

**ProGARM<sup>®</sup>**  
PROTECTING LIVES

**ARC FLASH &  
FLAME RESISTANT  
GARMENTS**



THORNE &  
**DERRICK**  
INTERNATIONAL

**Thorne & Derrick**  
+44 (0) 191 410 4292  
[www.powerandcables.com](http://www.powerandcables.com)



# 8 GREAT REASONS TO CHOOSE ProGARM®



## SAFETY AND PROTECTION

ProGARM® products have inherent, fire extinguishing properties for the ultimate protection, minimising employee injury in the event of an Arc Flash incident. (see page 7)



## COMFORT

“As comfortable as pyjamas”, our highly breathable and soft garments achieve greater wearer acceptance ensuring they’ll want to wear them every day.



## DESIGN

Innovative features, great adjustability and considered cutting and shaping creates, what we believe are, the most comfortable and functional Arc Flash garments you can buy. (see page 12)



## AVAILABILITY

ProGARM® is committed to maintaining unrivalled stock availability so we can deliver the protective garments you need as soon as possible. Order before 3pm and we will provide next day delivery.



## ACCREDITATION

ProGARM® is Article 11b certified. That means our business and production facilities are audited externally, all products are quality controlled and have full product traceability. Be confident in every product that carries the ProGARM® name to keep your team safe and protected. (see page 5)



## QUALITY AND DURABILITY

All ProGARM® garments are manufactured to the highest standards and carry a LIFETIME SEAM GUARANTEE. They are also tested to be colour-fast to reduce fading and we aim for less than 3% shrinkage. The result is that garments can last as much as 70% longer. (see page 6)



## INNOVATION

What constitutes the ultimate in protection and great comfort today may not be enough tomorrow. ProGARM® is committed to innovating and constantly improving our products to offer better protection and even greater comfort. (see page 11)



## TECHNICAL EXPERTISE AND SUPPORT

Our experienced team offers technical expertise and knowledge across an ever increasing range of industries utilising Flame Resistant, antistatic and Arc Flash protective garments. Providing advice on the right garment solutions for your team, you’ll also see the guarantees we offer and experience our excellent customer support.

# CONTENTS

## PRODUCT PAGES

Single Colour Collection	14
Two Tone Colour Collection	26
Hi Vis Yellow Collection	34
Hi Vis Orange Collection	42
Outer Garment Collection	50
Accessories and Other Garments	58

## INFORMATION PAGES

About ProGARM®	4
EN Standards at a glance	5
ProGARM® Brands	5
ProGARM® Quality	6
ARC Flash Explained	7
ProGARM® Industry Sectors	8
Protection in Layers	9
VXS+ Fabrics	10
ProGARM® Innovations	11
Features and Benefits	12
Product Care	70
ThermSAFE™ Components	72
PPE Directive and Care Labels	73
EN Standards Explained	74
Product EN Standard Matrix	82
Bespoke Products	86
Branding and Garment Alterations	87
Size Chart	88
ProGARM® in Production	89
Notes	90





SAFE CAN ALSO BE COMFORTABLE AND INNOVATIVE

There is no goal more important than the safety of your team. ProGARM® offers garments that deliver the ultimate protection against the risks and hazards your employees encounter every day.

But being safe doesn't mean the garments can't be comfortable and offer what the wearer needs in terms of features, fit and function.

Our mission is to continue to lead the way in both providing the ultimate protection and wearer comfort too. That way you'll be confident in the protective garments you provide to your team, and that they will find them comfortable to wear every day.



CONSTANT INNOVATION

What offers the ultimate protection today, may not be the protection required tomorrow. Similarly, what is the ultimate in wearer comfort today, can also be improved for tomorrow.

ProGARM® is on a never-ending journey of reviewing, improving and innovating to produce garments that not only offer greater protection, but are even more comfortable and function better for the wearer. Each product is the result of extensive in-house development work and listening to the needs of end users. We take these ideas to refine, improve and deliver high quality safety garments available for quick dispatch to you.

Every detail of a ProGARM® garment is considered, from the super soft VXS+ fabric, the zippers, reflective tapes and even the thread we use so we can offer our **LIFETIME SEAM GUARANTEE**.

Some of the largest businesses in the world rely on ProGARM® to deliver the protection and comfort you and your team need, day-in and day-out.

WHAT'S NEW?

Take a look at how our 2016/17 range of products continues to raise the bar in comfort, function and most importantly safety. Exciting innovations this year include:

- Upgraded Hi Vis Orange Collection that meets a higher flame-resistance and higher welding standard - Class 2 EN ISO 111611
- Two new ranges that are fully waterproof to keep you dry and a baselayer range for warmth
- Expanded range of ladies' workwear. Popular trouser styles 5816 and 7638 are now available in ladies' sizes
- New garments such as a new 11cal polo shirt, the 24cal helmet and a softshell jacket jam packed with useful features
- Adjustments to a number of garments to improve sizing and fit. Even more Arc test results and information on our datasheets for products such as our sweatshirts to give you complete peace of mind

EN STANDARDS AT A GLANCE



**BS EN 1149-5**  
Protective clothing –  
Electrostatic Properties  
  
Page: 75



**GO/RT 3279**  
  
**GO/RT 3279**  
Railway Group Standard –  
High Visibility Clothing  
  
Page: 75



**IEC 61482-2**  
Protective clothing  
against the thermal  
hazards of an electric arc  
  
Page: 76



**BS EN ISO 11611**  
Protective clothing  
for use in welding and  
allied processes  
  
Page: 77



**BS EN ISO 20471**  
High visibility clothing  
  
Page: 78



**BS EN ISO 14116**  
Protection against Heat &  
Flame, Limited Flame Spread  
  
Page: 78



**BS EN ISO 11612**  
Clothing to protect  
against heat and flame  
  
Page: 79



**BS EN 13034**  
Protective clothing  
against liquid chemicals  
  
Page: 80



**BS EN 342**  
Protective clothing –  
protection against cold  
  
Page: 80



**BS EN 343**  
Protective clothing –  
protection against rain  
  
Page: 81



**BS EN 14404**  
Personal protective equipment, knee protectors  
for work in the kneeling position  
  
Page: 81

OUR MARQUES CONTINUE TO SET THE STANDARD IN PROTECTIVE GARMENTS:



**VXS+ FABRIC**  
This quality assured fabric provides the ultimate in terms of performance, quality and comfort




**100% INHERENT**  
Our inherent VXS+ fabrics guarantee Flame Resistant protection throughout the lifetime of the garment. With no fabric treatment required there is no reduction in the level of protection as the garment is washed


ThermSAFE™

**ThermSAFE™**  
Arc Flash and Flame Resistant components such as zipper components, stretch reflective tapes and buttons are constantly tested and evaluated


# ProGARM® QUALITY - THE FACTS

**PRODUCT DEVELOPMENT**


We listen carefully to our buyers and wearers, incorporating comments and suggestions into new garment styles and ranges.

**DURABILITY**


All garments are not the same. Take a closer look and see how we construct garments and our garment components to deliver increased garment life.

**UNIQUE ProGARM® DESIGNS**


Developing our own designs means we're constantly innovating and improving. We're also able to accommodate any special design requirements you may have.

**SIZING**


Our range of sizes is one of the widest in the industry. We have garments up to size 60" chest in stock and the ability to create bespoke sizes too. That means you can protect every member of your team with the same great products.

**ISO9001**


ProGARM® is ISO9001 certified, demonstrating our continued commitment to high quality products, efficient manufacturing and an excellent customer experience.

**ARTICLE 11B CERTIFIED**


ProGARM® is Article 11B certified. That means our business and production facilities are audited externally, all products are quality controlled and have full product traceability.

**LIFETIME SEAM GUARANTEE**


ProGARM® garments carry a lifetime guarantee on the structural seams of the garment – another example of our unparalleled commitment to quality and your satisfaction.

**QUALITY MATERIALS**


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

**ARC FLASH CERTIFICATION**


As part of our commitment to continually raise the levels of certification of our products, the majority of our garments are now Arc Flash certified as well as Flame Resistant.

**EUROPEAN PRODUCTION**

ProGARM® produces all the garments within the EU to ensure speed of delivery, quality control and traceability.


**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.

**CONTINUOUS PRODUCT TESTING**

In addition to wearer trials, we also test seams, components and fabrics in laboratory conditions to understand and maximise performance.

# ARC FLASH – IEC 61482 EXPLAINED

**IEC 61482-2: 2009**  
**LIVE WORKING – PROTECTIVE CLOTHING AGAINST THE THERMAL HAZARDS OF AN ELECTRIC ARC.**

**SCOPE**  
(EXTRACT FROM THE INTERNATIONAL STANDARD)

This part of IEC 61482 is applicable to protective clothing used in work if there is 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: 2009 European Standards:

**OPEN ARC TEST METHOD: IEC 61482-1-1**


This test method gives a Calorific Value for each garment - expressed as an ATPV (Arc Thermal Protection Value) or EBT Value (Energy Breakopen Threshold) - 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 (Class 1) or 7kA (Class 2) with Class 2 being a higher level of protection and is established in the European market. Garments in the ProGARM® collection are tested in this way 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.



ATPV Testing on a ProGARM® garment. Before, during and after.

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



# ProGARM® SPECIALIST INDUSTRY EXPERIENCE





**UTILITIES AND POWER GENERATION**

Whether you need protection for your teams in your coal-fired or hydro-electric power station, or for those working with electricity outside of your facilities, rely on ProGARM® for the ultimate in worker protection and to provide a range of clothing with unparalleled comfort.





**INDUSTRIAL ELECTRICAL**

The Health and Safety Executive and the European Union are specifying increasing levels of flame resistance and Arc Flash protection for clothing worn by workers involved in industrial electrical roles.





**PETROCHEMICAL**

Thousands of workers in the petrochemical sector already trust ProGARM® to provide the protection they need day after day.

They know that not only will the inherent VXS+ fabric retain its flame resistance throughout the life of the garment but also that our understanding of their needs creates the most functional and comfortable garments they could ask for.





**RAIL**

The electrification of our railways has exposed rail workers to increased risks from Arc Flash. Our Hi Vis Orange range of products complies with the rail industry's requirements in terms of visibility and Arc Flash.

# IEC 61482 - PROTECTION IN LAYERS

## LAYERED PROTECTION WITH ProGARM®

When Flame Resistant Arc Flash protective garments are worn together or in a layered combination, the PPE provides the wearer with the best 'last line of defence' against an Arc Flash incident.

Our workwear is designed to replace your traditional workwear in order to ensure maximum comfort. It's not heavy or coarse like traditional cotton based workwear but soft and breathable.

Layered garment systems also give total protection values higher than the individual protection values of each garment when added together. As air is a poor conductor of heat, the air gap between the garments acts as an insulator and increases the total calorific value of the garment system.

## ARC RATED CATEGORY CHART BASED ON NFPA 70E 2015

An Arc 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 your employer as the results of their Arc Flash Risk Assessments.

The NFPA identified four Arc risk category levels, which are numbered by severity from 1 to 4 (1 being the lowest and 4 being the highest risk). The Arc Category (ARC) is the level of Arc Flash protection 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.

Each level, 0-4, is rated at a certain amount of flame resistance, measured again in calories/cm².

ARC 1	4 cal MINIMUM CAL RATING	ARC 2	8 cal MINIMUM CAL RATING
ARC 3	25 cal MINIMUM CAL RATING	ARC 4	40 cal MINIMUM CAL RATING

ProGARM®  
5280 POLO SHIRT

ARC 1 7 cal



+

ProGARM®  
5630 SWEATSHIRT

ARC 2 14 cal



=

ARC 3 31 cal



# ABOUT VXS+ FABRICS

## INHERENT OR TREATED FABRICS?

VXS+ Inherent Fabrics give peace of mind and ultimate protection. Unlike chemically treated fabrics, their Flame Resistant properties do not wash out giving protection to the wearer throughout the life of the garment. Other features include improved comfort levels and reduced shrinkage.



## VXS+ IS A HIGH PERFORMANCE AND UNIQUELY BALANCED BLEND OF FIBRES FOR ULTIMATE COMFORT

For many years, wearers of Flame Resistant garments have had the discomfort of heavyweight cotton drill fabrics that are uncomfortable to wear and shrink extensively with washing. With the introduction of ProGARM® VXS+ fabric, wearers can now benefit from:

✓ **INHERENT PROTECTION**

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

✓ **INSTANT EXTINGUISHING PROPERTIES**

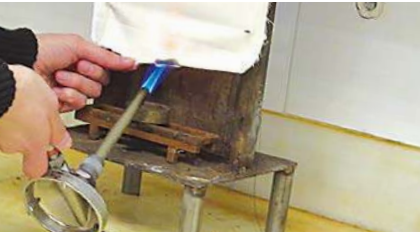
Ultimate protection against Flame and Arc Flash Hazards

✓ **GREAT COMFORT**

Breathable, soft to wear and fantastic to the touch

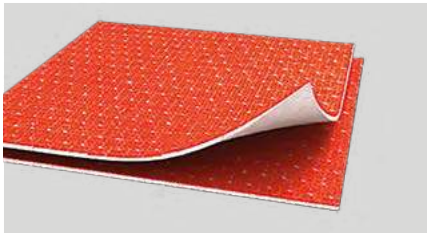
✓ **HIGHLY DURABLE**

Colourfast with less than 3% washing shrinkage



## INSTANT EXTINGUISHING PROPERTIES

The blend and composition of the VXS+ fabrics offer outstanding performance against traditional treated cotton and even more expensive aramid blends of fabrics. Watch the videos on the ProGARM® YouTube channel or request a visit from one of our sales representatives to see how quickly these fabrics instantly extinguish when the ignition source is removed.



