS 2	≤ 60 km/hr	PASSIVE	
HIGH RISK ISO20471 CLASS 1	≤ 30 km/hr	PASSIVE	

The fluorescent fabric must encircle the torso, sleeves and trouser legs with at least 40%, or the minimum required area, of fluorescent material present on the front of the garment (and on the back of the garment). The reflective strips must be 50mm wide and the space between 2 reflective strips must be at least 50mm. The distance from 'the end' of the garment (e.g. the end of a trouser leg) to the reflective strip must also be at least 50mm. Reflective strips can be positioned in a variety of different ways; Class 3 garments must cover the wearer's torso and have either reflective strips about the sleeves or full length trouser legs.



EN ISO 14116

PROTECTION AGAINST HEAT & FLAME, LIMITED FLAME SPREAD

This standard replaces the withdrawn EN533. While the standard does deal with the issue of flame resistance to some extent, it is arguably more suited to outerwear that would usually be worn over other protective garments. For this reason ProGARM® has opted to meet EN11612 which offers a higher standard of protection.

Clothing manufactured to this standard is made from flame retardant materials so that if the material comes into contact with a flame, it will only continue to burn for a limited amount of time. After removal from the flame, the material will stop burning. Clothing in this category should not be worn to protect against convective heat, radiant heat, molten metal or similar higher risk hazards.

THE CONTENTS OF THIS STANDARD

For fabrics, this standard only has a flame spread test and the test results are given as index values as detailed below. The number of wash cycles and the washing method used to achieve the stated index value are also given under the EN Standard pictogram. E.g. "25H" indicates 25 domestic wash cycles (this can also be indicated as "I" for industrial wash cycles or "C" for chemical cleaning such as Dry Cleaning). The "60" represents the laboratory washing temperature in degrees Celsius. There are also requirements in this standard for the seam strength to be tested and for tests to ensure the flame retardant properties of the garment's seams meet the requirements.

DIFFERENT TESTS, CODES

Index 1: No flaming to the top or side edge, no flaming debris and no afterglow shall spread from the carbonised area to the undamaged area. Hole formation is possible under this index. These fabrics should not be worn next to the skin. An example of a fabric in this category would be an FR polyester which will meet the requirements but will always form a hole.

Index 2: No flaming to the top or side edge, no flaming debris and no afterglow shall spread from the carbonised area to the undamaged area. No hole formation possible with this index. The requirements are the same as index 3 but no maximum afterflame time is specified.

Index 3: Requirements are the same as index 2, but the afterflame time of each individual specimen should not exceed 2 seconds.



EN ISO 11612

CLOTHING TO PROTECT AGAINST HEAT & FLAME

ProGARM® produces garments to protect wearers against heat & flame in accordance with this European Standard. This standard replaces the withdrawn EN531 standard and shows our continuous commitment to offer garments certified to the latest specifications.

ABOUT THIS EN STANDARD

The requirements apply to clothing intended for a wide range of applications which offer limited flame spread and provide protection against various hazards including radiant heat, convective heat and splatters of molten metal. The pictogram is the same as the withdrawn EN531 standard. There are several fabric tests within this EN Standard and the results of the tests are represented by the pre-fix letters A, B, C, D, E and F. A number after these letters indicates the performance of the fabric within this test. If a (0) is shown, then the fabric has not been tested or does not achieve the lowest value attainable with the test.

FABRIC REQUIREMENTS

General Requirement: The mechanical strength and heat resistance at a temperature of 180°C: the material shall not ignite or melt and shall not shrink by more than 5%.

EXPLAINING THE DIFFERENT TESTS AND CODES

LETTER A (EN 15025)

This test consists of applying a flame to a fabric sample for 10 seconds. To pass the test, the afterflame and smoulder times and formation of holes must be within the tolerances within the standard. The application of a flame can take place in two ways:

CODE LETTER A1 SURFACE IGNITION, ISO15025 A

Procedure A (leads to Class A1), the flame is applied horizontally (similarly to EN470 and EN531).

- No specimen shall permit any part of the lowest boundary of any flame to reach the upper or either vertical edges
- No specimen shall give hole formation of 5mm or greater in any direction, except for an inter-lining that is used for specific protection other than heat and flame protection
- No specimen shall give flaming or molten debris
- The mean value of afterflame time shall be < 2s
- The mean value of afterglow time shall be < 2s

CODE LETTER A1 EDGE IGNITION, ISO15025 B

Procedure B (leads to Class A2), the flame is applied laterally.

- No specimen shall permit any part of the lowest boundary of any flame to reach the upper or either vertical edges
- No specimen shall give flaming or molten debris
- The mean value of afterflame time shall be < 2s
- The mean value of afterglow time shall be < 2s

LETTER B (ISO 9151)

Convective Heat: determination of the heat transmission when exposed to flames. The sample is held above the flame and the rise in temperature on the topside of the sample is measured with a calorimeter. The length of time the sample can remain exposed before its temperature rises by 24 °C is determined.

B1: 4 < 10 seconds, B2: 10 < 20 seconds, B3: 21 seconds and longer.

LETTER C (ISO 6942)

Exposure to radiant heat: In this test, a fabric sample is exposed to radiant heat (infrared rays). The temperature on the reverse (unexposed) side of the sample is registered using a calorimeter. Subsequently, the length of time the sample can remain exposed before its temperature rises by 24°C is measured. The test procedure is the same as ISO 11611, but the classification is different:

C1: 7 < 20 seconds, C2: 20 < 50 seconds, C3: 50 < 95 seconds, C4: 95 seconds and longer.

LETTER D AND E (ISO 9185)

D = Aluminium | E = Molten Iron.

