

# EN STANDARDS

## EN ISO 20471



### High Visibility Clothing

X - Garment Class

Class 3 - highest class, typically consists of upper body and full sleeved garments or coveralls.

Class 2 - mid level, typically consists of short or no sleeve garments and some trousers.

Class 1 - lowest level, typically consists of lower body or partially fluorescent garments.

## EN343



### Protection against rain

Y - Resistance to water penetration (waterproofness) - 4 classes.

Y - Resistance to water vapour (breathability) - 4 classes.

R - Rain Tower Test (optional test), replaced with X when not tested. Will be written for example, Class 4.4.X.

## EN ISO 11612



### Clothing to protect against heat & flame

A(X): Limited Flame Spread test - A1 Face and/or A2 edge. Procedure A (leads to Class A1), the flame is applied horizontally, Procedure B (leads to Class A2), the flame is applied laterally.

B(X): (B1-B3) - Performance against convective heat

C(X): (C1-C4) - Performance against radiant heat

D(X): (D1-D3) - Performance against molten aluminium splash

E(X): (E1-E3) - Performance against molten iron splash

F(X): (F1-F3) - Performance against contact heat.

## EN ISO 11611



### Protective clothing for use in welding and allied processes

Limited Flame Spread Test.

Impact of Splatter Test.

Class 1: Manual welding operations during which small amounts of splatter of molten metal are formed

Class 2: Manual welding operations during which large amounts of droplets of molten metal are formed.

## EN1149-5



### Protective clothing- electrostatic properties

It specifies material and design requirements for electrostatic dissipative protection clothing used as part of a total earthed system to avoid incendiary discharge of static electricity. The outer fabric of these garments are therefore made from antistatic materials and components.

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).

Garments meeting this standard do not offer protection from mains voltage.

## RIS 3279-TOM



### Railway Group Standard - High Visibility Clothing

This Rail Group Standard is a high visibility standard that only applies to orange garments in the rail industry in the UK and Garments must comply to Class 2 High Visibility. The Standard mandates minimum requirements for high visibility clothing that is to be provided for wearing by people on the lineside or on or near the line. It applies to all high visibility clothing worn in order to meet the requirements of GE/RT8000 Rule Book.

The rail industry standard has now replaced GO/RT 3279 Issue 8. However, garments previously certified to GO/RT 3279 continue to meet the requirements of the rail industry standard.

## ATPV / EBT / ELIM

Cal/cm<sup>2</sup>

### ARC Thermal Protective Value

An ARC Thermal Protective Value (ATPV) refers to the maximum incident energy (in calories per centimetre squared) that protective equipment can be exposed to and prevent to onset of a second-degree burns where there is a 50% probability.

An Energy Limit Value (ELIM) is the point at which the clothing gives a 0% probability of enough energy getting through the garment to cause a second-degree burn. It is the new cal/cm<sup>2</sup> measurement.

Ratings are based upon the total weight of the fabric and ratings can be stacked when using a layered system. A higher rating means better protection.

## EN14058



### Protection against Cold

Protection against the effects of cool environments at low temperatures above -5 in outdoor and indoor environments, e.g. wind cooling effect in an outdoor environment or body cooling effect in a refrigerated environments.

Y - Thermal Resistance Class (Class 1-4)

Y - Air Permeability Class (Class 1-3)

Y - Icler (Class 4 mandatory, Class 1-3 optional)

WP - Water Penetration (optional)

Y and/or WP will be replaced with X if the garment has not been tested.

## IEC 61482



### Protective clothing against the thermal hazards of an Electric ARC

IEC 61482-2 is the European garment standard for the thermal hazards of an arc flash. The standard includes requirements for material testing and additional information for garments constructed from the compliant materials.

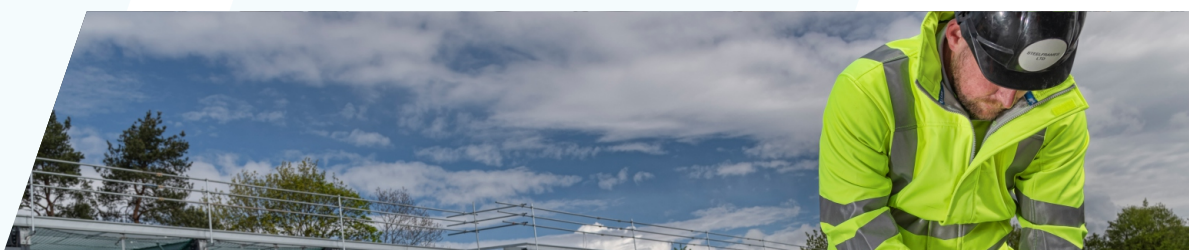
Garments certified to this standard are defined as category III and are subject to annual audits under Article 11 of the PPE Directive.