## GREAT COMFORT

Using advanced textile technologies we now incorporate the VXS+ blend of fabric into all our garments to increase the comfort for the wearer. By using fibres like Modacrylics, Cotton, Viscose, Carbon and Lycra®, the result is garments wearers want to work in and your assurance of protection at all times.



## HIGHLY DURABLE

Excellent colour fastness and appearance is a key feature of the VXS+ fabric along with low shrinkage levels and minimum pilling. The majority of fabrics have been tested to 50 industrial washes with some of the top performers being subjected to further Tunnel Drying before being retested and passing the Flame Resistant tests 'after washing'. Further tests include colour fastness and strength in the warp and weft.

# ProGARM® INNOVATIONS

## ALWAYS INNOVATING

ProGARM® is on a never-ending journey of reviewing, improving and innovating to produce garments that not only offer greater protection, but are more comfortable and function better for the wearer.

Take a look at some of the more recent innovations you will see in our garments:



### WARM AND DRY

We're excited to be launching two new ranges of ProGARM® garments – a range of waterproofs to keep your team dry and a range of baselayers to keep them warm.

Taking cues from the best in waterproof clothing in consumer markets, our waterproof range is jam-packed with great garment features to make working in the worst of the weather as comfortable as possible. We believe that the right garment cut, and features such as inner cuffs to the jackets, make these garments the leader in protection from the elements as well as the hazards of the job.

Layer up with a ProGARM® baselayer and you are increasing not only your flame resistance and Arc Flash protection but also protecting against the cold. We know that worker comfort is paramount in getting the job done quickly and accurately and yet again ProGARM® innovates to create comfortable and practical garments that your team will want to wear.



### ProGARM® SafetyICON™ MARKING

The SafetyICON™ on each ProGARM® garment provides a quick visual reference to identify the capabilities of the garment and allows you to check whether the correct garments are being worn.

Now available across the range, the new marks feature the EN Standard symbols, which create a quick visual check for safety officers in all kinds of industry sectors.

### MORE LADIES' PRODUCTS

We've continued to support the development of female specific products with the release of further specific ladies' products across a number of ranges. Most exciting is that popular trouser styles 5816 and 7638 are now available in ladies' sizes.



### ThermSAFE™ STRETCH TAPE

A new development by ProGARM®, our ThermSAFE™ tape is used on knitted garments such as polo shirts and sweatshirts. Traditionally heat applied tapes lack flexibility and stretch, changing the nature and characteristics of the fabric to which they have been applied and reducing the range of movement and comfort.

This unique new tape has a new formulation within the reflective material and has been certified to the new EN ISO 20471 High Visibility standard and tested for 50 washes. More product innovation from ProGARM®.

### UPGRADED HI VIS ORANGE COLLECTION

We don't rest on our laurels. Take a look at our upgraded Hi Vis Orange Collection, which now meets a higher flame resistance and higher welding standard - Class 2 EN ISO 111611.



# ProGARM® FEATURES & BENEFITS

**INTERNAL ELASTICATED WAISTBAND**  
Gives improved garment fit for safety and comfort



**ADJUSTABLE VELCRO® CUFFS**  
Allow a close fit for comfort and safety, especially when working with gloves



**ThermSAFE™ PLASTIC ZIPPERS**  
Manufactured from non-spark, military-grade FR nylon 6.6 for safety and garment longevity



**GAS MONITOR LOOP**  
Provides a secure location point for a gas monitor or other portable items




**THREE NEEDLE SEAMS**  
Increase durability and the life of the garment



**INTERNAL KNEEPAD POCKETS**  
Allow kneepads to be added for wearer comfort and protection



**DOUBLE STITCHED REFLECTIVE TAPE**  
Ensures the reflective tapes remain intact and increases the life of the garment



**EASY-STRETCH PANEL**  
Improves the range of movement especially when stretching the arm



**ThermSAFE™ PLASTIC POPPERS**  
Made from high-grade, non-spark, FR plastic for safety and garment longevity



**SafetyICON™ MARKINGS**  
Provide instant visual recognition of garment standards



























# SINGLE COLOUR COLLECTION



// SINGLE COLOUR COLLECTION

	<b>5280 POLO SHIRT</b> PAGE 16 		<b>5200 POLO SHIRT</b> PAGE 17 
	<b>5430 T-SHIRT</b> PAGE 18 		<b>5630 SWEATSHIRT</b> PAGE 19 
	<b>5790 LINED FLEECE JACKET</b> PAGE 20 		<b>5850 JACKET</b> PAGE 21 
	<b>5896 LAB COAT</b> PAGE 22 		<b>6100 COVERALL</b> PAGE 23 
	<b>7638 TROUSER</b> PAGE 24 		<b>7636 LADIES' TROUSER</b> PAGE 25 

For full Product Matrix outlining EN Standards see page 82

**100% INHERENT** 

- ✓ **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 PROPERTIES**  
Ultimate protection against Flame and Arc Flash Hazards




✓ **HIGHLY DURABLE**  
Colourfast with less than 3% washing shrinkage\*  
\*only on certain products



ProGARM® 5280 POLO SHIRT

// SINGLE COLOUR COLLECTION

EN STANDARDS

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

LOI

34.3%
LOI

ARC

ARC
CLASS 1

FABRIC

VXS+
INHERENT

FEATURES AND BENEFITS

- 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
- Rib knit cuffs // Close fit
- Colour matched to other navy ProGARM® garments // Best appearance
- SafetyICON™ on arm // Visual EN Standards icon system



Sizes: S-4XL    Colour: Navy

Fabric specification  
VXS+ Inherent Pique Fabric, Navy - 210gms

Product care: 

SEAM  
GUARANTEE 



Plastic popper fastening and rib tipping on collars



Enclosed fastenings on placket






SafetyICON™ EN Standard identification

ProGARM® 5200 POLO SHIRT

// SINGLE COLOUR COLLECTION

EN STANDARDS

 EN 1149-5: 2008 Pt. 5:2008 Pt. 3:2004 Charge Decay	 IEC 61482-2: 2009 Class 1 ATPV = 11cal/cm²	 EN ISO 11612: 2008 A1, B1, C1
---	--	--

LOI

31.2%
LOI

ARC

ARC
2

FABRIC

VXS+
INHERENT

FEATURES AND BENEFITS

- 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
- Rib knit cuffs // Close fit
- Colour matched to other navy ProGARM® garments // Best appearance
- SafetyICON™ on arm // Visual EN Standards icon system



Sizes: S-4XL    Colour: Navy

Fabric specification:  
VXS+ Inherent Interlock Fabric, Navy - 260gms

Product care: 

SEAM  
GUARANTEE 



Ultra-soft and durable VXS+ fabric



Enclosed fastenings on placket






SafetyICON™ EN Standard identification

ProGARM® 5430 T-SHIRT

// SINGLE COLOUR COLLECTION

EN STANDARDS

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

ARC



FABRIC



FEATURES AND BENEFITS

- Round neck rib knit collar // Traditional design
- VXS+ blend // Natural feel, comfortable and soft
- Breathable // With good moisture management
- Open cuffs // Relaxed fit
- Generous length // Maximum protection
- Colour matched to other navy ProGARM® garments // Best appearance
- SafetyICON™ on arm // Visual EN Standards icon system



Sizes: S-4XL    Colour: Navy

Fabric specification  
VXS+ Inherent Jersey Fabric, Navy - 200gms

Product care: 

SEAM  
GUARANTEE 



Open cuff for casual relaxed fit



Twin needle stitch on neckline






Ultra-soft and durable VXS+ fabric

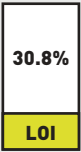
ProGARM® 5630 SWEATSHIRT

// SINGLE COLOUR COLLECTION

EN STANDARDS

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

LOI



ARC



FABRIC



FEATURES AND BENEFITS

- 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
- 5cm stretch rib hem // Best fit around the waist
- Rib knit cuffs // Close fit
- Colour matched to other navy ProGARM® garments // Best appearance
- SafetyICON™ on arm // Visual EN Standards icon system
- Arm pocket // Useful pocket for phone or small items



Sizes: S-4XL    Colour: Navy

Fabric specification:  
VXS+ Inherent Sweat Fabric, Navy - 320gms

Product care: 

SEAM  
GUARANTEE 



VXS+ fabric featuring brushed fleece inner for warmth



Twin needle stitch on neckline



Innovative arm pocket with flap



ProGARM® 5790 LINED FLEECE JACKET

// SINGLE COLOUR COLLECTION

EN STANDARDS

EN 1149-5: 2008

Pl. 5:2008  
Pl. 3:2004  
Charge Decay

IEC 61482-2: 2009

Class 1  
ATPV= 32.3cal/cm²

EN ISO 11612: 2008

A1, B2, C2

ARC

ARC 3

FABRIC

VXS+

INHERENT

FEATURES AND BENEFITS

- Mandarin collar // Maximum neck protection
- Two front pockets with zippers // Secure storage
- Internal pocket // With secure Velcro® tab
- Now fully lined // Extra warmth and protection
- Draw cord waist adjustment with toggles // Close waist fit
- SafetyICON™ on arm // Visual EN Standards icon system
- Elasticated cuff // Close fit around wrist
- ThermSAFE™ plastic FR zipper // CE Certified
- Extended back // Protection when bending over



Sizes: S-4XL    Colour: Navy

**Fabric specification**  
Outer Layer: VXS+ 310F 300g/m² Fleece Inherent Fabric  
Lining: VXS+ 230C 230g/m² Woven Fabric

Product care:

SEAM GUARANTEE



Features elastic cuffs



Side pockets with ThermSAFE™ zip



Drawcord waist adjustment with toggles for better fit

ProGARM® 5850 JACKET

// SINGLE COLOUR COLLECTION

EN STANDARDS

EN 1149-5: 2008

Pl. 5:2008  
Pl. 3:2004  
Charge Decay

IEC 61482-2: 2009

Class 1  
EBT50= 9.5cal/cm²

EN ISO 11612: 2008

A1, B1, C1

EN ISO 11611: 2007

Class 1, A1

LOI

30.6%

LOI

ARC

ARC 2

FABRIC

VXS+

INHERENT

FEATURES AND BENEFITS

- Mandarin collar // Maximum neck protection
- Vertical chest pocket with zipper // Discreet design
- 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 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 wear comfort



Sizes: S-4XL    Colour: Navy

**Fabric specification:**  
VXS+ 250W 250g/m² Woven Inherent Fabric

Product care:

SEAM GUARANTEE



Napoleon style vertical chest pocket with ThermSAFE™ Zipper



SafetyICON™ EN Standard Identification

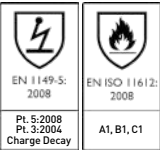


Adjustable waist for improved fit

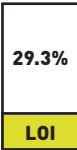
ProGARM® 5896 LAB COAT

// SINGLE COLOUR COLLECTION

EN STANDARDS



LOI



FABRIC



FEATURES AND BENEFITS

Relaxed neck // Traditional design

Double cuff poppers // Adjustable for best fit

Side pleats // Improved fit

ThermSAFE™ plastic FR poppers // CE Certified

Three front pockets // Useful storage space

SafetyICON™ on arm // Visual EN Standards icon system



Sizes: S-4XL Colour: Navy

Fabric specification  
VXS+ 300W 300g/m² Woven Inherent Fabric with FC Finish

Product care:

SEAM  
GUARANTEE



Clear label with batch traceability



Inherent Flame Resistant threads used on all garments

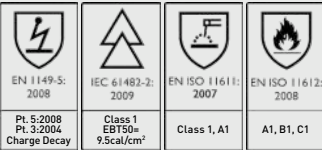


Breast pocket and two side pockets with contrast stitching

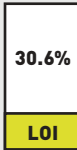
ProGARM® 6100 COVERALL

// SINGLE COLOUR COLLECTION

EN STANDARDS



LOI



ARC



FABRIC



FEATURES AND BENEFITS

Mandarin collar // Maximum neck protection

Kneepad pockets // Wear with kneepads for extra comfort

Chest Pockets with zippers // 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 2Point adjustable waistband // Ensures close fit

Triple stitched side seams // Lifetime quality assurance

Easy-Stretch™ side panels // Maximum wear comfort

Action back // For improved comfort



Also available in Orange

Sizes: S-4XL, Regular leg (31"/80cm)  
M-2XL, Tall leg (33"/85cm)  
Short leg by re-hemming  
Colour: Navy, Orange

Fabric specification:  
VXS+ 250W 250g/m² Woven Inherent Fabric

Product care:

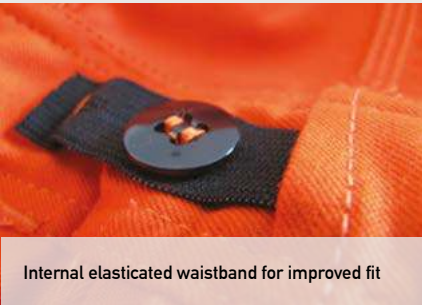
SEAM  
GUARANTEE



Internal kneepad pocket to fit ProGARM® 2240 kneepad



Radio loop on chest pocket







Internal elasticated waistband for improved fit



ProGARM® 7638 TROUSER

// SINGLE COLOUR COLLECTION

EN STANDARDS

 EN 1149-5: 2008 Pt. 5:2008 Pt. 3:2004 Charge Decay	 IEC 61482-2: 2009 Class 1 EBT50= 9.5cal/cm²	 EN ISO 11611: 2007 Class 1, A1	 EN ISO 11612: 2008 A1, B1, C1
--	--	---	--