Determining the level of protection against spatters of molten metal. A membrane (with similar properties to human skin) is attached to the reverse of the fabric sample sequentially rising quantities of molten metal (aluminium or iron as applicable) are splashed on the sample. The quantity of molten metal which deforms the membrane is determined.

The classification for molten aluminium is:

D1: 100 < 200 grams, D2: 200 < 350 grams, D3: 350 grams and more

The classification for molten iron is:

E1: 60 < 120 grams, E2: 120 < 200 grams, E3: 200 grams and more.

LETTER F (ISO 12127)

This is a new test to establish a value for contact heat.

The classification in this respect:

F1: 5 < 10 seconds, F2: 10 < 15 seconds, F3: 15 seconds and longer.



EN 13034

PROTECTIVE CLOTHING AGAINST LIQUID CHEMICALS

ProGARM® produces garments to protect wearers against liquid chemicals in accordance with this European Standard. These garments are suitable for use in environments where there may be a risk of chemical splashes but where a total chemical barrier is not required - *PB = Partial Body Protection.

The EN 13034 standard specifies the requirements and test methods for Type 6 chemical protection suits for both one-off and multiple use applications. For other related accessories, such as gloves and boots, which are not an integral part of the suit, please refer to the corresponding product standards (see Product Matrix on page 102). Clothing in this category provides limited protection against small splatters or fumes of liquid chemicals. It is usually made of water-repellent, but not completely waterproof materials. Within the ProGARM® range of products this is often achieved by the use of chemical coatings such as Teflon®, which repel the contaminants and in order to preserve these properties within the fabric of the garment, special washing and drying instructions should be adhered to.

ABOUT THIS EN STANDARD

The fabric is tested in various ways to determine its tensile strength and resistance to chemicals. In these tests, four different solutions of chemicals (Sulphuric Acid H₂SO₄ 30%, Sodium Hydroxide NaHO 30%, O-xylene undiluted and 1-butanol undiluted) are applied to a fabric sample and the quantities of liquid that drip off and penetrate the fabric are measured and analysed must be within the tolerances set within the standard.

One finished product (of each quality) must also be analysed in a 'mannequin' test. During this spray test, the wearer must perform 7 movements (these are described in the standard) and the permeability of the garment to liquid chemicals is subsequently determined. The classes attained in the various tests must be clearly listed in the user instructions for the garment.

Where certified to EN 13034 ProGARM® garments are Type 6 garments and must undergo the spray test in order to display the EN pictogram for the standard on the user information and garment Care Label. In some of our garments it should be noted that in some instances the fabric has been tested but the garment and seams have not. In this case, this is clearly marked on the Care Label and the EN pictogram is not shown. Other requirements within the EN 13034 standard include tests for water resistance, tear strength, tensile strength and seam strength. If 2 piece garments are to be worn such as a trouser and jacket combination it is important to ensure that both garments have been certified as a 'set' for the specified level of protection.

If chemicals are splashed onto a garment, the wearer should immediately move away from the affected area and carefully remove the garment, ensuring that the chemicals or liquids do not come into contact with any part of the skin. The garment must then be cleaned and assessed for future use or taken out of use.



EN 342

PROTECTION AGAINST COLD

This EN standard specifies the requirements and test methods for garments and clothing combinations designed to protect the wearer in a cold environment (characterised by a combination of humidity, wind and air temperature lower than -5 °C). The standard does not contain any specific requirements for head, hand or foot protection.

ABOUT THIS EN STANDARD

This standard's pictogram is an ice-crystal placed alongside three figures that represent the insulation (Clo), air permeability (X) and, if applicable, the water vapour resistance (Y) values. The precise meaning of these values is explained below.

THE CLO, X AND Y VALUES

The Clo value indicates a garment's insulation properties and is a measurement of how long a person can work at a specific temperature when wearing this clothing. It is not a specific class, but can be any value. The table below shows the significance of the Clo value.

	LIGHT ACTIVITY 115 W/M ²		AVERAGE ACTIVITY 170 W/M ²	
CLO	8H/°C	1H/°C	8H/°C	1H/°C
2.0	1	-23	-18	-31
2.5	-6	-33	-29	-44
3.0	-13	-43	-39	-57

The X value indicates a garment's air permeability. The X value has 3 classes (1 to 3). Class 1 garments have the highest air permeability and Class 3 the least. The air permeability is a wind proofing measurement, Class 1 is therefore the least windproof and Class 3 the most.

The Y value indicates a garment's water vapour resistance. The Y value also has 3 classes (1 to 3). Class 1 garments have the lowest water vapour resistance and Class 3 garments the highest.

A more recent version (2004) of EN 342 is now available.

The new version has the following values: Icler / Icle, this is the equivalent of the Clo value and two Y values. The first Y value indicates the air permeability; it is assessed in a different way to the old EN 342, but is still given as Class 1 to 3. The second Y value indicates the garment's waterproofing. Clothing that complies with EN 342 does not necessarily have to be waterproof. This value can therefore sometimes be omitted. This value has 2 classes - 1 and 2. Class 1 is the least waterproof and Class 2 the most. If a garment is waterproof, its breathability must also be tested.



EN 14404

KNEE PROTECTION

Personal protective equipment. Knee protectors for work in the kneeling position.

ProGARM® produces safety garments that are certified in accordance with the EN 14404 Type 2 standard. This EN Standard relates to trousers and coveralls which offer kneepad pockets to protect the wearer when kneeling.

ABOUT THIS EN STANDARD

EN 14404 only applies in combination with certified kneepads and a garment that has been assessed. All ProGARM® workwear garments with knee pockets comply with EN 14404 and have been assessed accordingly by a notified body.

The measurements prescribed for kneepads depend on the size of the garment in which they are used. The ProGARM® Gel Foam kneepads is our recommended kneepad for use in our garments to ensure the pad fits the pocket and offers protection for wearers from short to long leg lengths.