## EN 13758



### Protection against solar Ultraviolet Radiation

EN 13758-2 is a standard that protects the skin against the sun's harmful UVA and UVB rays. Fabric that is certified with this standard is marked with an ultraviolet protection factor (UPF-value), which indicates the level of protection provided.



# TECHNOLOGY PARTNERS

## CARRINGTON TEXTILES

Carrington Textiles specialise in the development of fabrics and finishes with exceptional performance in the most demanding workplace environments. As a result, they have a reputation for exciting breakthroughs.

## VILOFT®

VILOFT® is a high-tech fibre of 100% natural origin - it lends special properties and functionalities to a variety of textiles. VILOFT® allows the production of very light and soft garments with incredible next to skin comfort.

## YKK®

YKK® are the world's largest zipper/zip pull manufacturer. YKK®'s only mission statement is to manufacture only useful, high quality zippers that would benefit, or enhance, the end-use goods in which they are installed. YKK® zippers are made to last longer and perform better than others on the market.

## TEKSTINA

Tekstina have developed a polyester-free URIM range of Electric ARC fabrics. We use their waterproof URIM CLN2 + KOR Lining fabric for our PRARC09 Foul Weather Storm Coat and the waterproof URIM **3PLY** 3-layer fabric for our PRARC10 Foul Weather Salopette.

## 3M™ THINSULATE™ INSULATION

Thinsulate™ insulation works by trapping air molecules between you and the outside. The more air traps in a given space, the greater its insulating value. Because the microfibrils in Thinsulate™ insulation are far finer than other fibres, they trap more air in less space, which naturally makes it a better insulator.

## RUDOLF

BIONIC-FINISH® ECO, based on proprietary dendrimer technology, comes as a family of unique non-halogenated, APEO-free, fluorine-free formulations suited for different materials and designed for different applications and needs, such as a garment being water repellent.

## TOLEDO FABRICS

For over 36 years Toledo Fabrics has been manufacturing knitted fabrics in the UK, offering a broad spectrum of both fabric solutions and services to industry. Areas that Toledo has a high level of involvement in are Upholstery, PPE, technical, sportswear, underwear & industrial filtration fabrics.

## THERMOLITE®

THERMOLITE® T3 EcoMade is breathable and quick drying. It demonstrates exceptional compressibility with rapid recover, as well as durability. Additionally, made from 100% recycled resourced, THERMOLITE® T3 EcoMade fibres offer added sustainability credentials. *THERMOLITE® is a trademark of The LYCRA Company*

## SILVADUR™

Silvadur™ unites silver ion's elemental powers with a patented delivery system to create an extremely effective, highly durable antimicrobial for a wide variety of textile and apparel applications. Silvadur™ is used in our LIFE polo shirts.

## PROTAL®

Protal® is a super high-performance Protex fibre blend, supplied by Waxman fibres, ultimately giving the wearer a consistency of compliance not available with many other FR fabrics.

## CORDURA re/cor™ RPET

CORDURA re/cor™ RPET is made from 100% post-industrial re-claimed fiber that is 100% GRS (Global Recycled Standard) certified. CORDURA re/cor™ RPET is durable, responsible, innovated to last.

## RUDHOLM GROUP

Rudholm Group produce trims and all accessories, that are high quality, fit for purpose, functional and adds value to any product. Their goal is to produce products with the least impact on the environment, and that our branding elements will be made from recyclable material, able to be recycled, up cycled and biodegradable.

## ACCREDITATIONS



# SIZE CHART

(TO FIT) MEASUREMENT IN INCHES

## MENS

### PROTECT & Evolution Storm Coats, Jackets & Polo Shirts

Size	XS	S	M	L	XL	2XL	3XL	4XL	5XL	6XL	7XL
Chest	31 - 34	34 - 37	37 - 40	40 - 43	43 - 46	46 - 50	50 - 55	55 - 59	59 - 63	63 - 66	66 - 70

### LIFE Shell, Softshell, Parka & Puffer

Size	S	M	L	XL	2XL	3XL	4XL	5XL	6XL
Chest	34 - 37	38 - 40	40 - 42	42 - 44	44 - 46	46 - 48	48 - 50	50 - 53	53 - 56

### PROTECT & LIFE Combat Trousers

Waist	28	30	32	34	36	38	40	42	44	46	48	50	52	54
Short	29	29	29	29	29	29	29	29	29	29	29	29	29	29
Reg	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Tall	33	33	33	33	33	33	33	33	33	33	33	33	33	33

### PROTECT & Evolution Waterproof & Combat Coverall, Salopette & Over Trousers

Size	S	M	L	XL	2XL	3XL	4XL
Chest	34 - 37	37 - 40	40 - 43	43 - 46	46 - 50	50 - 55	55 - 59
Waist	30 - 33	33 - 36	36 - 39	39 - 42	42 - 44	44 - 47	47 - 49