LOI

30.6%
LOI

ARC

ARC 2
----------

FABRIC


VXS+ INHERENT
------------------

FEATURES AND BENEFITS

- Combat pocket with flap // Safe storage space
- Kneepad pockets // Wear with kneepads for extra comfort
- 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 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



**Sizes:** 30-52" Regular leg (32"/81cm)  
32-44" Tall leg (34"/86cm)  
32-42" Short leg (30"/76cm)  
**Colour:** Navy

**Fabric specification:**  
VXS+ 250W 250g/m² Woven Inherent Fabric  
**Product care:** 

SEAM  
GUARANTEE 



Combat pocket on right leg with SafetyICON™ EN Standard identification



Wide rear belt loop restricts excess belt movement







Triple needle stitch seams for extra longevity

ProGARM® 7636 LADIES' TROUSER

// SINGLE COLOUR COLLECTION

EN STANDARDS

 EN 1149-5: 2008 Pt. 5:2008 Pt. 3:2004 Charge Decay	 IEC 61482-2: 2009 Class 1 EBT50= 9.5cal/cm²	 EN ISO 11611: 2007 Class 1, A1	 EN ISO 11612: 2008 A1, B1, C1
---	--	---	--

LOI

30.6%
LOI

ARC

ARC 2
----------

FABRIC

VXS+ INHERENT
------------------

FEATURES AND BENEFITS

- Combat pocket with flap // Safe storage space
- Kneepad pockets // Wear with kneepads for extra comfort
- 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 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



**Sizes:** 8-24 Regular leg (30"/76cm)  
8-24 Tall leg (32"/81cm)  
**Colour:** Navy

**Fabric specification:**  
VXS+ 250W 250g/m² Woven Inherent Fabric  
**Product care:** 

SEAM  
GUARANTEE 



Triple needle stitch seams for extra longevity



Reinforced crotch panel for increased strength



Wide rear belt loop restricts excess belt movement





## TWO TONE COLOUR COLLECTION

// TWO TONE COLOUR COLLECTION



### 5808 JACKET

PAGE 28



### 5816 TROUSER

PAGE 29



### 5814 LADIES' TROUSER

PAGE 30



### 6458 COVERALL

PAGE 31



### 6444 COVERALL

PAGE 32



### 6446 LADIES' COVERALL

PAGE 33



For full Product Matrix outlining EN Standards see page 82

**100% INHERENT**



#### ✓ INHERENT PROTECTION

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

#### ✓ INSTANT EXTINGUISHING PROPERTIES

Ultimate protection against Flame and Arc Flash Hazards

#### ✓ GREAT COMFORT

Breathable, soft to wear and fantastic to the touch

#### ✓ HIGHLY DURABLE

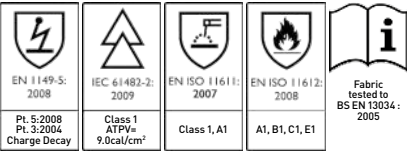
Colourfast with less than 3% washing shrinkage\*  
\*only on certain products



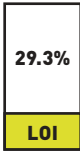
ProGARM® 5808 JACKET

// TWO TONE COLOUR COLLECTION

EN STANDARDS



LOI



ARC



FABRIC



FEATURES AND BENEFITS

- Mandarin collar // Maximum neck protection
- Two front pockets with zippers // 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 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 wear comfort



Sizes: S-4XL    Colour: Navy/Yellow

Fabric specification  
VXS+ 300W 300g/m² Woven Inherent Fabric with FC Finish

Product care:

SEAM  
GUARANTEE



Adjustable waist fastening for improved fit



Double stitched reflective tape on Hi Vis yellow shoulder

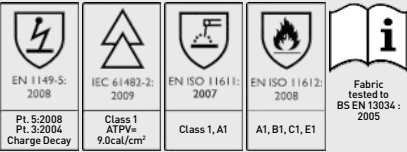


Gas monitor loop on chest

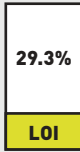
ProGARM® 5816 TROUSER

// TWO TONE COLOUR COLLECTION

EN STANDARDS



LOI



ARC



FABRIC



FEATURES AND BENEFITS

- 5cm FR AS reflective tape // Double stitched for longer life
- Kneepad pockets // Wear with kneepads for extra comfort
- 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 Standards 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



Sizes: 30-52" Regular leg (32"/81cm)  
30-44" Tall leg (34"/86cm)  
32-42" Short leg (30"/76cm)  
Colour: Navy/Yellow

Fabric specification:  
VXS+ 300W 300g/m² Woven Inherent  
Fabric with FC Finish

Product care:

SEAM  
GUARANTEE



Internal kneepad pocket to fit ProGARM® 2240 kneepad



Side pockets with flaps to prevent debris



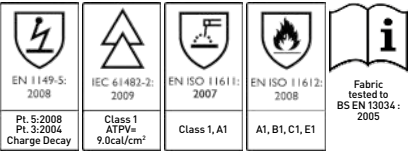
Triple needle stitch seams for extra longevity



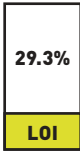
ProGARM® 5814 LADIES' TROUSER

// TWO TONE COLOUR COLLECTION

EN STANDARDS



LOI



ARC



FABRIC



FEATURES AND BENEFITS

5cm FR AS reflective tape // Double stitched for longer life

Kneepad pockets // Wear with kneepads for extra comfort

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 Standards 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



Sizes: 8-24 Regular leg (30"/76cm)  
8-24 Tall leg (32"/81cm)  
Colour: Navy/Yellow

Fabric specification:  
VXS+ 300W 300g/m² Woven Inherent  
Fabric with FC Finish

Product care:

SEAM  
GUARANTEE



Triple needle stitch seams for extra longevity



Wide rear belt loop restricts excess belt movement

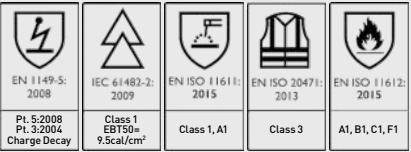


Combat pocket on right leg with SafetyICON™ EN Standards identification

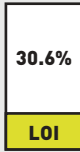
ProGARM® 6458 COVERALL

// TWO TONE COLOUR COLLECTION

EN STANDARDS



LOI



ARC



FABRIC



FEATURES AND BENEFITS

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 Standards 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 2Point adjustable waistband // Ensures close fit

Triple stitched side seams // Lifetime quality assurance

Easy-Stretch™ side panels // Maximum wear comfort



Sizes: S-4XL Regular leg (31"/80cm)  
M-2XL Tall leg (33"/85cm)  
Colour: Navy/Yellow

Fabric specification:  
VXS+ 250W 250g/m² Woven Inherent Fabric

Product care:

SEAM  
GUARANTEE



Internal elasticated waistband for improved fit



Combat pocket on right leg with phone pocket



Vertical chest pockets for use with harnesses



ProGARM® 6444 COVERALL

// TWO TONE COLOUR COLLECTION

EN STANDARDS

EN 1149-5: 2008	IEC 61482-2: 2009	EN ISO 11611: 2007	EN ISO 20471: 2013	EN ISO 11612: 2008	Fabric tested to BS EN 13034: 2005
Pl. 5:2008 Pl. 3:2004 Charge Decay	Class 1 ATPV= 9.0cal/cm²	Class 1, A1	Class 3	A1, B1, C1, E1	

LOI

29.3%
LOI

ARC

ARC 2
-------

FABRIC

VXS+ INHERENT
---------------

FEATURES AND BENEFITS

- Mandarin collar // Maximum neck protection
- Kneepad pockets // Wear with kneepads for extra comfort
- Chest pockets with zippers // 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 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
- Action back // For improved comfort

Sizes: 38–60" Regular leg (31"/80cm)  
40–52" Tall leg (33"/85cm)  
Colour: Navy/Yellow

Fabric specification:  
VXS+ 300W 300g/m² Woven Inherent  
Fabric with FC Finish

Product care:

SEAM GUARANTEE



Features fluid repellent coating on fabric



Adjustable cuff with ThermSAFE™ fastening



Internal elasticated waistband for improved fit

ProGARM® 6446 LADIES' COVERALL

// TWO TONE COLOUR COLLECTION

EN STANDARDS

EN 1149-5: 2008	IEC 61482-2: 2009	EN ISO 11611: 2007	EN ISO 20471: 2013	EN ISO 11612: 2008	Fabric tested to BS EN 13034: 2005
Pl. 5:2008 Pl. 3:2004 Charge Decay	Class 1 ATPV= 9.0cal/cm²	Class 1, A1	Class 3	A1, B1, C1, E1	

LOI

29.3%
LOI

ARC

ARC 2
-------

FABRIC

VXS+ INHERENT
---------------

FEATURES AND BENEFITS

- Mandarin collar // Maximum neck protection
- Kneepad pockets // Wear with kneepads for extra comfort
- Chest pockets with zippers // 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 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
- Action back // For improved comfort

Sizes: 8–18 Regular leg (31"/82cm)  
8–18 Tall leg (34"/86cm)  
Short leg Version by re-hemming  
Colour: Navy/Yellow

Fabric specification:  
VXS+ 300W 300g/m² Woven Inherent  
Fabric with FC Finish

Product care:

SEAM GUARANTEE



Featuring ThermSAFE™ zipper



Gas monitor loop on chest



Adjustable cuff with ThermSAFE™ fastening





# HI VIS YELLOW COLLECTION

// HI VIS YELLOW COLLECTION



## 5286 POLO SHIRT

PAGE 36



## 5626 SWEATSHIRT

PAGE 37



## 9910 SOFTSHELL JACKET

PAGE 38



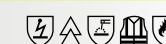
## 7480 COVERALL

PAGE 39



## 7418 TROUSER

PAGE 40



**100%  
INHERENT**



For full Product Matrix outlining EN Standards see page 82

### ✓ 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 PROPERTIES

Ultimate protection against Flame and Arc Flash Hazards

### ✓ HIGHLY DURABLE

Colourfast with less than 3% washing shrinkage\*

\*only on certain products



ProGARM® 5286 POLO SHIRT

// HI VIS YELLOW COLLECTION

EN STANDARDS

EN 1149-5: 2008	IEC 61482-2: 2009	EN ISO 20471: 2013	EN ISO 11612: 2008
Pt. 5:2008 Pt. 3:2004 Charge Decay	Class1	Class 3	A1, B1, C1

ARC



FABRIC



FEATURES AND BENEFITS

- 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 Standards icon system
- 5cm FR AS reflective tape // Heat applied to improve flexibility



Sizes: S-4XL    Colour: HV Yellow

Fabric specification  
VXS+ Inherent Pique Fabric, HV Yellow - 210gms

Product care:

SEAM  
GUARANTEE



Heat applied stretch tape for additional comfort



Stretch cuff for better fit



Enclosed fastenings on placket

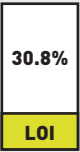
ProGARM® 5626 SWEATSHIRT

// HI VIS YELLOW COLLECTION

EN STANDARDS

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

LOI



ARC



FABRIC



FEATURES AND BENEFITS

- VXS+ blend // Natural feel, comfortable and soft
- Breathable // With good moisture management
- Rib knit cuffs // Close fit
- SafetyICON™ on arm // Visual EN Standards icon system
- 5cm FR AS 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



Sizes: S-4XL    Colour: HV Yellow

Fabric specification:  
VXS+ Inherent Sweat Fabric, HV Yellow - 320gms

Product care:

SEAM  
GUARANTEE



Twin needle stitch on neckline



Ultra-soft and durable VXS+ fabric



Stretch cuff for better fit



ProGARM® 9910 SOFTSHELL JACKET

// HI VIS YELLOW COLLECTION

EN STANDARDS

EN 1149-5: 2008	IEC 61482-2: 2009	EN ISO 20471: 2013	EN ISO 11612: 2008
Pl. 5:2008 Pl. 3:2004 Charge Decay	EBT50= 23cal/cm²	Class 3 Excludes Clause 5.6	A1, B2, C2, F2

LOI

31.0%
LOI

ARC

ARC 2
-------

FABRIC

VXS+ INHERENT
---------------

FEATURES AND BENEFITS

- 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 side // Storage space
- Mandarin collar // Maximum neck protection
- 50mm double stitched reflective tape // Increased durability
- Microfleece lining // Warmth and comfort
- Easy stretch side panels // Wear comfort
- Covered zipped hand pockets // Keeps out debris and keeps contents secure
- Extended back // Protection when bending over
- SafetyICON™ on arm // Visual EN Standards icon system
- ThermSAFE™ plastic FR zipper // CE Certified
- ThermSAFE™ two-way plastic FR zipper // Flexibility



SEAM GUARANTEE

Sizes: S-3XL  
Colour: HV Yellow/Navy

Fabric specification  
VXS+ Inherent Satin Weave fabric with Waterproof Membrane - 405gms

Product care:



Napoleon chest pocket with phone pocket inside



Adjustable cuff with soft cuffing on inside for extra warmth



Adjustable waist strap with ThermSAFE™ hook and loop

ProGARM® 7480 COVERALL

// HI VIS YELLOW COLLECTION

EN STANDARDS

EN 1149-5: 2008	IEC 61482-2: 2009	EN ISO 11611: 2007	EN ISO 20471: 2013	EN ISO 11612: 2008
Pl. 5:2008 Pl. 3:2004 Charge Decay	Class 1 EBT50= 9.5cal/cm²	Class 1, A1	Class 3	A1, B1, C1

LOI

30.6%
LOI

ARC

ARC 2
-------

FABRIC

VXS+ INHERENT
---------------

FEATURES AND BENEFITS

- Mandarin collar // Maximum neck protection
- Kneepad pockets // Wear with kneepads for extra comfort
- 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



SEAM GUARANTEE

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

Colour: HV Yellow

Fabric specification:  
VXS+ HVY250W 250g/m² Woven Inherent Hi-Visibility Fabric

Product care:



Double stitched reflective tape to EN20471 Class 3 pattern



Featuring Flame Resistant ThermSAFE™ hook and loop








Featuring ThermSAFE™ zipper



# ProGARM® 7418 TROUSER

// HI VIS YELLOW COLLECTION

## EN STANDARDS

 EN 1149-5:2008 Pl. 5:2008 Pl. 3:2004 Charge Decay	 IEC 61482-2:2009 Class 1 EBT50=9.5cal/cm²	 EN ISO 11611:2007 Class 1, A1	 EN ISO 20471:2013 Class 2	 EN ISO 11612:2008 A1, B1, C1, E1
--	--	---	---	--

## LOI

30.6%
LOI

## ARC

ARC
2

## FABRIC

VXS+
INHERENT

## FEATURES AND BENEFITS

- Combat pocket with flap // Safe storage space
- Kneepad pockets // Wear with kneepads for extra comfort
- 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 Standards icon system
- Rear pockets with flap // Secure storage space
- Triple stitched side seams // Lifetime quality assurance
- Reinforced crotch // Improved longevity
- 7cm wide reflective tape // Class 2 hi visibility certification
- ThermSAFE™ jeans button // Jeans style fastening

**Sizes:** 30-52" Regular leg (32"/81cm)  
30-44" Tall leg (34"/86cm)  
32-42" Short leg (30"/76cm)  
**Colour:** HV Yellow

**Fabric specification:**  
VXS+ HVY250W 250g/m² Woven Inherent  
Hi-Visibility Fabric

**Product care:**     

**SEAM  
GUARANTEE** 



Combat pocket on right leg with  
SafetyICON™ EN Standard Identification



Triple needle stitch seams for extra longevity



Internal kneepad pocket to fit  
ProGARM® 2240 kneepad

66

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.







# HI VIS ORANGE COLLECTION



// HI VIS ORANGE COLLECTION



## 5290 POLO SHIRT

PAGE 44



## 5648 SWEATSHIRT

PAGE 45



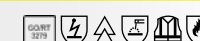
## 4609 JACKET

PAGE 46



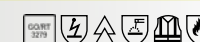
## 4617 TROUSER

PAGE 47



## 4691 COVERALL

PAGE 48



**100%  
INHERENT**



For full Product Matrix outlining EN Standards see page 82

### ✓ 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 PROPERTIES

Ultimate protection against Flame and Arc Flash Hazards

### ✓ HIGHLY DURABLE






Colourfast with less than 3% washing shrinkage\*  
\*only on certain products



ProGARM® 5290 POLO SHIRT

// HI VIS ORANGE COLLECTION

EN STANDARDS

 Compliant	 EN 1149-5: 2008 Pt 5: 2008 Pt 3: 2004 Charge Decay	 IEC 61482-2: 2009	 EN ISO 20471: 2013	 EN ISO 11612: 2008
Issue 8		Class 1	Class 3	A1, B1, C1

ARC

FABRIC

 CLASS 1	 VXS+ INHERENT
--	---

FEATURES AND BENEFITS

- 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 Standards icon system
- 5cm FR AS reflective tape // Heat applied to improve flexibility



Sizes: S-4XL    Colour: HV Orange

Fabric specification  
VXS+ Inherent Pique Fabric, HV Orange - 220gms

Product care: 

SEAM  
GUARANTEE 



SafetyICON™ EN Standard Identification



Contrast Cuffing







Ultra-soft and durable VXS+ Fabric

ProGARM® 5648 SWEATSHIRT

// HI VIS ORANGE COLLECTION

EN STANDARDS

 Compliant	 IEC 61482-2: 2009 EBT50=21.6 Cal/cm² Class 1	 EN ISO 20471: 2013	 EN ISO 11612: 2008
Issue 8		Class 3	A1, B1, C1

LOI

ARC

FABRIC

 30.2%	 ARC 2	 VXS+ INHERENT
LOI		

FEATURES AND BENEFITS

- 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 Standards icon system
- Arm pocket // Useful pocket for phone or small items
- 5cm FR AS reflective tape // Heat applied to improve flexibility



Sizes: S-4XL    Colour: HV Orange

Fabric specification:  
VXS+ Inherent Sweat Fabric, HV Orange - 430gms

Product care: 

SEAM  
GUARANTEE 



Innovative arm pocket with flap



Ultra-soft and durable VXS+ Fabric









Twin needle stitch on neckline



ProGARM® 4609 JACKET

// HI VIS ORANGE COLLECTION

EN STANDARDS

 Compliant	 EN 1149-5: 2008 Pt. 5:2008 Pt. 3:2004 Charge Decay	 IEC 61482-2: 2009 ATPV = 10cal/cm² Class 1	 EN ISO 11611: 2015 Class 2, A1	 EN ISO 20471: 2013 Class 3	 EN ISO 11612: 2015 A2, B1, C1 E2, F1
Issue 8					

LOI

28.7%
LOI

ARC

ARC 2
-------

FABRIC

VXS+ INHERENT
------------------

FEATURES AND BENEFITS

- Mandarin collar // Maximum neck protection
- Vertical chest pocket with zipper // Discreet design
- 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 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



Sizes: S-4XL    Colour: HV Orange

Fabric specification  
VXS+ Inherent Woven Fabric, HV Orange - 360gms

Product care: 

SEAM  
GUARANTEE 



Adjustable waist fastening for improved fit



Action back for improved comfort









Side pockets with flaps to prevent debris

ProGARM® 4617 TROUSER

// HI VIS ORANGE COLLECTION

EN STANDARDS

 Compliant	 EN 1149-5: 2008 Pt. 5:2008 Pt. 3:2004 Charge Decay	 IEC 61482-2: 2009 ATPV = 10cal/cm² Class 1	 EN ISO 11611: 2015 Class 2, A1	 EN ISO 20471: 2013 Class 1	 EN ISO 11612: 2015 A2, B1, C1 E2, F1
Issue 8					

LOI

28.7%
LOI

ARC

ARC 2
-------

FABRIC

VXS+ INHERENT
------------------

FEATURES AND BENEFITS

- Combat pocket with flap // Safe storage space
- Kneepad pockets // Wear with kneepads for extra comfort and safety
- 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 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
- 5cm FR AS reflective tape // Double stitched for longer life



Sizes: 30-54" Regular Leg (32"/81cm)  
30-44" Tall Leg (34"/86cm)  
32-42" Short Leg (30"/76cm)  
Colour: HV Orange

Fabric specification:  
VXS+ Inherent Woven Fabric,  
HV Orange - 360gms

Product care: 

SEAM  
GUARANTEE 



Reinforced crotch panel for increased strength









Internal kneepad pocket to fit  
ProGARM® 2240 kneepad



Combat pocket on right leg with  
SafetyICON™ EN Standard identification



EN STANDARDS

 Compliant	 EN 1149-5:2008 Pt. 5:2008 Pt. 3:2004 Charge Decay	 IEC 61482-2:2009 ATPV = 10cal/cm² Class 1	 EN ISO 11611:2015 Class 2, A1	 EN ISO 20471:2013 Class 3	 EN ISO 11612:2015 A2, B1, C1 E2, F1
---	---	--	---	---	--

LOI

28.7%
LOI

ARC

ARC 2
-------

FABRIC

VXS+ INHERENT
------------------

FEATURES AND BENEFITS

- Mandarin collar // Maximum neck protection
- Kneepad pockets // Wear with kneepads for extra comfort
- Chest pockets // 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 flaps // With entry inside coverall
- ThermSAFE™ plastic FR zippers // CE Certified
- Internal elastic 2Point adjustable waistband // Ensures close fit
- Double stitched side seams // Lifetime quality assurance
- Easy-Stretch™ side panels // Maximum wear comfort

Sizes:

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

Fabric specification:

VXS+ Inherent Woven Fabric,  
HV Orange - 360gms

Colour: HV Orange

Product care:     

SEAM  
GUARANTEE 



GO/RT tape pattern for trackside workers



Double stitched ThermSAFE™ reflective tape for longevity



Internal elasticated waistband for improved fit



66

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!







# OUTER GARMENT COLLECTION



### 4252 JACKET & 4385 WINTER LINER

PAGE 52



### 9750 JACKET & 9751 HELMET HOOD

PAGE 54



### 9440 JACKET & 9441 HELMET HOOD

PAGE 56



### 4280 SALOPETTE

PAGE 53



### 9880 SALOPETTE

PAGE 55



### 9660 SALOPETTE

PAGE 57

For full Product Matrix outlining EN Standards see page 82

**100% INHERENT**

- ✓ **INHERENT PROTECTION**  
Flame Resistant properties last the lifetime of the fabric and do not wash out
- ✓ **INSTANT EXTINGUISHING PROPERTIES**  
Ultimate protection against Flame and Arc Flash Hazards
- ✓ **GREAT COMFORT**  
Breathable, soft to wear and fantastic to the touch
- ✓ **HIGHLY DURABLE**  
Colourfast with less than 3% washing shrinkage\*  
\*only on certain products



ProGARM® 4252 JACKET & 4385 LINER

// OUTER GARMENT COLLECTION

EN STANDARDS

EN 1149-5: 2008	IEC 61482-2: 2009	EN ISO 11611: 2007	EN 471: 2003 A1:2007	EN ISO 11612: 2008	EN 13034 2005	EN 14058	EN 343: 2003 +A1: 2007
Pt. 5:2008 Pt. 3:2004 Charge Decay	Class 2	Class 2, A1	Class 3	A1, B2, C2, F1	Type PB (6) +A1:2009		

ARC FABRIC



FEATURES AND BENEFITS

- Two tone design // Practical and stylish
- Chest pockets with flaps // Generous storage space
- Chunky plastic zippers // For heavy duty use
- Storm flap & Velcro® fastening // Keeps the weather out
- Two side pockets and map pockets // Secure storage
- SafetyICON™ on arm // Visual EN Standards icon system
- Velcro® secured cuff tab // Close fit around wrist or gloves
- Phone pocket on sleeve with flap // Safe and secure
- 5cm FR AS reflective tape // Double stitched for longer life
- Internal pocket // With secure Velcro® tab
- Removable hood with toggle fastening // For close fit



Sizes: S-3XL Colour: HV Yellow/Navy

Fabric specification  
Two layer fabric with waterproof membrane, Hi-Vis Yellow/Navy - 300gms + 250gms

Product care:

Quilted Liner  
Note this item is not necessary to meet the requirements of Class 2 Electric Arc Protection - it is an additional layer for warmth. Please request further information from our sales office.

Sizes: S-3XL Colour: Black



Napoleon style vertical chest pocket under Velcro® fastened storm flap



Three-part hood for close fit with draw cord adjustments



Interactive zipper takes extra winter liner for warmth

ProGARM® 4280 SALOPETTE

// OUTER GARMENT COLLECTION

EN STANDARDS

EN 1149-5: 2008	IEC 61482-2: 2009	EN ISO 11611: 2007	EN ISO 11612: 2008	EN 13034 2005	EN 14058	EN 343: 2003 +A1: 2007
Pt. 5:2008 Pt. 3:2004 Charge Decay	Class 2	Class 2, A1	A1, B2, C2, F1	Type PB (6) +A1:2009		

ARC FABRIC



FEATURES AND BENEFITS

- Shoulder straps with buckles // Fully adjustable
- Phone pocket with flap // Safe and secure
- 5cm FR AS reflective tape // Extra visibility
- Pocket on chest with flaps // Additional storage space
- SafetyICON™ // Visual EN Standards icon system
- Chunky plastic zipper // For heavy duty use



Sizes: S-3XL Colour: Navy

Fabric specification:  
Two layer fabric with waterproof membrane, Navy - 300gms + 250gms

Product care:



Chest pocket with Velcro® fastening flaps



Shoulder straps with adjustable snap-lock connectors



Stitched reflective tape for durability

SEAM GUARANTEE



ProGARM® 9750 JACKET & 9751 HELMET HOOD

EN STANDARDS

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

LOI	ARC	FABRIC
27.0%	ARC 4	VXS+ INHERENT
LOI	47cal/cm²	

FEATURES AND BENEFITS

- Two tone design // Practical and stylish
- Elasticated inner cuffs // Windproofing
- Storm flap // Windproofing
- Taped seams // Waterproof and windproof
- Fully adjustable, fold away hood with Velcro® // Safety and comfort
- Radio loop // Attaching point on left breast
- Inner pockets on right breast // Storage space
- Mandarin collar // Maximum neck protection
- 50mm double stitched reflective tape // Increased durability
- Fully lined // Warmth and comfort
- Easy-stretch side panels // Wear comfort
- Extended back // Protection when bending over
- Covered zipped hand pockets // Keeps out debris and keeps contents secure
- No seams on shoulder // Improved durability as well as comfort whilst wearing a harness
- SafetyICON™ on arm // Visual EN Standards icon system