There are three properties of knee protectors that are tested - these are Penetration Resistance, Force Distribution and Shock Absorption. Two levels of protection can be provided. The ProGARM® Gel Foam Kneepad has been tested according to and meets the requirements for EN14404 Level 1.

Level 1: This level requires kneepads to provide protection on a surface on which the wearer will not generally risk injury from lying objects more than 1cm high. Penetration resistance of at least 100 N.

Level 2: This level requires kneepads to be able to withstand use under heavy conditions, such as kneeling on stones in mines and quarries. Penetration resistance of at least 250 N.



EN 343

PROTECTIVE AGAINST RAIN

This EN Standard specifies the requirements and test methods for materials and the seams of protective clothing that has been designed to give protection against precipitation (i.e. rain, snow), mist and ground moisture. There is also a separate test EN 14360 for assessing the waterproofness of the complete finished garments but this test is not included in EN 343.

ABOUT THIS EN STANDARD

This standard's icon shows an umbrella placed under two numbers that represent the X and Y values. The X value indicates the waterproofness and the Y value indicates the water vapour permeability (the garment's breathability).

This standard falls within the scope of 'self-certification'. This means that manufacturers are allowed to certify their own products, which therefore do not need to be assessed by an independent notified body. This is because the only risk to the wearer is that he/she might get wet, which is not a life-threatening hazard. If EN 343 is used in combination with other EN Standards the whole combination of standards is assessed by the notified body

THE X AND Y VALUES

The X value indicates the waterproofness of the garment. There are 4 classes with 4 being the highest (i.e. the most waterproof) and 1 is the lowest. A specific quantity of pressurised water is applied to the fabric and the respective Class is derived from the amount of pressure the fabric can withstand.

The Y value indicates the breathability of the fabric/s (all the layers used in the article). There are also 4 classes for breathability with Class 1 being the lowest and Class 4 the highest. Wearing Class 1 garments longer than x minutes is not recommended (the length of time the article may be worn (x) is given in the standard in a table).

PRODUCT MATRIX

	SINGLE COLOUR COLLECTION											SINGLE COLOUR COLLECTION						TWO TONE COLOUR COLLECTION						
																								
	5200 PAGE 20	5202 PAGE 20	5280 PAGE 21	5282 PAGE 21	5630 PAGE 22	5530 PAGE 23	5430 PAGE 24	9931 PAGE 25	5850 PAGE 26	5790 PAGE 26			7638 PAGE 27	7636 PAGE 27	7720 PAGE 28	6100 PAGE 29		6101 PAGE 29	5808 PAGE 32	5816 PAGE 33	5814 PAGE 33	5805 PAGE 34	5815 PAGE 35	5810 PAGE 35
	POLO SHIRT	LADIES' POLO SHIRT	POLO SHIRT	LADIES' POLO SHIRT	SWEATSHIRT	HOODIE	T-SHIRT	SOFTSHELL JACKET	JACKET	LINED FLEECE			TROUSER	LADIES' TROUSER	COMBAT TROUSER	COVERALL		LADIES' COVERALL	JACKET	TROUSER	LADIES' TROUSER	HI-VIS JACKET	HI-VIS TROUSER	LADIES' HI-VIS TROUSER
	NAVY	NAVY	NAVY	NAVY	NAVY	NAVY	NAVY	NAVY	NAVY	NAVY			NAVY	NAVY	NAVY	NAVY OR ORANGE		NAVY	NAVY/ HV YELLOW	NAVY/ HV YELLOW	NAVY/ HV YELLOW	NAVY/ HV YELLOW	NAVY/ HV YELLOW	NAVY/ HV YELLOW
260 GMS	260 GMS	210 GMS	210 GMS	320 GMS	320 GMS	200 GMS	340 GMS	250 GMS	310 GMS + 230 GMS		250 GMS	250 GMS	300 GMS	250 GMS	250 GMS	300 GMS	300 GMS	300 GMS	300 GMS	300 GMS	300 GMS			
<div></div> <div>PROTECTIVE CLOTHING AGAINST THE THERMAL HAZARDS OF ELECTRIC ARC OPEN ARC TEST METHOD CAL RATING</div>	14.2 CAL/CM²	14.2 CAL/CM²	7 CAL/CM²	7 CAL/CM²	14.4 CAL/CM²	13.2 CAL/CM²		28 CAL/CM²	9.5 CAL/CM²	32.3 CAL/CM²		9.5 CAL/CM²	9.5 CAL/CM²	12.8 CAL/CM²	9.5 CAL/CM²	9.5 CAL/CM²	12 CAL/CM²	12 CAL/CM²	12 CAL/CM²	12 CAL/CM²	12 CAL/CM²	12 CAL/CM²		
<div></div> <div>PROTECTIVE CLOTHING AGAINST THE THERMAL HAZARDS OF ELECTRIC ARC BOX TEST METHOD, CLASS 1 OR 2</div>	CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 2	CLASS 1	CLASS 1		CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1			
<div></div> <div>CLOTHING TO PROTECT AGAINST HEAT & FLAME (LETTER 'A' LIMITED FLAME SPREAD, LETTER 'B' CONVECTIVE HEAT, LETTER 'C' RADIANT HEAT, LETTER 'D' MOLTEN ALUMINIUM SPLASH, LETTER 'E' MOLTEN IRON SPLASH, LETTER 'F' CONTACT HEAT)</div>	A1, B1, C1, F1	A1, B1, C1, F1	A1, B1, C1	A1, B1, C1	A1, B1, C1	A1, B1, C1, F1	A1, B1, C1	A1, B1, C1, F1	A1, B1, C1	A1, B1, C1		A1, B1, C1	A1, B1, C1	A1, B1, C1, F1	A1, B1, C1, F1	A1, B1, C1, D1, E1, F1	A1, B1, C1, D1, E1, F1	A1, B1, C1, D1, E1, F1	A1, B1, C1, D1, E1, F1	A1, B1, C1, D1, E1, F1	A1, B1, C1, D1, E1, F1			
<div></div> <div>PROTECTIVE CLOTHING WITH ELECTROSTATIC PROPERTIES</div>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
<div></div> <div>PROTECTIVE CLOTHING FOR WELDING AND ALLIED PROCESSES (CLASS 1 OR 2)</div>									CLASS 1, A1			CLASS 1, A1	CLASS 1, A1		CLASS 1, A1	CLASS 1, A1	CLASS 1, A1	CLASS 1, A1	CLASS 1, A1	CLASS 1, A1	CLASS 1, A1			
<div></div> <div>HIGH VISIBILITY CLOTHING (CLASS 1, 2 OR 3)</div>																			CLASS 2	CLASS 1	CLASS 1			
<div></div> <div>RAIL STANDARD HIGH VISIBILITY 60/RT</div>																								
<div></div> <div>PROTECTION AGAINST RAIN</div>																								
<div></div> <div>PROTECTION AGAINST CHEMICAL LIQUIDS</div>																GARMENT	GARMENT	GARMENT	GARMENT	GARMENT	GARMENT			

