



OCEAN Manual for Multinorm Protect

(For models: 020022 and 030003)

Producer:

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The garment is produced in accordance with PPE Regulation (EU) 2016/425, general requirements EN ISO 13688:2013 and manufactured to protect against rain as defined in EN 343:2019, high visibility as defined in EN20471:2013+A1:2016, brief contact with flames and heat as defined in EN ISO 11612:2015, protective clothing against welding and allied processes as defined in EN11611:2015, protection against chemicals as defined in EN 13034:2005+A1:2009, electrostatic dissipative protective clothing as defined in EN 1149-5:2018, as well as protection against thermal hazards of an electrical arc as defined in IEC 61482-2:2018.

The garments are made of 270 g/m², 98% Polyester, 2% Carbon/ 60% MAC 40% CO, PU coating with a TPU membrane and with a lining of 100% FR cotton.

For optimal use of the clothing, please follow these instructions:

The use of the clothing must not be different from the concept. All layer of the jacket shall be present for an optimal protection. For an optimal protection and maximal duration of the clothing it is advisable to remove chemicals immediately from the surface. Damaged or dirty clothing loses the ability for giving the user protection

**EN 11612**

EN 11612:2015 Protection against accidental brief contact with flames and heat

This garment is NOT a fireman clothing and cannot be used against long lasting high heating and fire. The garment gives the user a passive limited protection by accidents and against short lasting contact with flame. Clothing can be used for a wide range of end uses, where there is a need for clothing with limited flame spread properties and where the user can be exposed to radiant or convective or contact heat or to molten metal splashes.

To give full protection, garment shall be used together with items giving to same protection level.

In the event of an accidental splash of chemical, flammable liquids or molten metal splash on clothing, the wearer should immediately withdraw and carefully remove the garments, ensuring that the chemical or liquid does not come in contact with any part of the skin. The clothing shall then be cleaned or removed. In the event of a molten metal splash, the garment, if worn next to the skin, may not eliminate all risks of burn.

See the protection and protective levels in the garment label.

A1, A2, Limited flame spread, A1 surface ignition, A2 edge ignition

B Protection to convective heat, levels 1-3, highest 3

C Protection to radiant heat, levels 1-4, highest 4

D Protection to molten aluminium, levels 1-3, highest 3

E Protection to molten iron, levels 1-3, highest 3

F Protection to contact heat, levels 1-3, highest 3

The clothing protects the user against bad weather according to norm EN 343:2019.



EN 343

Y

= Resistance against water penetration class 1 to 4

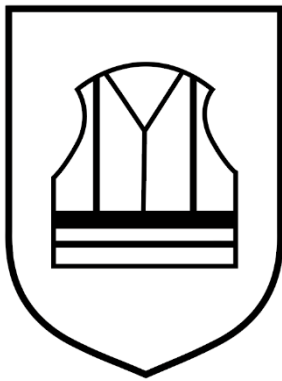
Y

= Resistance against water vapor class 1 to 4

R

= Rain tower test, if the test has been done it will be *R*, if not *X*

The clothing has achieved EN 343:2019 class 3 for resistance against water penetration and class 1 for resistance against water vapor.



EN 20471

EN ISO 20471:2013+A1:2016

High visibility clothing

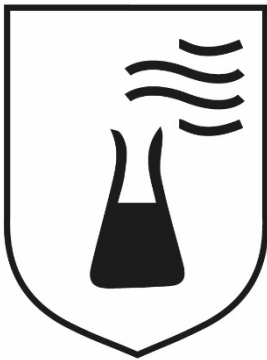
X

Where x is the level of certification.

This garment provides conspicuity in any light condition, during daylight and under illumination or headlights in the dark, in high risk situations. The classification goes from class 1 to class 3, where class 3 is the highest possible level. The class is marked besides the pictogram in the garment label.

In the label stated maximum number of cleaning cycles is not the only factor related to the lifetime of the garment. The lifetime will also depend on usage, storage etc. If the maximum number is not stated, materials have been tested at least after 5 washes.