Sizes: S-4XL  
Colour: HV Yellow/Navy

Product care:

Fabric specification:  
Outer layer : VXS+ Inherent special weave fabric with waterproof membrane - 395gms  
Lining layer : VXS+ Inherent woven fabric - 200gms



9751 HELMET HOOD

To be ordered separately

SEAM GUARANTEE



Velcro® fastening tabs on cuffs and back



Replaceable hood



Napoleon pocket covered behind storm flap

ProGARM® 9880 WATERPROOF TROUSER

// OUTER GARMENT COLLECTION

EN STANDARDS

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

LOI	ARC	FABRIC
27.0%	ARC 4	VXS+ INHERENT
LOI	47cal/cm²	

FEATURES AND BENEFITS

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

Sizes: S-4XL Colour: HV Yellow/Navy

Fabric specification:  
Outer layer: VXS+ Inherent special weave fabric with waterproof membrane - 395gms  
Lining layer: VXS+ Inherent woven fabric - 200gms

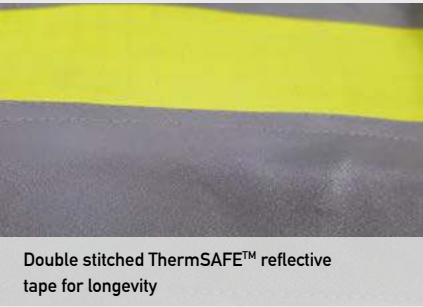
Product care:



SEAM GUARANTEE



Expandable ankle opening with zipper



Double stitched ThermSAFE™ reflective tape for longevity



Removable braces



# ProGARM® 9440 JACKET & 9441 HELMET HOOD

## EN STANDARDS

Compliant	EN 1149-5: 2008	IEC 61482-2: 2009	EN ISO 13034: 2005	EN ISO 11612: 2015	EN ISO 13034: 2005	EN 343: 2003
Issue 8	Pt. 5:2008 Pt. 3:2004 Charge Decay	ATPV= 47cal/cm² Class 2	Class 2, A1	Class 3	A1, B1, C1, D2, E3, F1	Type PB (6) +A1:2009

LOI	ARC	FABRIC
27.0%	ARC 4	VXS+ INHERENT
LOI	47cal/cm²	INHERENT

## FEATURES AND BENEFITS

- Elasticated inner cuffs // Windproofing
- Storm flap // Windproofing
- Taped seams // Waterproof and windproof
- Fully adjustable, fold away hood with Velcro® // Safety and comfort
- Radio loop // Attaching point on left breast
- Inner pockets on right breast // Storage space
- Mandarin collar // Maximum neck protection
- 50mm double stitched reflective tape // Increased durability
- Fully lined // Warmth and comfort
- Easy-stretch side panels // Wear comfort
- Extended back // Protection when bending over
- Covered zipped hand pockets // Keeps out debris and keeps contents secure
- No seams on shoulder // Improved durability as well as comfort whilst wearing a harness
- SafetyICON™ on arm // Visual EN Standards icon system



**Sizes:** S-4XL  
**Colour:** HV Orange

**Product care:**

**Fabric specification:**  
Outer layer : VXS+ Inherent special weave fabric with waterproof membrane - 395gms  
Lining layer : VXS+ Inherent woven fabric - 200gms

**9441 HELMET HOOD**  
To be ordered separately

**SEAM GUARANTEE**



Velcro® fastening tabs on cuffs and back



Replaceable hood



Napoleon pocket covered behind storm flap

# ProGARM® 9660 WATERPROOF TROUSER

// OUTER GARMENT COLLECTION

## EN STANDARDS

Compliant	EN 1149-5: 2008	IEC 61482-2: 2009	EN ISO 13034: 2005	EN ISO 11612: 2015	EN ISO 13034: 2005	EN 343: 2003
Issue 8	Pt. 5:2008 Pt. 3:2004 Charge Decay	ATPV= 47cal/cm² Class 2	Class 2, A1	Class 2	A1, B1, C1, D2, E3, F1	Type PB (6) +A1:2009

LOI	ARC	FABRIC
27.0%	ARC 4	VXS+ INHERENT
LOI	47cal/cm²	INHERENT

## FEATURES AND BENEFITS

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



**Sizes:** S-4XL **Colour:** HV Orange

**Fabric specification:**  
Outer layer : VXS+ Inherent special weave fabric with waterproof membrane - 395gms  
Lining layer : VXS+ Inherent woven fabric - 200gms

**Product care:**

**SEAM GUARANTEE**



Side access pockets with flaps



Expandable ankle opening with zipper



Removable braces





# ACCESSORIES & OTHER GARMENTS



**2240 FR KNEEPADS,  
2000 KIT BAG &  
2678 ARC GLOVES**

PAGE 60



**8210 BASELAYER TOP &  
8220 BASELAYER LEGGINGS**

PAGE 61



**8100 BALACLAVA,  
8300 SNOOD &  
8400 HELMET LINER**

PAGE 62



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

PAGE 63



**2680 ARC CLASS 2 HELMET &  
2669 REPLACEMENT VISOR**

PAGE 64



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

PAGE 65



**2676 EAR MUFFS,  
2664 CHIN STRAP &  
2674 HEAD HARNESS**

PAGE 66



**2662 FRONT SWEATBAND,  
2666 BACK SWEATBAND &  
2670 HEADLIGHT**

PAGE 67



**2682 ZONE EAR DEFENDER ADAPTORS,  
2677 STORAGE BAG & 2672 VISOR CLOTH**

PAGE 68

For full Product Matrix outlining EN Standards see page 82

**100%  
INHERENT**



✓ **INHERENT PROTECTION**

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

✓ **INSTANT EXTINGUISHING PROPERTIES**

Ultimate protection against Flame and Arc Flash Hazards

✓ **GREAT COMFORT**

Breathable, soft to wear and fantastic to the touch

✓ **HIGHLY DURABLE**

Colourfast with less than 3% washing shrinkage\*  
\*only on certain products



ProGARM® 2240 FOAM KNEEPADS

// ACCESSORIES & OTHER GARMENTS

FEATURES AND BENEFITS

EN ISO 11612 Certified // Optimum safety

Notched sides // For maximum flexibility

Excellent breathability // Due to air holes in the foam


High impact absorption // From high grade cellular rubber

Wash tested to ISO 15797, 12 cycles // Perfect stability

EN STANDARDS

EN 14404

EN ISO 11612: 2008




Sizes: W: 145mm x L: 235mm

Colour: Black

ProGARM® 2000 KIT BAG

// ACCESSORIES & OTHER GARMENTS



FEATURES AND BENEFITS

Detachable adjustable shoulder strap // Improved comfort

Zipped front pockets // Secure storage

Zipped main compartment pocket // Secure storage

Internal baseboard // For rigidity

Protective base feet // For longer bag life

34 litre capacity // Large capacity

Sizes: 50cm x 25cm x 25cm (34 litres)

Colour: Black

ProGARM® 2678 ARC GLOVES

// ACCESSORIES & OTHER GARMENTS

FEATURES AND BENEFITS

ARC Rated 50cm² // High Arc Resistant rating

Cut resistant // Level 2 & 3 according to ANSI/ISEA 105 Scale

Flame Resistant // Exceeds industry standards according to ASTM D6413.

Winterised // 100% waterproof/windproof

Leather // 18oz/yd² goatgrain leather

Durability // 5x more durable than traditional driver gloves

EN STANDARDS


EN 388

3.2.4.3

ARC

ARC 4

50cal/cm²



Sizes: L, XL, 2XL

Colour: Tan

ProGARM® 8210 BASELAYER TOP

// ACCESSORIES & OTHER GARMENTS

EN STANDARDS

EN 1149-5: 2008

Pl. 5:2008

Pl. 3:2004

Charge Decay


EN ISO 11612: 2008

A1, B1, C1

FABRIC

VXS+

INHERENT



FEATURES AND BENEFITS

Extra soft fabric // Comfortable to wear

Thumb hole // Extra added hand protection

Extended back // Added protection

Contrast threads // Stylish

L-shaped seams // Wearer comfort

Fully machine washable // Wearer's convenience

Sizes: S-4XL

Colour: Navy

Fabric specification

VXS+ Inherent jersey fabric, Navy - 220gms

Product care:

40

no iron

no bleach

no dry clean

no tumble dry

no steam

no wring

ProGARM® 8220 BASELAYER LEGGINGS

// ACCESSORIES & OTHER GARMENTS

EN STANDARDS

EN 1149-5: 2008

Pl. 5:2008

Pl. 3:2004

Charge Decay

EN ISO 11612: 2008

A1, B1, C1

FABRIC

VXS+

INHERENT



FEATURES AND BENEFITS

Extra soft fabric // Comfortable to wear

Contrast threads // Stylish

Fully machine washable // Wearer's convenience

Sizes: S-4XL

Colour: Navy

Fabric specification:

VXS+ Inherent jersey fabric, Navy - 220gms

Product care:

40

no iron

no bleach

no dry clean

no tumble dry

no steam

no wring

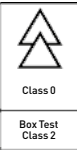






# PROGARM® 2680 ARC CLASS 2 HELMET & 2669 VISOR

IN ACCORDANCE WITH:



- EN397 : 2012+A1:2012
- EN50365 : 2002

## PRODUCT FEATURES

- 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)
- Protection against Molten Metal Splash (MM)
- Protection against Lateral Deformations (LD)
- Protection against electric shock (class 0) 1000V AC, 1500V DC
- Wheel ratchet adjustment
- Adjustable head circumference from 53-63cm
- Two level height adjustment feature
- Short peak
- 4 point webbing harness
- Accessory slot for ear defenders



IN ACCORDANCE WITH:

- PNEN166 : 2001
- GS-ET 29 : 2010

### 2669 REPLACEMENT VISOR

To be ordered separately

**Lifetime:** 4 years  
**Sizes:** One Size  
**Colour:** White (other colours available)



Batch number date stamp on helmet shell



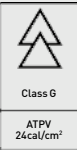
Chin strap fastening with quick release buckle



Ratchet mechanism on rear of helmet

# PROGARM® 2690 ARC 24CAL HELMET & 2667 VISOR

IN ACCORDANCE WITH:



OTHER STANDARDS:

- ANSI/ISEA Z89.1-2014
- ANSI/ISEA Z87.1-2015
- ASTM F2178-12

## PRODUCT FEATURES

- Force transmission after conditioning in temperatures of (-18°C) and (+49°C)
- Apex penetration after conditioning in temperatures of (-18°C) and (+49°C)
- Protection against electric shock (class G)
- Wheel ratchet adjustment
- Two level height adjustment feature
- Short peak
- 4 point webbing harness
- Accessory slot for ear defenders



### 2667 REPLACEMENT VISOR

To be ordered separately

**Lifetime:** 4 years  
**Sizes:** One Size  
**Colour:** White (other colours available)



Batch number date stamp on helmet shell



Chin strap fastening with quick release buckle



Ratchet mechanism on rear of helmet



# ProGARM® 2676 EAR MUFFS

// ACCESSORIES & OTHER GARMENTS

## PRODUCT DESCRIPTION

Fit adjustable ear muffs for attachment to the ProGARM® helmets, soft PVC cushions. SNR: 23dB. CE EN 352-3 Certified.



# ProGARM® 2674 HEAD HARNESS

// ACCESSORIES & OTHER GARMENTS



## PRODUCT DESCRIPTION

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

# ProGARM® 2664 CHIN STRAP

// ACCESSORIES & OTHER GARMENTS

## PRODUCT DESCRIPTION

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



# ProGARM® 2662 FRONT SWEATBAND

// ACCESSORIES & OTHER GARMENTS

## PRODUCT DESCRIPTION

Replacement soft velour and foam sweatband for comfort and moisture absorption, Velcro® fastening.



# ProGARM® 2666 BACK SWEATBAND

// ACCESSORIES & OTHER GARMENTS

## PRODUCT DESCRIPTION

Replacement soft velour and foam sweatband for comfort and moisture absorption, Velcro® fastening.



# ProGARM® 2670 HEADLIGHT

// ACCESSORIES & OTHER GARMENTS

## PRODUCT DESCRIPTION

LED headlight with super bright white LEDs powered by 3 x AAA batteries (not included). Vertically adjustable beam, easily and stably mounted on the helmet by elastic strap and Velcro® fastening.





# ProGARM® 2682 ZONE EAR DEFENDER ADAPTORS

## PRODUCT DESCRIPTION

Adaptors to fit the popular zone ear defenders to the Arc helmets.



# ProGARM® 2677 STORAGE BAG

// ACCESSORIES & OTHER GARMENTS



## PRODUCT DESCRIPTION

Storage bag to transport and protect ProGARM® helmet and other accessories.

# ProGARM® 2672 VISOR CLOTH

// ACCESSORIES & OTHER GARMENTS

## PRODUCT DESCRIPTION

Replacement soft cotton cloth for cleaning ProGARM® visors.



66

THE ProGARM®  
FR GARMENTS ARE  
OUTSTANDING -  
WE HAVE WASHED  
THEM 50 TIMES  
INCLUDING PUTTING  
THEM THROUGH THE  
TUMBLE DRYER AND  
SHRINKAGE IS LESS  
THAN 3% AS STATED!