PRODUCT MATRIX

TWO TONE COLOUR COLLECTION										HI-VIS YELLOW COLLECTION									
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 7522 PAGE 37										 9930 PAGE 46									
 6458 PAGE 38										 7418 PAGE 47									
 6444 PAGE 39										 7414 PAGE 47									
 6446 PAGE 39										 9750 PAGE 48									
 6460 PAGE 40										 9880 PAGE 49									
 4658 PAGE 40										 7480 PAGE 50									
 5286 PAGE 44										 7482 PAGE 50									
 5287 PAGE 44										 9720 PAGE 51									
HI-VIS COMBAT TROUSER	HI-VIS DUNGAREE	COVERALL	COVERALL	LADIES' COVERALL	COVERALL	COVERALL	POLO SHIRT	LADIES' POLO SHIRT		SWEATSHIRT	SOFTSHELL JACKET	TROUSER	LADIES' TROUSER	WATERPROOF JACKET	WATERPROOF SALOPETTES	COVERALL	LADIES' COVERALL	LIGHTWEIGHT WATERPROOF JACKET	LIGHTWEIGHT WATERPROOF SALOPETTES
NAVY/HV YELLOW	NAVY/HV YELLOW	NAVY/HV YELLOW	NAVY/HV YELLOW	NAVY/HV YELLOW	NAVY/HV YELLOW	NAVY/HV ORANGE	HV YELLOW	HV YELLOW		HV YELLOW	HV YELLOW/NAVY	HV YELLOW	HV YELLOW	HV YELLOW/NAVY	HV YELLOW/NAVY	HV YELLOW	HV YELLOW	HV YELLOW / NAVY	HV YELLOW / NAVY
300 GMS	300 GMS	240 GMS	300 GMS	300 GMS	160 GMS	290GMS + 240 GMS	210 GMS	210 GMS		320 GMS	340 GMS	250 GMS	250 GMS	395 GMS + 200 GMS	395 GMS + 200 GMS	250 GMS	250 GMS	250 GMS + 120 GMS	250 GMS + 120 GMS
 PROTECTIVE CLOTHING AGAINST THE THERMAL HAZARDS OF ELECTRIC ARC OPEN ARC TEST METHOD CAL/RATING	12 CAL/CM²	12 CAL/CM²	9.5 CAL/CM²	12 CAL/CM²	12 CAL/CM²	5 CAL/CM²	8 CAL/CM²			13.2 CAL/CM²	28 CAL/CM²	9.5 CAL/CM²	9.5 CAL/CM²	47 CAL/CM²	47 CAL/CM²	9.5 CAL/CM²	9.5 CAL/CM²	25 CAL/CM²	25 CAL/CM²
 PROTECTIVE CLOTHING AGAINST THE THERMAL HAZARDS OF ELECTRIC ARC BOX TEST METHOD, CLASS 1 OR 2	APC1	APC1	CLASS 1	CLASS 1	CLASS 1	APC 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 2	CLASS 1	CLASS 1	CLASS 2	CLASS 2	CLASS 1	CLASS 1	APC 2	APC 2
 CLOTHING TO PROTECT AGAINST HEAT & FLAME LETTER 'A' LIMITED FLAME SPREAD, LETTER 'B' CONVECTIVE HEAT, LETTER 'C' RADIANT HEAT, LETTER 'D' MOLTEN ALUMINIUM SPLASH, LETTER 'E' MOLTEN IRON SPLASH, LETTER 'F' CONTACT HEAT	A1, B1, C1, F1	A1, B1, C1, F1	A1, B1, C1, F1	A1, B1, C1, D1, E1, F1	A1, B1, C1, D1, E1, F1	A1, B1, C1, F1	A1, B1, C1, F1	A1, B1, C1, F1	A1, B1, C1, F1	A1, B1, C1	A1, B1, C1, F1	A1, B1, C1, E1	A1, B1, C1, E1	A1, B1, C1, D2, E3, F1	A1, B1, C1, D2, E3, F1	A1, B1, C1	A1, B1, C1	A1, B1, C1 D1, E1, F1	A1, B1, C1 D1, E1, F1
 PROTECTIVE CLOTHING WITH ELECTROSTATIC PROPERTIES	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
 PROTECTIVE CLOTHING FOR WELDING AND ALLIED PROCESSES (CLASS 1 OR 2)			CLASS 1, A1	CLASS 1, A1	CLASS 1, A1		CLASS 1, A1					CLASS 1, A1	CLASS 1, A1	CLASS 2, A1	CLASS 2, A1	CLASS 1, A1	CLASS 1, A1	CLASS 1, A1	CLASS 1, A1
 HIGH VISIBILITY CLOTHING (CLASS 1, 2 OR 3)	CLASS 1	CLASS 1	CLASS 3	CLASS 3	CLASS 2	CLASS 3	CLASS 3	CLASS 3	CLASS 3	CLASS 3	CLASS 3	CLASS 2	CLASS 2	CLASS 3	CLASS 2	CLASS 3	CLASS 3	CLASS 3	CLASS 1
 RAIL STANDARD HIGH VISIBILITY GO/RT							ISSUE 1												
 PROTECTION AGAINST RAIN														CLASS 3/3	CLASS 3/3			CLASS 3/3	CLASS 3/3
 PROTECTION AGAINST CHEMICAL LIQUIDS														GARMENT	GARMENT			GARMENT	GARMENT