EN 20471 Classification			
	Class 1	Class 2	Class 3
Min. fluorescent background material	0,14 m ²	0,50 m ²	0,80 m ²
Min. reflective material	0,10 m ²	0,13 m ²	0,20 m ²
Or combined material	0,20 m ²	-	-

**EN 13034**

The material meets the requirements of EN 13034+A1:2009.

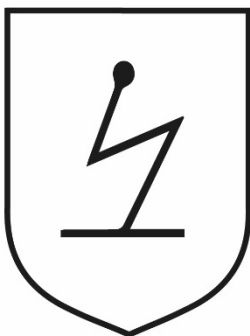
Performance requirements for chemical protective clothing offering limited protection against liquid chemicals (Type 6, type PB[6])

This standard specifies requirements and test methods for chemical protective suits of type 6 and type PB [6] for partial body protection. The clothing provides limited protection to small drops or a light mist of chemical liquids. In general, this clothing is made of liquid-repellent, but not completely fluid-tight materials. The chemical protective suit (Type 6) provides the least protection against chemicals and is then provided for use when the risks were

estimated to be low and a complete permeation barrier against liquids is not necessary, ie if the person wearing the suit has sufficient time in the event of contamination of clothing to take timely and appropriate protective measures. As low risks for. Example regarded the possible contact with small amounts of spray or injection. Take into account, that the prolonged wearing of chemical protective suits cause heat stress!

Material has got the following levels for mechanical properties: abrasion 6, tear 4, tensile 6, puncture 3 (levels 1-6, best 6)

The material has the following repellency/penetration; H₂SO₄ 3/3, NaOH 3/3, O-xylene 2/3, 1-Butanol 3/3 (indices 1-3, best 3).

**EN 1149-5**

EN 1149-5:2018, Electrostatic dissipative protective clothing

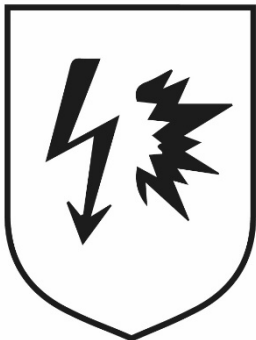
This garment protects against electrostatic discharge when used as part of total earthed system. The person must be properly earthed. The electric resistance between the user's skin and the earth shall be less than 10⁸Ω, e.g. by wearing adequate footwear or conductive floors.

The protective clothing shall not be opened or removed whilst in presence of flammable or explosive atmospheres or while handling flammable or explosive substances.

The jacket shall always cover the electrostatic trousers or bib and braces. To establish conduction all over the body the jacket shall be closed in front as well as by the sleeves, meaning the protective clothing must permanently cover non-complying materials during use and movements.

The electrostatic ability will be reduced after use, by dirt, by maintenance and in extreme weather conditions. The performance of the electrostatic dissipative clothing can be affected by wear and tear, laundering and other possible contaminations.

The electrostatic dissipative protective clothing is intended to be worn in Zones 1, 2, 20, 21 and 22. (See EN 60079-10-1 and EN 60079-1-2) in which the minimum ignition energy of any explosive atmosphere is not less than 0,016 mJ. It shall not be used in oxygen enriched atmospheres, or in zone 0 (See EN 60079-10-1) without prior approval of the responsible safety engineer or management.



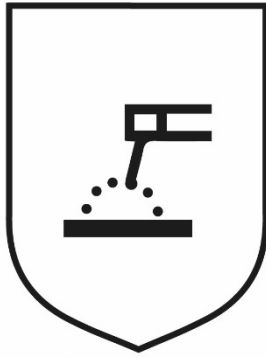
IEC 61482-2:2018

IEC 61482-2:2018 Protective clothing against the thermal hazards of an electric arc

This garment is suitable for work where there is an electric arc hazard. Garment do not protect against electric shock, only the thermal effects of an electric arc.

