

En471 Info and PPE explanations

Safety Specifications

Only YELLOW and Orange hi vis vests are en471 spec by law.

Red vests, green vests and all other colours do not meet en471 specification

Below are some of the required codes and safety explanations for various items of Hi Visibility and Personal Protective Equipment.



High Visibility

EN471 - Specification for High Visibility Clothing

There are 3 classes of garment type based on the levels of conspicuity they provide. On all garments the retro-reflective tape must not be less than 50mm wide.



CLASS 3

THE HIGHEST LEVEL OF CONSPICUITY

Minimum background material 0.80m²

Minimum retro-reflective material 0.20m²



CLASS 2

INTERMEDIATE PROTECTION

Minimum background material 0.50m²

Minimum retro-reflective material 0.13m²



CLASS 1

LOW LEVEL PROTECTION

Minimum background material 0.14m²

Minimum retro-reflective material 0.10m²

Selection of the most suitable class of garment is based on your risk assessment. However, in certain situations guidance is given, such as if you are working on the highways the 'Safety at Street Works and Road works' and the 'Traffic Signs Manual Chapter 8' provide information on what type and class of protective clothing you should be wearing.

EN 1150

This is the standard non-professional use for example, jogging, cycling or other traffic related interaction activities. This would include sports users who need high visibility for cycling, road running, driving etc.

Whilst EN471 specifies a set of requirements for high visibility warning garments for professional use in the work place, the EN 1150 standard provides details for non-professional use, together with criteria for minimum area's and placement of reflective material to achieve enhanced conspicuity. Garments conforming to these standards are capable of signalling the users presence visually, under any light conditions, both by day and under illumination by vehicle headlights in the dark.

Non-professional use, EN1150, is considered to be suitable for children, cyclist and pedestrian training activities, walking to the bus etc.

Each garment must consist of both background material, (luminous) and retroreflective materials, (reflective bands and braces). The background material provides for day light conspicuity whilst the retroreflective provides for night time visibility.

EN1150 can either be satisfied by the minimum area of background and retroreflective materials or, depending on the height of the wearer, the combined performance area.



Protection Against Foul Weather

EN343:2003

Performance criteria governs the resistance to water penetration and water vapour resistance (breathability) of the garment.



Protection Against Heat And Flame

Note: This product has specification EN533. A fuller explanation of the standards in this area are shown below.

EN533 (EN 533:1997 has been replaced by EN ISO 14116:2008 “Protective clothing.) Protection against heat

and flame. Limited flame spread materials, material assemblies and clothing”.

All three standards have been listed as a Harmonised Standard in the EU Official Journal list of harmonised PPE standards (5th June 2009).

Limited flame spread properties (being superseded by BSEN ISO 14116).

EN531 (EN 531:1995 is being replaced by EN ISO 11612:2008 “Protective clothing. Clothing to protect against heat and flame”.) Protective clothing for workers exposed to heat.

EN470-1 (EN 470-1:1995 is being replaced by EN ISO 11611:2007 “Protective clothing for use in welding and allied processes”.)

Protective clothing for use in welding and allied processes (being superseded by BS EN 11611:2007).

Different performance criteria for each of these standards have relevance to both fabrics and garments separately to help determine the suitability of garment. ENV50354, CLC/TS 50354, IEC 61482-1, IEC 61482-1-2 These are all standards which have been used or are being used in the constantly evolving field of protection against electric arc.



Electrostatic Performance (Anti-static)

Note: This product has specification prEN1149-5:2006. A fuller explanation of the standards in this area are shown below.

prEN1149-5:2006

Protective clothing with electrostatic properties. The series of CE Antistatic Standards¹, 1149 have been updated and the parts are separated into test methods and performance requirements.

**Chemical Protection - Reduced Spray**

Note: This product has specification EN13034 Type 6. A fuller explanation of the standards in this area are shown below.

EN13034 Type 6

EN13034:2005 Type 6 (PB) Partial body.

EN1513 Limited use protection for parts of the body.

EN 470-1:1995 has been replaced by EN ISO 11611:2007 "Protective clothing for use in welding and allied processes".

EN 531:1995 is being replaced by EN ISO 11612:2008 "Protective clothing. Clothing to protect against heat and flame".

EN 533:1997 has been replaced by EN ISO 14116:2008 "Protective clothing. Protection against heat and flame. Limited flame spread materials, material assemblies and clothing".

All three standards have been listed as a Harmonised Standard in the EU Official Journal list of harmonised PPE standards (5th June 2009).

- EN ISO 11611: Fabric meets EN 470 Tear Strength or EN ISO 11611 Tear Strength is = 15 N
- EN ISO 11612: EN ISO 11612 Tear Strength is = 7.5 N

If Labels and User Information list the standard number they must also list the Clause Exclusions.

SAFETY FOOTWEAR SPECIFICATION**EN345****Specification for safety footwear for professional use**

- S1** Antistatic plus energy absorption of heel area
- S2** Antistatic plus energy absorption of heel area plus water resistant
- S3** Antistatic plus energy absorption of heel area, water resistant plus penetration resistant
- S5** 200 Joule Toecap protection. Allrubber or all polymeric footwear with antistatic properties. Energy absorption of seat region. Plus penetration resistance. Cleated

EN346**Specification for protective footwear for professional use**

- P1** Antistatic plus energy absorption heel
- P2** Antistatic, energy absorption heel plus water resistant
- P3** Antistatic, energy absorption heel, water resistant plus penetration resistant

EN347

Specification for occupational footwear for professional use

- O1** Antistatic plus energy absorption heel
- O2** Antistatic, energy absorption heel, plus water resistant
- O3** Antistatic, energy absorption heel, water resistant plus penetration resistant

SAFETY CLOTHING SPECIFICATION

- EN 340** 1993 General Requirements Protective clothing
- EN 348** Test method determination of behaviour of materials on impact of small splashes of molten metal on protective clothing
- EN 367** Protective Clothing ? protection against heat and fire
- EN 368** Protective Clothing ? protection against liquid chemicals penetration
- EN 369** Protective Clothing ? protection against liquid chemicals permeation
- EN 373** Protective Clothing ? assessment of resistance of materials to molten metal splash
- EN465** Protective Clothing- protection against liquid chemicals
- EN469** Protective clothing for fire fighters
- EN470** Protective clothing for use in welding and allied trades
- EN471** High Visibility warning clothing [Further detailed info on en471 can be found here](#)
- EN510** Specification for protective clothing for use where there is a risk of entanglement with moving parts
- EN531** Protective clothing for industrial workers exposed to heat.
- EN943** Protective clothing against liquid and gaseous chemicals including liquid aerosols and solid particles
- EN1073** Protective clothing against radioactive contamination.
- EN1149** Protective clothing ? electrostatic properties

SAFETY GLOVES

- EN374 ? 2** Protective gloves against chemicals and micro organisms, determination of resistance to penetration
- EN374 ? 3** Protective gloves against chemicals and micro organisms, determination of resistance to permeation by chemicals.
- EN388** 1994 Protective Gloves against mechanical risks
- EN407** Protective gloves against thermal risks (heat and/or fire)
- EN421** Protective gloves against ionising radiation and radioactive contamination.
- EN511** Protective gloves against cold
- EN659** Protective gloves for fire fighters
- EN12477** Protective gloves for welders