PRODUCT MATRIX

HI-VIS ORANGE COLLECTION												HI-VIS ORANGE COLLECTION		BASELAYERS COLLECTION									
																							
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	POLO SHIRT	LADIES' POLO SHIRT	SWEATSHIRT	JACKET	TROUSER	LADIES' TROUSER	WATER-PROOF JACKET	WATER-PROOF SALOPETTES	COVERALL	LADIES' COVERALL		LIGHTWEIGHT WATERPROOF JACKET	LIGHTWEIGHT WATERPROOF SALOPETTES	BASELAYER TOP	BASELAYER LEGGINGS	BALACLAVA	SNOOD	HELMET LINER	BOXER BRIEFS	FR BRA	COMPRESSION SOCKS	GENERAL BOOT SOCKS	
	HV ORANGE	HV ORANGE	HV ORANGE	HV ORANGE	HV ORANGE	HV ORANGE	HV ORANGE	HV ORANGE	HV ORANGE	HV ORANGE	HV ORANGE		HV ORANGE	HV ORANGE	NAVY	NAVY	NAVY	NAVY	NAVY	NAVY	BLACK	NAVY	NAVY
	220 GMS	220 GMS	430 GMS	290 GMS	290 GMS	290 GMS	395 GMS + 200 GMS	395 GMS + 200 GMS	290 GMS	290 GMS		250 GMS + 120 GMS	250 GMS + 120 GMS	220 GMS	220 GMS	220 GMS	220 GMS	220 GMS	180 GMS	330 GMS	180 GMS	180 GMS	
 PROTECTIVE CLOTHING AGAINST THE THERMAL HAZARDS OF ELECTRIC ARC OPEN ARC TEST METHOD CAL RATING	6 CAL/CM²	6 CAL/CM²	21.6 CAL/CM²	8 CAL/CM²	8 CAL/CM²	8 CAL/CM²	47 CAL/CM²	47 CAL/CM²	8 CAL/CM²	8 CAL/CM²		25 CAL/CM²	25 CAL/CM²	4.9 CAL/CM²	4.9 CAL/CM²								
 PROTECTIVE CLOTHING AGAINST THE THERMAL HAZARDS OF ELECTRIC ARC BOX TEST METHOD, CLASS 1 OR 2	CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 2	CLASS 2	CLASS 1	CLASS 1		APC 2	APC 2										
 CLOTHING TO PROTECT AGAINST HEAT & FLAME (LETTER 'A' LIMITED FLAME SPREAD, LETTER 'B' CONVECTIVE HEAT, LETTER 'C' RADIANT HEAT, LETTER 'D' MOLTEN ALUMINIUM SPLASH, LETTER 'E' MOLTEN IRON SPLASH, LETTER 'F' CONTACT HEAT)	A1, B1, C1	A1, B1, C1	A1, B1, C1	A1, B1, C1, F1	A1, B1, C1, F1	A1, B1, C1, F1	A1, B1, C1, D2, E3, F1	A1, B1, C1, D2, E3, F1	A1, B1, C1, F1	A1, B1, C1, F1		A1, B1, C1 D1, E1, F1	A1, B1, C1 D1, E1, F1	A1, B1, C1	A1, B1, C1	A1, B1, C1	A1, B1, C1	A1, B1, C1	A1, B1, C1	A1, B1, C1	INDEX 3	INDEX 3	
 PROTECTIVE CLOTHING WITH ELECTROSTATIC PROPERTIES	✓	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓			
 PROTECTIVE CLOTHING FOR WELDING AND ALLIED PROCESSES (CLASS 1 OR 2)				CLASS 1, A1	CLASS 1, A1	CLASS 1, A1	CLASS 2, A1	CLASS 2, A1	CLASS 1, A1	CLASS 1, A1		CLASS 1, A1	CLASS 1, A1										
 HIGH VISIBILITY CLOTHING (CLASS 1, 2 OR 3)	CLASS 3	CLASS 3	CLASS 3	CLASS 3	CLASS 1	CLASS 1	CLASS 3	CLASS 2	CLASS 3	CLASS 3		CLASS 3	CLASS 1										
 RAIL STANDARD HIGH VISIBILITY RIS 3279	ISSUE 1	ISSUE 1	ISSUE 1	ISSUE 1	ISSUE 1	ISSUE 1	ISSUE 1	ISSUE 1	ISSUE 1	ISSUE 1		ISSUE 1	ISSUE 1										
 PROTECTION AGAINST RAIN							CLASS 3/3	CLASS 3/3				CLASS 3/3	CLASS 3/3										
 PROTECTION AGAINST CHEMICAL LIQUIDS							GARMENT	GARMENT				GARMENT	GARMENT										