# LAUNDRY OF ProGARM® VXS+ GARMENTS

## TRIED AND TESTED

NOT ALL FABRICS ARE ALIKE... SPECIFY ProGARM® VXS+ FABRIC

Ensuring that garments perform wash after wash is an essential part of the criteria when developing a new product, and our garments have undergone wash trials at several commercial laundry companies on behalf of end-user requirements. The wash characteristics of the fabric is of key importance with particular emphasis on colour fastness, tear and tensile strengths, pilling resistance and dimensional change (shrinkage).

Our top selling fabric has been certified to EN11612 after 50 industrial wash cycles at 75°C and tunnel drying at 150°C for 5 minutes according to ISO 15797:2004.

In addition to this, the detail of each garment is key and with this in mind, we use branded reflective tapes and components from names including Velcro® and ThermSAFE™. All test reports on our garments are performed after defined wash cycles in accordance with the EN Standard, and in the case of some of our ThermSAFE™ reflective tapes, the testing is performed after 50 industrial wash cycles and drying procedures.

If you intend to commercially wash these garments, we are happy to discuss this with your laundry partner that the quality, benefits and flexibility of wearing ProGARM® Flame Resistant garments can be fully realised.

# ALL ABOUT WASHING

## DURABILITY

ProGARM® VXS+ Fabrics maintain excellent colour fastness and appearance even after multiple washes.

Extensive product trials have been carried out with various end users and laundry companies to clearly demonstrate the quality and superiority of the ProGARM® garments and the VXS+ Fabric blends when compared against other products and fabrics in the market.

Many aramid fabrics are sensitive to high pH values in detergents and as such they are more susceptible to colour change during the industrial laundry process. However, the dye processes of the VXS+ blends allow for optimum wash performance in addition to low shrinkage and quick-dry properties.

## 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 in domestic machinery. Considerations are made 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.

ProGARM® garments meet this standard as a minimum with many fabrics and accessories within our collection also tested to the Industrial Wash standard EN ISO15797.

**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. Considerations are made for use of industrial washing machinery, larger wash loads, more demanding wash detergents, 8 washing procedures (with hotter and tougher temperatures) and for 2 drying procedures including tunnel drying with temperatures up to 160°C.

Some fabrics and accessories within the ProGARM® product range have been tested to this standard for industrial washing in accordance with the correct procedures. For further details, please discuss with your ProGARM® representative.

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.



## INDEPENDENT LAB TESTING

All fabrics within the ProGARM® VXS+ range are extensively tested before being released to market and as part of the requirements to achieve EN certification. These tests include pilling, abrasion, tear, tensile, colour retention, wash performance and weight in addition to the flame performance tests that are required. As a further step we also test garments and fabrics on the market to ensure that the ProGARM® products remain at the cutting edge.



# ThermSAFE™ COMPONENTS

## HIGH QUALITY CERTIFIED COMPONENTS

Every component within a ProGARM® garment is carefully selected and tested to ensure that the performance of the finished garment is not affected by an inferior component. The ThermSAFE™ brand of components gives you confidence that we have tested and approved each item for use in Flame Resistant garments and in the heavy work environments and washing cycles it will undergo during its lifetime.



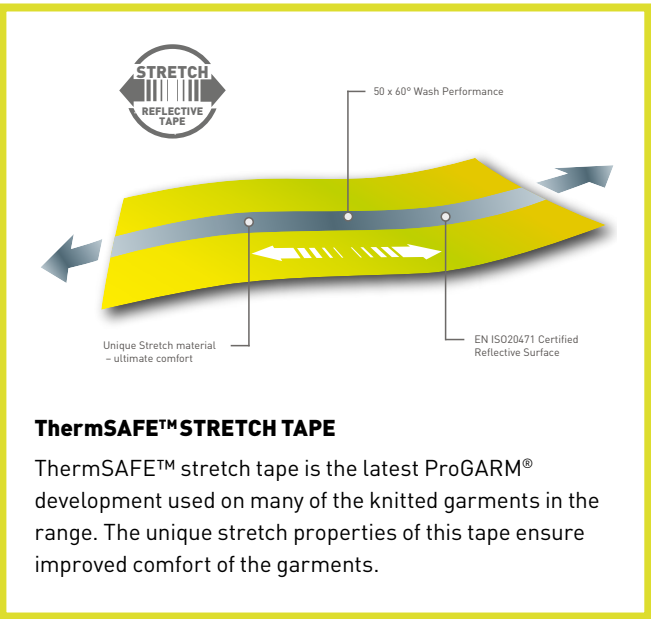
### ThermSAFE™ ZIPPERS

Our plastic Military-Grade zippers feature 6mm moulded plastic teeth using FR Nylon 6.6 grade material for heat resistance for 5 minutes at 185°C according to ISO17493. The permanent FR polyester tape also meets the same FR requirements.



### ThermSAFE™ FR REFLECTIVE TAPE

Our most popular tape is tested to 50 x 60° washes and performs well in industrial washing environments. (We also offer an industrial wash tape tested to higher standards of washing and drying cycles should this be required in any garments).



### ThermSAFE™ STRETCH TAPE

ThermSAFE™ stretch tape is the latest ProGARM® development used on many of the knitted garments in the range. The unique stretch properties of this tape ensure improved comfort of the garments.



### ThermSAFE™ POPPERS

These plastic poppers are made using a special blend of polymers to ensure that they do not fail to function after exposure to heat. We have independently tested this unique popper and now feature it on the majority of our coveralls and jackets.



### ThermSAFE™ JEANS BUTTON

This jeans button is made using a special blend of polymers to ensure that it does not fail to function after exposure to heat. We have independently tested this unique button and now feature it on the majority of our workwear trousers.



### ThermSAFE™ THREAD

Some Flame Resistant garment manufacturers of Arc Flash protective garments use non-aramid threads in their main structural seams. With ThermSAFE™ aramid threads will not melt below 265°C offering you maximum protection.



### ThermSAFE™ VELCRO®

We only use genuine Velcro® in our garments for maximum performance and 'grab'! This special Velcro® is also Flame Resistant and in laboratory trials has been tested to not present any danger in antistatic environments.

# PPE DIRECTIVE AND CARE LABELS

Personal Protective Equipment (PPE) is equipment that protects the wearer against one or more health or safety risks in the work environment. In order to sell PPE in the EU, it must comply with the European Directive that regulates PPE products 89/686/EEC. This directive regulates requirements concerning the function, marking, technical documentation and also the CE marking process.

In accordance with the directive, PPE is divided into three categories as follows:

### CATEGORY 1

Protective equipment of simple design where the user can assess the protection level. This PPE does not require certification by an external body.

### CATEGORY 2

Protective equipment that is neither simple nor complex and protects against medium risks.

This PPE requires assessment by an external body but is not subject to an EC quality assurance system.

### CATEGORY 3

Protective equipment of complex design that protects the wearer against dangers to life or serious permanent injury, where the user cannot detect the risk in time. This PPE must be certified by an external inspection body and is subject to an EC quality assurance system. Items in this category carry a 4 digit number after the CE marking, which indicates the independent body regularly checks the PPE for continuous conformity.

Protective equipment in categories 2 and 3 are Type Approved by a notified body and adapted to the majority of different harmonised standards. In order to sell PPE products, they must be CE marked. The CE mark means that a product is Type Approved and complies with the requirements that have been set for PPE in the Directive 89/686/EEC and therefore can be sold in all EU and ESS countries. All of ProGARM®'s PPE products comply with the requirements that are set in accordance with the directive.

### PLEASE NOTE

Any garment correctly certified and CE marked should display the relevant symbol for the standards. Some manufacturers claim that the garment meets the requirements but only the fabric and not the complete garment may be certified. This is clear by the Care Label of the garment which will not show the EN symbol but may simply note in text the standard to which the fabric conforms.

All ProGARM® garments are fully certified to the standards for which we claim and a sample Care Label is shown below.

Style Number

CE Marking

EN Standards to which the garment meets

Wash Care Instructions

Fabric Compositions

Clear Washing Care Symbols

Batch Number For Traceability

Garment Edition Number

ProGARM®

SIZE M

98-102

174-178

CL-Version 1 Edition 1 Made in EU

CE0339 9750

EN ISO 11611: 2015 Class 2, A1

EN ISO 11612: 2015 A1, B1, C1, D2, E3, F1

EN 1149-5: 2008 Pt 5:2008 Pt 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

EN 13034:2005 +A1:2009 Type 6

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 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.

Wash Instructions:

60°

S1\_6101/6104

Care Label in each garment showing clearly to which standards the garment is certified



# EN STANDARDS



## EN STANDARDS AND PROTECTION OVERVIEW

The protective clothing produced under the ProGARM® brand is designed specifically for working in environments where heat, flame, low light, open arc, chemicals or static are all hazards that may be encountered.

In order to ensure that the garments protect in these environments, each article is certificated and produced in accordance with a European Standard. The requirements of these standards ensure that the design, materials used and performance after washing are maintained and reach the minimum requirements.

When new EN Standards become available, through a policy of continuous improvement, ProGARM® ensures that garments are certified to the most recent standard. An example of this is the EN ISO11612 standard which superseded EN531, the previous standard for Heat & Flame Protection. The new EN Standard checks the garment design requirements along with more stringent testing procedures for fabrics and garments ensure that a vastly superior level of protection is offered to the wearer.

Not only do ProGARM® garments meet these requirements but in many cases they exceed what is required.

We have listed here the most popular EN Standards that relate to the garments we offer in our collection, with simple explanations. For the actual standard terminology, the relevant BSI document should be referred to and these are available for purchase from BSI British Standards Institute <http://shop.bsigroup.com> or other similar websites.

For further information on EN Standards and an explanation of how these fit into your work environments, or for an assessment of your current garments, please contact our Sales Office on 01482 679600.

## LIMITING OXYGEN INDEX (LOI)

Limiting Oxygen Index (LOI) can have a great impact on the capabilities of a fabric and garment, it is good to have an understanding of how it impacts the Flame Resistant and Arc properties of a fabric.

Our fabrics use a self-extinguishing fibre; which means when it comes into contact with an ignition source it emits an inert gas which pushes oxygen away and thus prevents the continuation of flaming and spread of any fire. The fabric works in a way similar to a fire extinguisher by removing one of the three elements vital for fire, in this case oxygen, and thus removes the ignition source. This mechanism is instantaneous and stops as soon as the flame is no longer present.

This powerful Flame Resistant mechanism can be illustrated further by studying Limiting Oxygen Index (LOI). LOI is the amount of oxygen you need in an atmosphere for a material to ignite. In our atmosphere there is 21% oxygen, so anything which has an LOI of less than 21 will burn readily, such as cotton which has an LOI of 17.



## UK GO/RT 3279 ISSUE 8

**WHAT IS GO/RT 3279?**

GO/RT 3279 is a high visibility standard that only applies to the rail industry in the UK, as opposed to the EU-Wide nature of other EN Standards. The aim is to ensure that rail workers on or near the trackside 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. However, there is no tolerance for the luminance factor.

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

Mentioned in the GO/RT 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 petrochemical refineries and fuel distribution companies.

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". The outer fabric of these garments are therefore 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. We note the key parts of these standards as follows that relate to the protective garments that ProGARM® produces.

**EN 1149-5 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 2 different test methods (EN1149-1 or EN1149-3).

**EN 1149-1 MEASUREMENTS OF SURFACE RESISTIVITY**

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

**EN 1149-3 MEASUREMENTS OF SURFACE RESISTIVITY**

This test method is referenced 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 an EN1149-2 (measurement of the electrical resistance through a material; the vertical resistance) which is used as a test method in EN ISO 11611 (welders clothing) and which is also mentioned in Annex H of EN 469:2005. A further part of EN1149 is under development which will cover the testing of the full garment - this part of the standard is EN1149-4.





## IEC 61482-2

### PROTECTIVE CLOTHING AGAINST THE THERMAL HAZARDS OF AN ELECTRIC ARC

ProGARM® produces safety 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 Article 11B Quality Control Procedures.

#### WHAT IS AN ELECTRIC ARC?

Electric Arc and the Arc Flash created is an extremely dangerous and the least understood hazard of electricity. It occurs 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 as high as 19,000°C and it also produces electric shock, force and large quantities of thermal radiant energy.

#### WHAT IS THE RISK?

In any situation where your employees are working with electricity, an Arc Flash can occur and as such the maximum energy of default circuits in any electrical installation must be able to be determined. The risks of an electric arc exposure are:

- Electrocution – potentially fatal
- 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

#### IEC 61482-2:2009 PERFORMANCE & DESIGN REQUIREMENTS

Performance requirements for materials and design requirements for garments, plus marking and user information.

This part of IEC 61482 is applicable to protective clothing used in work if there is an electric arc hazard. This standard specifies 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 based on relevant general properties of the textiles, tested with selected textile test methods, and one of the Test Methods as defined below.

#### IEC 61482-1-1:2009 ‘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 ATPV value, expressed in kilojoules per square metre (kJ/m²), which can be converted into the familiar cal/cm².

#### IEC 61482-1-2:2007 ‘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). During this test, a fabric sample is exposed to an electric 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 second-degree burns is subsequently determined. Samples are also assessed for after-flaming, hole formation, melting, etc.