The garment has been tested according to EN 61482-1-2:2014, "box test" and complies with Class 1 with APC 1 (4 kA).

For full body protection, the protective clothing shall be worn in the closed state and other suitable protective equipment (helmet with protective face screen, protective gloves and footwear (boots)) shall be used. No garments, like shirts, undergarments or underwear should be used which melt under arc exposures, made of e.g. polyamide, polyester or acryl fibres.



EN 11611

EN ISO 11611:2015 is Protective clothing used in welding and allied processes

This garment protects against spatters (small splashes of molten metal), short contact time with flame, radiant heat from an electric arc used in welding and allied processes. It minimizes the possibility of electrical shock by short-term, accidental contact with electrical conductors at voltages up to 100 V d.c. in normal conditions of welding. If there is an increased risk of electric shock in your work environment, additional insulation layers are required. Be careful when welding in a confined space where there could be a greater

concentration of oxygen - this will reduce the flame retardant properties of the welders protective clothing. Under certain circumstances, additional partial body protection may be required. Seat, soiling, or other contaminants can affect the level of protection.

This clothing meets EN ISO 11611:2015 Class 1 A1+A2. Class 1 is protection against less hazardous welding techniques and situations, causing lower levels of spatter and radiant heat, see below table. Limited flame spread has been tested by surface ignition A1 and edge ignition A2.

Guidance for the selection of the type of welders' clothing (Class 1/ Class 2)

Table A.1 — Selection criteria for clothing for use in welding or allied processes (reference points)

Type of welders' clothing	Selection criteria relating to the process:	Selection criteria relating to the environmental conditions:
Class 1	Manual welding techniques with light formation of spatters and drops, e.g.: — gas welding; — TIG welding; — MIG welding (with low current); — micro plasma welding; — brazing; — spot welding; — MMA welding (with rutile-covered electrode).	Operation of machines, e.g.: — oxygen cutting machines; — plasma cutting machines; — resistance welding machines; — machines for thermal spraying; — bench welding.
Class 2	Manual welding techniques with heavy formation of spatters and drops, e.g.: — MMA welding (with basic or cellulose-covered electrode); — MAG welding (with CO ₂ or mixed gases); — MIG welding (with high current); — self-shielded flux cored arc welding; — plasma cutting; — gouging; — oxygen cutting; — thermal spraying.	Operation of machines, e.g.: — in confined spaces; — at overhead welding/cutting or in comparable constrained positions.

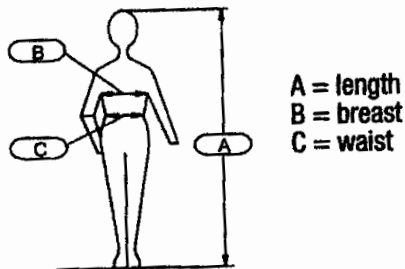
Washing Instructions

The washing instruction: See care label.

Use of softener and bleaching agent is forbidden. Ironing is not allowed Do not put the clothing to soak. Do not use tumbling. Hang up right after washing for drying.

The water repellent qualities can be weakened after washing. Thus it can be necessary (we recommend to do this after every washing) to re-establish the water and oil repellent qualities after maximum 5 washes. This can be done in a professional laundry. Maximum 12 times washing to secure the retention of the protection against spread of electrostatic discharges EN1149.

Measurement scheme



	A	B	C
2XS	164-172	70-78	58-66
XS	164-172	78-86	66-74
S	164-172	86-94	74-82
M	172-180	94-102	82-90
L	172-180	102-110	90-98
XL	180-188	110-118	98-106
2XL	180-188	118-129	106-117
3XL	188-196	129-141	117-129
4XL	188-196	141-153	129-141
5XL	188-196	153-165	141-153
6XL	188-196	165-177	153-165

Certification is made by SGS, Takomotie 8, FI-00380 Helsinki, Finland , Notified body nr. 0598

Declaration of Conformity can be found on www.oceantextile.dk