SIZE GUIDELINES



POLO SHIRTS, T-SHIRTS, SWEATSHIRTS, JACKETS									
UK	XS	S	M	L	XL	2XL	3XL	4XL	5XL
CHEST TO FIT (INCHES)	34-36	36-38	38-41	41-44	44-46	46-50	50-52	52-56	56-58
CHEST TO FIT (CMS)	85-90	90-95	95-102.5	102.5-110	110-115	115-125	125-130	130-140	140-145
EUR	44-46	46-48	48-52	52-56	56-58	58-62	62-64	64-66	66-68
DE	42-44	44-46	46-50	50-54	54-56	56-60	60-62	62-66	66-68
NL	42-44	44-46	46-50	50-54	54-56	56-60	60-62	62-66	66-68

LADIES POLO SHIRTS									
UK	8	10	12	14	16	18	20	22	24
BUST TO FIT (INCHES)	34-36	36-38	38-40	40-42	42-44	44-46	46-48	48-50	50-52
BUST TO FIT (CMS)	85-90	90-95	95-100	100-105	105-110	110-115	115-120	120-125	125-130
EUR	44-46	46-48	48-50	50-54	54-56	56-58	58-60	60-62	62-64
DE	42-44	44-46	46-48	48-52	52-54	54-56	56-58	58-60	60-62
NL	42-44	44-46	46-48	48-52	52-54	54-56	56-58	58-60	60-62

WATERPROOF JACKETS									
UK	XS	S	M	L	XL	2XL	3XL	4XL	5XL
CHEST TO FIT (INCHES)	34-36	36-38	38-41	41-44	44-46	46-50	50-52	52-56	56-58
CHEST TO FIT (CMS)	85-90	90-95	95-102.5	102.5-110	110-115	115-125	125-130	130-140	140-145
EUR	44-46	46-48	48-52	52-56	56-58	58-62	62-64	64-66	66-68
DE	42-44	44-46	46-50	50-54	54-56	56-58	58-60	60-62	62-64
NL	42-44	44-46	46-50	50-54	54-56	56-58	58-60	60-62	62-64

WATERPROOF SALOPETTES									
UK	XS	S	M	L	XL	2XL	3XL	4XL	5XL
WAIST TO FIT (INCHES)	35	37	39	41	43	45	47	49	51
WAIST TO FIT (CMS)	89	94	99	104	109	114	119	124	129
INSIDE LEG TO FIT (INCHES)	32	32	32	32	32	32	32	32	32
INSIDE LEG TO FIT (CMS)	81	81	81	81	81	81	81	81	81
EUR	50R	52R	54R	56R	58R	60R	62R	64R	66R
DE	48	50	52	54	56	58	60	62	64
NL	48R	50R	52R	54R	56R	58R	60R	62R	64R

BASELAYERS									
UK	XS	S	M	L	XL	2XL	3XL	4XL	5XL
CHEST TO FIT (INCHES)	34-36	36-38	38-41	41-44	44-46	46-50	50-52	52-56	56-58
CHEST TO FIT (CMS)	85-90	90-95	95-102.5	102.5-110	110-115	115-125	125-130	130-140	140-145
WAIST TO FIT (INCHES)	26.8	29.9	33.1	36.2	39.4	42.5	45.7	48.8	51.9
WAIST TO FIT (CMS)	68	76	84	92	100	108	116	124	132
BODY LENGTH (CMS)	164-172	164-172	172-180	172-180	180-188	180-188	188-196	188-196	188-196

MENS TROUSERS/DUNGAREES (SHORT)													
UK	30"S	32"S	34"S	35"S	36"S	38"S	40"S	42"S	44"S	46"S	48"S	50"S	52"S
WAIST TO FIT (INCHES)	30	32	34	35	36	38	40	42	44	46	48	50	52
WAIST TO FIT (CMS)	75	80	85	87.5	90	95	100	105	110	115	120	125	130
INSIDE LEG TO FIT (INCHES)	30	30	30	30	30	30	30	30	30	30	30	30	30
INSIDE LEG TO FIT (CMS)	76	76	76	76	76	76	76	76	76	76	76	76	76
EUR	44S	46S	50S	51S	52S	54S	56S	58S	60S	62S	64S	66S	68S
DE	22	23	24	25	26	27	28	29	30	31	32	33	34
NL	42S	44S	48S	49S	50S	52S	54S	56S	58S	60S	62S	64S	66S
SE	D84	D88	D92	D94	D96	D100	D104	D108	D112	D116	D120	D124	D128

MENS TROUSERS/DUNGAREES (REGULAR)													
UK	30"R	32"R	34"R	35"R	36"R	38"R	40"R	42"R	44"R	46"R	48"R	50"R	52"R
WAIST TO FIT (INCHES)	30	32	34	35	36	38	40	42	44	46	48	50	52
WAIST TO FIT (CMS)	75	80	85	87.5	90	95	100	105	110	115	120	125	130
INSIDE LEG TO FIT (INCHES)	32	32	32	32	32	32	32	32	32	32	32	32	32
INSIDE LEG TO FIT (CMS)	81	81	81	81	81	81	81	81	81	81	81	81	81
EUR	44R	46R	50R	51R	52R	54R	56R	58R	60R	62R	64R	66R	68R
DE	44	46	48	50	52	54	56	58	60	62	64	66	68
NL	42R	44R	48R	49R	50R	52R	54R	56R	58R	60R	62R	64R	66R
SE	C44	C46	C50	C51	C52	C54	C56	C58	C60	C62	C64	C66	C68