#### GARMENT TESTING & FABRIC TESTING

It is important to note that not only the fabric should be tested for conformance to the Arc Flash Standard, but also the complete garment or garment assembly itself. The garment test is not testing for energetic value but is testing to ensure that the garment structure remains intact after the arc exposure and that components such as zippers and buttons are still functional and do not contribute 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 shall be regarded. For example a test under the standard using a 4kA test current (Class 1) subjects the garment/ fabric to an incident energy of 135 kJ/m2 ± 56 kJ/m2 (3.2 ± 1.2 cal/cm2) over a 500ms exposure at 18-28°C at 45-75% 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 result in the garment providing insufficient protection. Therefore risk assessments should be conducted prior to live working.

For full body protection, the protective clothing shall be worn in the closed state and other suitable protective equipment (e.g. helmet with protective face screen, protective gloves and footwear (boots) shall be used. No garments such as shirts, undergarments or underwear should be used which melt under arc exposures - e.g. made of polyamide, polyester or acryl fibres. For maximum protection against Arc Flash Exposure garments should be worn as part of a layering system i.e. in conjunction with a shirt or other undergarment.

#### REPAIR INSTRUCTIONS

Warning: tears to Arc Flash certified garments should not be repaired by the user; a flammable (not flameproof) thread or heat reactivatable piece likely to melt would be very dangerous in the event of exposure to flame. Should there be any need to repair a garment, please contact ProGARM® for details on how this is best undertaken.



## EN ISO 11611

### PROTECTIVE CLOTHING FOR WELDING AND ALLIED PROCESSES

ProGARM® produces safety garments that 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 built 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 and if the fabric 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. Subsequently, the length of time the sample can remain exposed before its temperature 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 > 7 seconds

**CLASS 2** - Temperature increase occurs after > 16 seconds.

## TYPICAL EXAMPLES OF PROCESSES VERSUS CLASS OF CLOTHING

#### CRITERIA FOR CHOICE ON THE BASIS OF THE TYPE OF PROCESS

##### CLASS 1

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

- 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, e.g:

- 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

**ISO 9150:** Determining 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** > 15 droplets of molten metal

**CLASS 2** > 25 droplets of molten metal.

**ISO 15025:** Test method for limited flame spread. The test consists of applying a flame to a fabric sample for 10 seconds. To pass the test, the after flame and smoulder times and 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.

#### CRITERIA FOR CHOICE ON THE BASIS OF THE TYPE OF WORK

##### CLASS 1

Operating machines, e.g:

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

##### CLASS 2

Operating machines, e.g:

- 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 ISO 20471 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 50 mm wide and the space between 2 reflective strips must be at least 50 mm. 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

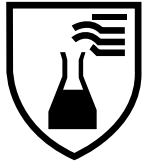
Determining the level of protection against splatters of molten metal. A membrane (with similar properties to human skin) is attached to the reverse of the fabric sample sequentially rising quantities of molten metal (aluminium or iron as applicable) are splashed on the sample. The quantity of molten 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 82). 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.

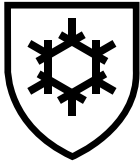
ABOUT THIS EN STANDARD

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%, 0-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.

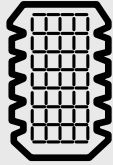
	LIGHT ACTIVITY 115 W/M²		AVERAGE ACTIVITY 170 W/M²	
CLO	8H/°C	1H/°C	8H/°C	1H/°C
2.0	1	-23	-18	-31
2.5	-6	-33	-29	-44
3.0	-13	-43	-39	-57

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 1 cm 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  
PROTECTION 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 3 Classes with 3 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 3 classes for breathability with Class 1 being the lowest and Class 3 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).



ProGARM® PRODUCT MATRIX

SINGLE COLOUR COLLECTION								SINGLE COLOUR COLLECTION				TWO TONE COLLECTION						HI VIS YELLOW COLLECTION																			
 <b>5280</b> PAGE 16	 <b>5200</b> PAGE 17	 <b>5430</b> PAGE 18	 <b>5630</b> PAGE 19	 <b>5790</b> PAGE 20	 <b>5850</b> PAGE 21	 <b>5896</b> PAGE 22		 <b>6100</b> PAGE 23	 <b>7638</b> PAGE 24	 <b>7636</b> PAGE 25	 <b>5808</b> PAGE 28	 <b>5816</b> PAGE 29	 <b>5814</b> PAGE 30	 <b>6458</b> PAGE 31	 <b>6444</b> PAGE 32	 <b>6446</b> PAGE 33	 <b>5286</b> PAGE 36	 <b>5626</b> PAGE 37																			
																			POLO SHIRT	POLO SHIRT	T-SHIRT	SWEATSHIRT	LINED FLEECE JACKET	JACKET	LAB COAT	COVERALL	TROUSER	LADIES' TROUSER	JACKET	TROUSER	LADIES' TROUSER	COVERALL	COVERALL	LADIES' COVERALL	POLO SHIRT	SWEATSHIRT	
																			NAVY	NAVY	NAVY	NAVY	NAVY	NAVY	NAVY	NAVY OR ORANGE	NAVY	NAVY	NAVY/ YELLOW	NAVY/ YELLOW	NAVY/ YELLOW	NAVY/ YELLOW	NAVY/ YELLOW	NAVY/ YELLOW	NAVY/ YELLOW	HV YELLOW	HV YELLOW
																			210GMS	260GMS	200GMS	320GMS	300GMS + 230GMS	240GMS	300GMS	240GMS	240GMS	240GMS	300GMS	300GMS	300GMS	240GMS	300GMS	300GMS	210GMS	320GMS	
 PROTECTIVE CLOTHING AGAINST THE THERMAL HAZARDS OF ELECTRIC ARC <small>OPEN ARC TEST METHOD CAL RATING</small>																																					
 PROTECTIVE CLOTHING AGAINST THE THERMAL HAZARDS OF ELECTRIC ARC <small>BOX TEST METHOD, CLASS 1 OR 2</small>	CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1		CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1																		
 CLOTHING TO PROTECT AGAINST HEAT & FLAME <small>(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)</small>	A1, B1, C1	A1, B1, C1	A1, B1, C1	A1, B1, C1	A1, B2, C2	A1, B1, C1	A1, B1, C1	A1, B1, C1	A1, B1, C1	A1, B1, C1	A1, B1, C1, E1	A1, B1, C1, E1	A1, B1, C1, E1	A1, B1, C1, F1	A1, B1, C1, E1	A1, B1, C1, E1	A1, B1, C1	A1, B1, C1																			
 PROTECTIVE CLOTHING WITH ELECTROSTATIC PROPERTIES																																					
 PROTECTIVE CLOTHING FOR WELDING AND ALLIED PROCESSES <small>(CLASS 1 OR 2)</small>						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																					
 HIGH VISIBILITY CLOTHING <small>(CLASS 1, 2 OR 3)</small>														CLASS 3	CLASS 3	CLASS 3	CLASS 3	CLASS 3																			
 RAIL STANDARD HIGH VISIBILITY GO/RT																																					
 PROTECTION AGAINST RAIN																																					
 PROTECTION AGAINST CHEMICAL LIQUIDS											FABRIC	FABRIC	FABRIC		FABRIC	FABRIC																					



ProGARM® PRODUCT MATRIX

		HI VIS YELLOW COLLECTION				HI VIS ORANGE COLLECTION						OUTER GARMENT COLLECTION						ACCESSORIES & OTHER GARMENTS				
																						
		9910 PAGE 38	7480 PAGE 39	7418 PAGE 40	5290 PAGE 44	5648 PAGE 45	4609 PAGE 46	4617 PAGE 47	4691 PAGE 48			4252 PAGE 52	4280 PAGE 53	9750 PAGE 54	9880 PAGE 55	9440 PAGE 56	9660 PAGE 57	8210 PAGE 61	8220 PAGE 61	8100 PAGE 62	8300 PAGE 62	8400 PAGE 62
		SOFTSHELL JACKET	COVERALL	TROUSER	POLO SHIRT	SWEATSHIRT	JACKET	TROUSER	COVERALL			JACKET	SALOPETTE	WATERPROOF JACKET	WATERPROOF SALOPETTE	WATERPROOF JACKET	WATERPROOF SALOPETTE	BASELAYER TOP	BASELAYER LEGGINGS	BALACLAVA	SNOOD	HELMET LINER
		HV YELLOW/NAVY	HV YELLOW	HV YELLOW	HV ORANGE	HV ORANGE	HV ORANGE	HV ORANGE	HV ORANGE			HV YELLOW/NAVY	NAVY	HV YELLOW/NAVY	HV YELLOW/NAVY	HV ORANGE	HV ORANGE	NAVY	NAVY	NAVY	NAVY	NAVY
		405GMS	240GMS	240GMS	220GMS	430GMS	360GMS	360GMS	360GMS			300GMS + 250GMS	300GMS + 250GMS	395GMS + 200GMS	395GMS + 200GMS	395GMS + 200GMS	395GMS + 200GMS	220GMS	220GMS	220GMS	220GMS	220GMS
	PROTECTIVE CLOTHING AGAINST THE THERMAL HAZARDS OF ELECTRIC ARC <small>OPEN ARC TEST METHOD CAL RATING</small>	23 CAL/CM²	9.5 CAL/CM²	9.5 CAL/CM²		21.6 CAL/CM²	10 CAL/CM²	10 CAL/CM²	10 CAL/CM²					47 CAL/CM²	47 CAL/CM²	47 CAL/CM²	47 CAL/CM²					
	PROTECTIVE CLOTHING AGAINST THE THERMAL HAZARDS OF ELECTRIC ARC <small>BOX TEST METHOD, CLASS 1 OR 2</small>		CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1	CLASS 1			CLASS 2	CLASS 2	CLASS 2	CLASS 2	CLASS 2	CLASS 2					
	CLOTHING TO PROTECT AGAINST HEAT & FLAME <small>(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)</small>	A1, B2, C2, F2	A1, B1, C1	A1, B1, C1, E1	A1, B1, C1	A1, B1, C1	A2, B1, C1, E2, F1	A2, B1, C1, E2, F1	A2, B1, C1, E2, F1			A1, B2, C2, F1	A1, B2, C2, F1	A1, B1, C1, D2, E3, F1	A1, B1, C1, D2, E3, F1	A1, B1, C1, D2, E3, F1	A1, B1, C1, D2, E3, F1	A1, B1, C1	A1, B1, C1	A1, B1, C1	A1, B1, C1	A1, B1, C1
	PROTECTIVE CLOTHING WITH ELECTROSTATIC PROPERTIES	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	PROTECTIVE CLOTHING FOR WELDING AND ALLIED PROCESSES <small>(CLASS 1 OR 2)</small>		CLASS 1, A1	CLASS 1, A1			CLASS 2, A1	CLASS 2, A1	CLASS 2, A1			CLASS 2, A1	CLASS 2, A1	CLASS 2, A1	CLASS 2, A1	CLASS 2, A1	CLASS 2, A1					
	HIGH VISIBILITY CLOTHING <small>(CLASS 1, 2 OR 3)</small>	CLASS 3	CLASS 3	CLASS 2	CLASS 3	CLASS 3	CLASS 3	CLASS 1	CLASS 3			CLASS 3		CLASS 3	CLASS 2	CLASS 3	CLASS 2					
	RAIL STANDARD HIGH VISIBILITY GO/RT				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
	PROTECTION AGAINST RAIN											CLASS 3, 3	CLASS 3, 3	CLASS 3, 3	CLASS 3, 3	CLASS 3, 3	CLASS 3, 3					
	PROTECTION AGAINST CHEMICAL LIQUIDS											PARTIAL BODY	PARTIAL BODY	PARTIAL BODY	PARTIAL BODY	PARTIAL BODY	PARTIAL BODY					



ProGARM® BESPOKE PRODUCTS

ProGARM® 9911 SOFTSHELL JACKET

**Sizes:** S-3XL

**Colour:** Navy

**Product care:**

**Fabric specification**  
VXS+ Inherent  
satin weave fabric  
with waterproof  
membrane - 405gms

**EN STANDARDS**

EN 1149-5: 2008	IEC 61482-2: 2009	EN ISO 11612: 2008
Pl. 5:2008 Pl. 3:2004 Charge Decay	EBT50+ 23cal/cm²	A1, B2, C2, F2

**FABRIC**

**ProGARM® 7630 TROUSER**

**FABRIC**

**EN STANDARDS**

EN 1149-5: 2008	IEC 61482-2: 2009	EN ISO 11611: 2007	EN ISO 11612: 2008
Pl. 5:2008 Pl. 3:2004 Charge Decay	Class 1 EBT50+ 9.5cal/cm²	Class 1, A1	A1, B1, C1

**Sizes**  
30-52" Regular leg (32"/81cm)  
32-44" Tall leg (34"/86cm)  
32-42" Short leg (30"/76cm)  
**Colour:** Navy

**Fabric specification**  
VXS+ 250W  
250g/m² Woven  
Inherent Fabric

**Product care:**

**ProGARM® 5895 LAB COAT**

**Sizes:** S-4XL

**Colour:** Navy

**Product care:**

**Fabric specification**  
VXS+ 300W 300g/m²  
Woven Inherent  
Fabric with FC Finish

**EN STANDARDS**

EN 1149-5: 2008	EN ISO 11612: 2008
Pl. 5:2008 Pl. 3:2004 Charge Decay	A1, B1, C1

**FABRIC**

**ProGARM® 6448 COVERALL**

**FABRIC**

**EN STANDARDS**

IEC 61482-2: 2009	EN ISO 11611: 2007	EN ISO 20471: 2013	EN ISO 11612: 2008
Class 1 EBT50+ 9.5cal/cm²	Class 1, A1	Class 3	A1, B1, C1

**Sizes:** S-4XL Regular leg (31"/80cm)  
M-2XL Tall leg (33"/85cm)  
**Colour:** HV Yellow/Red

**Fabric specification**  
VXS+ 250W 250g/m² Woven Inherent Fabric

**Product care:**

**ProGARM® 6450 COVERALL**

**Sizes:** 38-60" Regular leg (31"/80cm)  
40-52" Tall leg (33"/85cm)  
**Colour:** Navy/Yellow

**Fabric specification**  
VXS+ 250W 250g/m² Woven Inherent Fabric

**Product care:**

**EN STANDARDS**

EN 1149-5: 2008	IEC 61482-2: 2009	EN ISO 11611: 2007	EN ISO 20471: 2013	EN ISO 11612: 2008	EN 13034:2005 +A1:2009
Pl. 5:2008 Pl. 3:2004 Charge Decay	Class 1 EBT50+ 9.5cal/cm²	Class 1, A1	Class 3	A1, B1, C1	Type 6

**FABRIC**

BRANDING AND GARMENT ALTERATIONS

BRANDING

ProGARM® recommends the use of FR Heat Transfers or FR Embroidery Threads for branding on any of the FR Arc garments in the collection to ensure compliance with the original CE certification. Considerations should also be taken when adding branding to EN20471 or EN471 hi visibility garments that large logos do not reduce the surface area of the background material.