### LIFE Overtrousers

Size	S	M	L	XL	2XL	3XL	4XL	5XL	6XL
Waist	30 - 33	33 - 35	35 - 37	37 - 39	40 - 41	41 - 43	43 - 47	47 - 51	51 - 53

## BASE LAYERS

### Mens

Size	S	M	L	XL	2XL	3XL
Chest	35 - 37	37 - 39	39 - 41	41 - 43	43 - 46	46 - 49
Waist	29 - 32	32 - 35	35 - 38	38 - 41	41 - 44	44 - 47

### Ladies

Size	8	10	12	14	16	18
Chest	29 - 31	31 - 33	33 - 35	35 - 38	38 - 41	41 - 43
Waist	25 - 27	27 - 29	29 - 32	32 - 35	35 - 38	38 - 47

Protective clothing should work with, not against the natural movement of your body. With this in mind, we aim to provide the best possible range of sizes, and for the collection to provide inclusive options. Adjustable features have been included where possible, and details can be found on the item datasheets. In some cases, regulations and standards prevent us from offering wider limits. If you fall outside of the size ranges, or if the item you require is not available, we can try to accommodate where it is safe to do so.

At PULSAR® we want everyone to be safe and protected and although we have specific gendered fit options available, we feel it's important for you to select the size and style you feel most comfortable wearing

**FR & ELECTRIC ARC**

**FR - AST - ARC Storm Coat, Sweatshirt & Polo Shirt**

Size	S	M	L	XL	2XL	3XL	4XL	5XL	6XL
Chest	34 - 37	37 - 40	40 - 43	43 - 46	46 - 50	50 - 55	55 - 59	59 - 63	63 - 66

**FR - AST - ARC Coverall & Salopette**

Size	S	M	L	XL	2XL	3XL	4XL	5XL	6XL
Chest	34 - 37	37 - 40	40 - 43	43 - 46	46 - 50	50 - 55	55 - 59	59 - 63	63 - 66
Waist	30 - 33	33 - 36	36 - 39	39 - 42	42 - 44	44 - 47	47 - 49	49 - 52	52 - 55

**FR - AST- ARC Combat Trousers**

Waist	28	30	32	34	36	38	40	42	44	46	48	50
Short	-	29	29	29	29	29	29	29	29	-	-	-
Reg	31	31	31	31	31	31	31	31	31	31	31	31
Tall	-	33	33	33	33	33	33	33	33	-	-	-

**LADIES**

**PROTECT Storm Coats, Soft Shells, Polo Shirts & Life Polo Shirts**

Size	8	10	12	14	16	18	20	22	24	26
Chest	29 - 32	32 - 34	34 - 36	36 - 38	38 - 40	40 - 42	42 - 44	44 - 46	46 - 48	48 - 52

**LIFE Shell, Softshell, Parka and Puffer**

Size	8	10	12	14	16	18	20	22	24	26
Chest	29 - 32	32 - 34	34 - 36	36 - 38	38 - 41	41 - 43	43 - 45	45 - 48	48 - 50	50 - 52

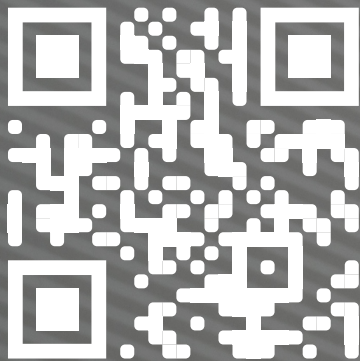
**PROTECT Combat Trousers**

Size	8	10	12	14	16	18	20	22	24	26
Waist	26	28	30	32	34	36	38	40	43 1/4	46 1/2
Short	29	29	29	29	29	29	29	29	29	29
Reg	31	31	31	31	31	31	31	31	31	31
Tall	33	33	33	33	33	33	33	33	33	33

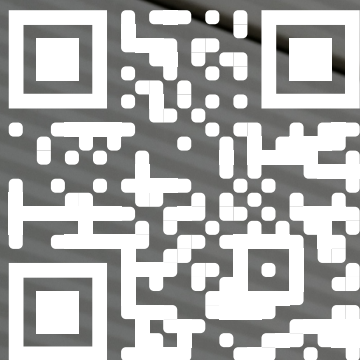
**LIFE Combat Trousers**

Size	8	10	12	14	16	18	20	22	24	26
Waist	27	29	31	33	35	37	39	41	44 1/4	47 1/2
Short	29	29	29	29	29	29	29	29	29	29
Reg	31	31	31	31	31	31	31	31	31	31
Tall	33	33	33	33	33	33	33	33	33	33

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



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



Digital Catalogue



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