MENS TROUSERS/DUNGAREES (TALL)													
UK	30" T	32" T	34" T	35" T	36" T	38" T	40" T	42" T	44" T	46" T	48" T	50" T	52" T
WAIST TO FIT (INCHES)	30	32	34	35	36	38	40	42	44	46	48	50	52
WAIST TO FIT (CMS)	75	80	85	87.5	90	95	100	105	110	115	120	125	130
INSIDE LEG TO FIT (INCHES)	34	34	34	34	34	34	34	34	34	34	34	34	34
INSIDE LEG TO FIT (CMS)	86	86	86	86	86	86	86	86	86	86	86	86	86
EUR	44L	46L	50L	51L	52L	54L	56L	58L	60L	62L	64L	66L	68L
DE	90	94	98	102	106	110	114	118	122	126	130	134	138
NL	42L	44L	48L	49L	50L	52L	54L	56L	58L	60L	62L	64L	66L
SE	C144	C146	C150	C151	C152	C154	C156	C158	C160	C162	C164	C166	C168

MENS COVERALLS (SHORT)													
UK	38"S	40"S	42"S	43"S	44"S	46"S	48"S	50"S	52"S	54"S	56"S	58"S	60"S
CHEST TO FIT (INCHES)	36-38	38-40	40-42	42-43	43-44	44-46	46-48	48-50	50-52	52-54	54-56	56-58	58-60
CHEST TO FIT (CMS)	90-95	95-100	100-105	105-107.5	107.5-110	110-115	115-120	120-125	125-130	130-135	135-140	140-145	145-150
INSIDE LEG TO FIT (INCHES)	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5
INSIDE LEG TO FIT (CMS)	75	75	75	75	75	75	75	75	75	75	75	75	75
EUR	48S	50S	54S	55S	56S	58S	60S	62S	64S	66S	68S	70S	72S
DE	24	25	26	27	28	29	30	31	32	-	33	-	34
NL	46S	48S	52S	53S	54S	56S	58S	60S	62S	64S	66S	68S	70S

MENS COVERALLS (REGULAR)													
UK	38"R	40"R	42"R	43"R	44"R	46"R	48"R	50"R	52"R	54"R	56"R	58"R	60"R
CHEST TO FIT (INCHES)	36-38	38-40	40-42	42-43	43-44	44-46	46-48	48-50	50-52	52-54	54-56	56-58	58-60
CHEST TO FIT (CMS)	90-95	95-100	100-105	105-107.5	107.5-110	110-115	115-120	120-125	125-130	130-135	135-140	140-145	145-150
INSIDE LEG TO FIT (INCHES)	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
INSIDE LEG TO FIT (CMS)	80	80	80	80	80	80	80	80	80	80	80	80	80
EUR	48R	50R	54R	55R	56R	58R	60R	62R	64R	66R	68R	70R	72R
DE	48	50	52	54	56	58	60	62	64	65	66	67	68
NL	46R	48R	52R	53R	54R	56R	58R	60R	62R	64R	66R	68R	70R

MENS COVERALLS (TALL)													
UK	38" T	40" T	42" T	43" T	44" T	46" T	48" T	50" T	52" T	54" T	56" T	58" T	60" T
CHEST TO FIT (INCHES)	36-38	38-40	40-42	42-43	43-44	44-46	46-48	48-50	50-52	52-54	54-56	56-58	58-60
CHEST TO FIT (CMS)	90-95	95-100	100-105	105-107.5	107.5-110	110-115	115-120	120-125	125-130	130-135	135-140	140-145	145-150
INSIDE LEG TO FIT (INCHES)	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5
INSIDE LEG TO FIT (CMS)	85	85	85	85	85	85	85	85	85	85	85	85	85
EUR	48L	50L	54L	55L	56L	58L	60L	62L	64L	66L	68L	70L	72L
DE	98	102	106	110	114	118	122	126	130	132	134	136	138
NL	46L	48L	52L	53L	54L	56L	58L	60L	62L	64L	66L	68L	70L

LADIES TROUSERS/DUNGAREES (SHORT)									
UK	8S	10S	12S	14S	16S	18S	20S	22S	24S
WAIST TO FIT (INCHES)	30.7	32.7	34.6	36.6	38.6	40.6	42.5	44.5	46.5
WAIST TO FIT (CMS)	78	83	88	93	98	103	108	113	118
HIPS TO FIT (INCHES)	40.6	42.5	44.5	46.5	48.4	50.4	52.4	54.3	56.3
HIPS TO FIT (CMS)	103	108	113	118	123	128	133	138	143
INSIDE LEG TO FIT (INCHES)	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6
INSIDE LEG TO FIT (CMS)	70	70	70	70	70	70	70	70	70
DE	17	18	19	20	21	22	23	24	25
SE	D17	D18	D19	D20	D21	D22	D23	D24	D25

LADIES TROUSERS/DUNGAREES (REGULAR)									
 UK	8R	10R	12R	14R	16R	18R	20R	22R	24R
WAIST TO FIT (INCHES)	30.7	32.7	34.6	36.6	38.6	40.6	42.5	44.5	46.5
WAIST TO FIT (CMS)	78	83	88	93	98	103	108	113	118
HIPS TO FIT (INCHES)	40.6	42.5	44.5	46.5	48.4	50.4	52.4	54.3	56.3
HIPS TO FIT (CMS)	103	108	113	118	123	128	133	138	143
INSIDE LEG TO FIT (INCHES)	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5
INSIDE LEG TO FIT (CMS)	75	75	75	75	75	75	75	75	75
 DE	34	36	38	40	42	44	46	48	50
 SE	C36	C38	C40	C42	C44	C46	C48	C50	C52