FR HEAT TRANSFERS

These heat applied transfers contain an FR component and have been tested and certificated 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. The transfers are pre-ordered in bulk quantities and can be quickly applied to your garments before dispatch.



FR EMBROIDERY THREADS

Standard embroidery threads are usually Rayon or polyester blends which burn, melt and drip with exposure to a flame. Using this type of thread on embroidery designs (in particular heavy stitched designs) poses a serious potential hazard on FR Arc garments and is not recommended. A recent example of a large arm badge on a garment using non FR threads resulted in burning and injury to the wearer – further information can be found on our website regarding this incident. We recommend the use of meta-aramid Flame Resistant threads when applying emblems to any of the ProGARM® garments.

GARMENT ALTERATIONS

The ProGARM® range of products is based on a stock service for fast delivery to our wearers. Some alterations can be undertaken on these stock garments providing the conformity of the garment is not compromised. For example, trousers or some coveralls can be re-hemmed to shorter leg lengths if required. For special sizes, or more detailed alterations please contact the sales office to discuss what we can offer and the typical delivery times and minimum order quantities we request.

ProGARM® ARC TRANSFER SYMBOL

Part of our SafetyICON™ system we can offer a bespoke transfer on the garment to identify the calorific rating of the garment, for further information please contact sales@progarm.com

ARC 1

4cal

MINIMUM CAL RATING

ARC 2

8cal

MINIMUM CAL RATING

ARC 3

25cal

MINIMUM CAL RATING

ARC 4

40cal

MINIMUM CAL RATING



ProGARM® SIZE CHART

JACKETS, POLO SHIRTS, SWEATSHIRTS	XS	S	M	L	XL	2XL	3XL	4XL	5XL								
CHEST (INCH)	36	38	40	44	48	52	56	60	64								
BODY LENGTH TO FIT (INCH)	67-68.5	67-68.5	68.5-70	70-71.5	71.5-73	71.5-73	73-75	73-75	73-75								
CHEST TO FIT (INCH)	34-35.5	37-38.5	38.5-40	43.5-45	46.5-48.5	51-53	55.5-58	60-62.5	65-67.5								
CHEST (CM)	91.5	96.5	101.5	112	122	132	142	152.5	162.5								
BODY LENGTH TO FIT (CM)	170-174	170-174	174-178	178-182	182-186	182-186	186-190	186-190	186-190								
CHEST TO FIT (CM)	86-90	94-98	98-102	110-114	118-123	129-135	141-147	153-159	165-171								

COVERALLS	38"	40"	42"	44"	46"	48"	50"	52"	54"	56"	58"	60"	62"	64"			
UK SIZE	S	M		L		XL		2XL		3XL		4XL		5XL			
CHEST TO FIT (INCH)	37-38.5	38.5-40	40-41.5	43.5-45	45-46.5	46.5-48.5	48.5-51	51-53	53-55.5	55.5-58	58-60	60-62.5	62.5-65	65-67.5			
REGULAR: LEG LENGTH (INCH)	31	31	31	31	31	31	31	31	31	31	31	31	31	31			
REGULAR: BODY LENGTH TO FIT (INCH)	67-68.5	68.5-70	68.5-70	70-71.5	70-71.5	71.5-73	71.5-73	71.5-73	73-75	73-75	73-75	73-75	73-75	73-75			
TALL: LEG LENGTH (INCH)	33	33	33	33	33	33	33	33	33	33	33	33	33	33			
TALL: BODY LENGTH TO FIT (INCH)	70-71.5	71.5-73	72.5-74	72.5-74	72.5-74	74-75.5	74-75.5	74-75.5	74-75.5	74-75.5	74-75.5	74-75.5	74-75.5	74-75.5			
SHORT: LEG LENGTH (INCH)	29	29	29	29	29	29	29	29	29	29	29	29	29	29			
SHORT: BODY LENGTH TO FIT (INCH)	64-65.5	64-65.5	65.5-67	68.5-70	68.5-70	68.5-70	68.5-70	68.5-70	68.5-70	68.5-70	68.5-70	68.5-70	68.5-70	68.5-70			
CHEST TO FIT (CM)	94-98	98-102	102-106	110-114	114-118	118-123	123-129	129-135	135-141	141-147	147-153	153-159	159-165	165-171			
REGULAR: LEG LENGTH (CM)	79	79	79	79	79	79	79	79	79	79	79	79	79	79			
REGULAR: BODY LENGTH TO FIT (CM)	170-174	174-178	174-178	178-182	178-182	182-186	182-186	182-186	186-190	186-190	186-190	186-190	186-190	186-190			
TALL: LEG LENGTH (CM)	84	84	84	84	84	84	84	84	84	84	84	84	84	84			
TALL: BODY LENGTH TO FIT (CM)	178-182	182-186	184-188	184-188	184-188	188-192	188-192	188-192	188-192	188-192	188-192	188-192	188-192	188-192			
SHORT: LEG LENGTH (CM)	74	74	74	74	74	74	74	74	74	74	74	74	74	74			
SHORT: BODY LENGTH TO FIT (CM)	162-166	162-166	166-170	174-178	174-178	174-178	174-178	174-178	174-178	174-178	174-178	174-178	174-178	174-178			

TROUSERS	28"	30"	32"	34"	36"	38"	40"	42"	44"	46"	48"	50"	52"	54"	56"	58"	60"
WAIST (INCH)	28	30	33	34	36	38	40	42	44	46	48	50	52	54	56	58	60
WAIST TO FIT (INCH)	26-27.5	27.5-29	30.5-32.5	32.5-34	34-35.5	35.5-37	37-38.5	38.5-40	40-41.5	41.5-43.5	43.5-45.5	45.5-48	48-50	50-52	52-54	54-56	56-58
REGULAR: LEG LENGTH (INCH)	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
REGULAR: BODY LENGTH TO FIT (INCH)	67-68.5	67-68.5	67-68.5	68.5-70	70-71.5	70-71.5	70-71.5	71.5-73	71.5-73	71.5-73	73-75	73-75	73-75	73-75	73-75	73-75	73-75
TALL: LEG LENGTH (INCH)	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
TALL: BODY LENGTH TO FIT (INCH)	70-71.5	70-71.5	70-71.5	71.5-73	72.5-74	72.5-74	72.5-74	74-75.5	74-75.5	74-75.5	74-75.5	74-75.5	74-75.5	74-75.5	74-75.5	74-75.5	74-75.5
SHORT: LEG LENGTH (INCH)	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
SHORT: BODY LENGTH TO FIT (INCH)	64-65.5	64-65.5	64-65.5	64-65.5	65.5-67	68.5-70	68.5-70	68.5-70	68.5-70	68.5-70	68.5-70	68.5-70	68.5-70	68.5-70	68.5-70	68.5-70	68.5-70
WAIST (CM)	73	78	83	88	93	98	103	108	113	118	123	128	133	138	143	148	153
WAIST TO FIT (CM)	66-70	70-74	78-82	82-86	86-90	90-94	94-98	98-102	102-106	106-111	111-116	116-122	122-127	127-132	132-137	137-142	142-147
REGULAR: LEG LENGTH (CM)	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81
REGULAR: BODY LENGTH TO FIT (CM)	170-174	170-174	170-174	174-178	178-182	178-182	178-182	182-186	182-186	182-186	186-190	186-190	186-190	186-190	186-190	186-190	186-190
TALL: LEG LENGTH (CM)	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
TALL: BODY LENGTH TO FIT (CM)	178-182	178-182	178-182	182-186	184-188	184-188	184-188	188-192	188-192	188-192	188-192	188-192	188-192	188-192	188-192	188-192	188-192
SHORT: LEG LENGTH (CM)	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
SHORT: BODY LENGTH TO FIT (CM)	162-166	162-166	162-166	162-166	166-170	174-178	174-178	174-178	174-178	174-178	174-178	174-178	174-178	174-178	174-178	174-178	174-178

LADIES' COVERALLS	8	10	12	14	16	18											
WAIST TO FIT (INCH)	26.5	28.5	30.5	32.5	34.5	36											
BODY LENGTH TO FIT (INCH)	65.5-67	65.5-67	65.5-67	67-68.5	67-68.5	67-68.5											
CHEST TO FIT (INCH)	31.5-33.5	33.5-35.5	35.5-37.5	37.5-39.5	39.5-41.5	41.5-43.5											
LEG LENGTH (INCH)	31	31	31	31	31	31											
WAIST ACTUAL (INCH)	32.5	34.5	36.5	38.5	40.5	42.5											
CHEST ACTUAL (INCH)	38.5	40.5	42.5	44.5	46.5	48.5											
WAIST TO FIT (CM)	67	72	77	82	87	92											
BODY LENGTH TO FIT (CM)	166-170	166-170	166-170	170-174	170-174	170-174											
CHEST TO FIT (CM)	80-85	85-90	90-95	95-100	100-105	105-110											
LEG LENGTH (CM)	79	79	79	79	79	79											
WAIST ACTUAL (CM)	83	88	93	98	103	108											
CHEST ACTUAL (CM)	98	103	108	113	118	123											

LADIES' TROUSERS	8	10	12	14	16	18	20	22	24								
WAIST (INCH)	30.5	32.5	34.5	36.5	38.5	40.5	42.5	44.5	46.5								
HIP 20CM FROM WAIST BAND (INCH)	40.5	42.5	44.5	46.5	48.5	50.5	52.5	54.5	56.5								
REGULAR: LEG LENGTH (INCH)	30	30	30	30	30	30	30	30	30								
REGULAR: BODY LENGTH TO FIT (INCH)	65.5-67	65.5-67	65.5-67	67-68.5	67-68.5	67-68.5	67-68.5	67-68.5	67-68.5								
TALL: LEG LENGTH (INCH)	32	32	32	32	32	32	32	32	32								
TALL: BODY LENGTH TO FIT (INCH)	67-68.5	67-68.5	67-68.5	68.5-70	68.5-70	68.5-70	68.5-70	68.5-70	68.5-70								
SHORT: LEG LENGTH (INCH)	27	27	27	27	27	27	27	27	27								
SHORT: BODY LENGTH TO FIT (INCH)	64-65.5	64-65.5	64-65.5	65.5-67	65.5-67	65.5-67	65.5-67	65.5-67	65.5-67								
WAIST (CM)	78	83	88	93	98	103	108	113	118								
HIP 20CM FROM WAIST BAND (CM)	103	108	113	118	123	128	133	138	143								
REGULAR: LEG LENGTH (CM)	75	75	75	75	75	75	75	75	75								
REGULAR: BODY LENGTH TO FIT (CM)	166-170	166-170	166-170	170-174	170-174	170-174	170-174	170-174	170-174								
TALL: LEG LENGTH (CM)	80	80	80	80	80	80	80	80	80								
TALL: BODY LENGTH TO FIT (CM)	170-174	170-174	170-174	174-178	174-178	174-178	174-178	174-178	174-178								
SHORT: LEG LENGTH (CM)	70	70	70	70	70	70	70	70	70								
SHORT: BODY LENGTH TO FIT (CM)	162-166	162-166	162-166	166-170	166-170	166-170	166-170	166-170	166-170								

Please note that not all models are available in all sizes. Please refer to product information.

ProGARM® IN PRODUCTION





## This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no text or other markings on the paper.

## This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no text or other markings on the paper.



**ProGARM<sup>®</sup>**  
PROTECTING LIVES



THORNE &  
**DERRICK**  
INTERNATIONAL

**Thorne & Derrick**

+44 (0) 191 410 4292

[www.powerandcables.com](http://www.powerandcables.com)

#### **INDUSTRY SECTORS**

Utilities and Power Generation  
Industrial Electrical  
Petrochemical  
Rail

Whilst every effort has been made to ensure the accuracy of all product descriptions, sizes and specifications, continual development of our product range means that certain details may change without notice. Though we make every attempt to ensure the colours of our products are reproduced as accurately as possible, they are provided for illustrative purposes and may differ from the actual product you receive. We reserve the right to improve products from our collection without notices.