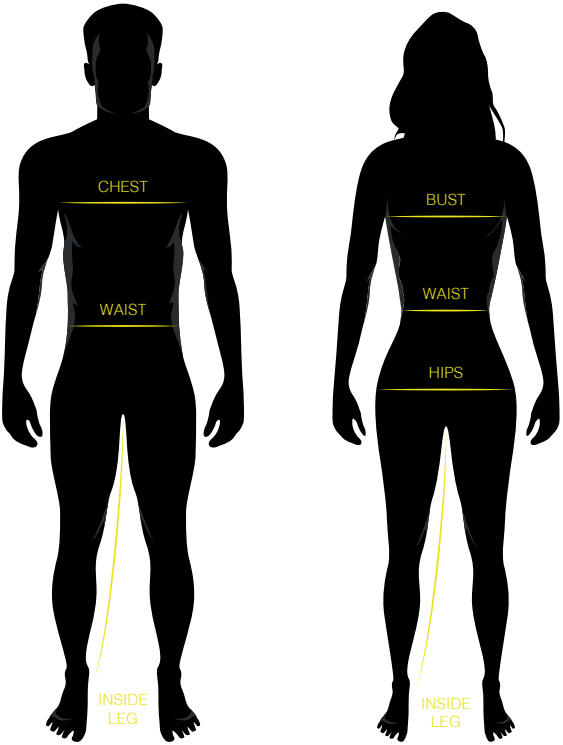
LADIES TROUSERS/DUNGAREES (TALL)									
UK	8T	10T	12T	14T	16T	18T	20T	22T	24T
WAIST TO FIT (INCHES)	30.7	32.7	34.6	36.6	38.6	40.6	42.5	44.5	46.5
WAIST TO FIT (CMS)	78	83	88	93	98	103	108	113	118
HIPS TO FIT (INCHES)	40.6	42.5	44.5	46.5	48.4	50.4	52.4	54.3	56.3
HIPS TO FIT (CMS)	103	108	113	118	123	128	133	138	143
INSIDE LEG TO FIT (INCHES)	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
INSIDE LEG TO FIT (CMS)	80	80	80	80	80	80	80	80	80
DE	68	72	76	80	84	88	92	96	100
SE	C136	C138	C140	C142	C144	C146	C148	C150	C152

LADIES COVERALLS (SHORT)									
UK	8S	10S	12S	14S	16S	18S	20S	22S	24S
BUST TO FIT (INCHES)	34-36	36-38	38-40	40-42	42-44	44-46	46-48	48-50	50-52
BUST TO FIT (CMS)	85-90	90-95	95-100	100-105	105-110	110-115	115-120	120-125	125-130
INSIDE LEG TO FIT (INCHES)	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6
INSIDE LEG TO FIT (CMS)	70	70	70	70	70	70	70	70	70

LADIES COVERALLS (REGULAR)									
UK	8R	10R	12R	14R	16R	18R	20R	22R	24R
BUST TO FIT (INCHES)	34-36	36-38	38-40	40-42	42-44	44-46	46-48	48-50	50-52
BUST TO FIT (CMS)	85-90	90-95	95-100	100-105	105-110	110-115	115-120	120-125	125-130
INSIDE LEG TO FIT (INCHES)	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5
INSIDE LEG TO FIT (CMS)	75	75	75	75	75	75	75	75	75

LADIES COVERALLS (TALL)									
UK	8T	10T	12T	14T	16T	18T	20T	22T	24T
BUST TO FIT (INCHES)	34-36	36-38	38-40	40-42	42-44	44-46	46-48	48-50	50-52
BUST TO FIT (CMS)	85-90	90-95	95-100	100-105	105-110	110-115	115-120	120-125	125-130
INSIDE LEG TO FIT (INCHES)	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
INSIDE LEG TO FIT (CMS)	80	80	80	80	80	80	80	80	80

Note: This size chart was correct at the time of going to print.



HOW TO MEASURE AND PICK THE RIGHT SIZE

Chest / Bust measurement
 Measure the circumference of your chest/bust below the armpit, measure the widest point.
Example 1: if your chest measures 102cm, for polo shirt the most suitable size would be M.
Example 2: if your bust measures 98cm, for ladies' polo shirt the most suitable size would be 12.
 Note: some garments such as Softshell Jackets would have a slim fit and it may be best to pick one size up if you prefer a looser fit.

Waist measurement
 Measure tightly around the waist and pick size accordingly, if your measurements fall in-between two sizes, we recommend picking the larger one, remember to check your inside leg measurement.

Hip measurement
 Measure tightly around the widest part of the hip, also measure the waist and pick size accordingly. If your measurements fall in-between two sizes, we recommend picking the larger one, remember to check your inside leg measurement.

Inside leg measurement
 Measure the distance between crotch and ankle and pick size that is the same or slightly longer than your measurement.

BRANDING AND GARMENT ALTERATIONS



BRANDING

We recommend using flame resistant heat transfers or flame resistant embroidery threads for branding on any of our arc flash and flame resistant garments to ensure compliance with the original CE certification. We also take care when adding branding to hi-vis garments, that large logos don't reduce the surface area of the background material as specified in EN20471 and EN471.



FLAME RESISTANT HEAT TRANSFERS

Heat applied transfers contain a flame resistant component and have been tested and certified to the EN11612 Heat & Flame European Standard. Transfers are easy to apply using an industrial heat press and can be printed in any Pantone® colour for exact replication of your company logo or brand. We can pre-order bulk quantity transfers and apply them to your garments quickly before dispatch.

FR EMBROIDERY THREADS

Standard embroidery threads are usually polyester blends which burn, melt and drip when exposed to flame, so using this type of thread on embroidered designs poses a serious risk. We always use military grade meta-aramid flame resistant threads when applying emblems to any of our garments.

GARMENT ALTERATIONS

All our products are stocked for fast delivery, but we can make alterations providing they don't compromise the conformity of the garment. We can shorten and re-hem trousers or some coveralls for example. For special sizes, or more detailed alterations, please contact our Customer Service Team to discuss how we can help and the typical delivery times and minimum order quantities.