



INSTRUCTIONS FOR USE PERSONAL PROTECTIVE EQUIPMENT (P.P.E.)

Read these instructions carefully before using this clothing. Refer to your safety engineer or manager regarding the appropriate clothing for your specific work situation. Keep these instructions carefully so you can refer to them whenever you wish.

Declaration of conformity for this P.P.E. and more comprehensive instructions for use: see <http://sio.to/eudoc>



This item complies with the fundamental requirements of *European Regulation 2016/425* on personal protective equipment (P.P.E.) based on European harmonised standard(s); you will find corresponding pictograms and protection classes on the label sewn into this garment.

Except for clothing that is only labelled *EN 343* and/or *EN 14058* and/or *EN 13758-2* (and is covered by self-certification, with exception of $R_{ct} > 0.25 \text{ m}^2 \text{ K/W}$), all our other P.P.E. covered by this manual has been certified by **Centexbel, Technologiepark 70, B-9052 Zwijnaarde (Belgium) - NB 0493**. If this number 0493 is shown on the right next to the CE pictogram on the label sewn into the garment, it means that it is category III P.P.E. of a complex design that is to protect the user against hazards which are fatal or which can seriously and irreparably impair one's health, and the quality assurance monitoring of the manufacturing process is carried out by Centexbel.

This P.P.E. complies with General Standard *EN ISO 13688:2013*. This P.P.E. complies with the REACH Regulation and does not contain any substances known at this time to cause allergic reactions or which are known to be carcinogenic or mutagenic. As with all P.P.E., this product does not protect you against all risks! Check your specific risk assessment.

This P.P.E. will also be worn combined with other P.P.E. (including non-clothing P.P.E.). Check the compatibility and correct use when combined with other P.P.E.. Read the manuals of other P.P.E. as well.

With regard to protection against rain, cold, chemicals, fire, heat, etc. it is self-evident that you will only be protected on the parts of the body covered by the P.P.E. when performing activities and movements. As it is possible to combine different garments, you need to ensure that all parts of the body are covered with the appropriate levels of protection.




Making alterations to this clothing (without authorisation from Sioen) is not permitted! For optimum and compliant protection, you need to close all fasteners.

Never wear a damaged garment. A damaged garment must be taken out of use immediately and either repaired or replaced. Notify your manager at once. At 'end of life', this garment must be collected, removed and processed in controlled conditions (professional collection service for mechanical or thermal recycling, etc.) in a specialised facility. Sioen has no obligation or responsibility for taking back the P.P.E. for safe disposal.

We recommend professional care (via an in-house or external laundry). Specific care instructions for commercial laundries are available from Sioen upon request or on the Sioen website <http://sio.to/eudoc>. Care instructions for domestic laundering (which can also be done at a commercial laundry!) appear on the label sewn into the garment.

You will find a more detailed explanation of these symbols on the Sioen website <http://sio.to/eudoc>.

Please contact your Sioen dealer in all cases for more information about care instructions, repairs and safe destruction methods.

Label	Clarification
MAX	Maximum (theoretical) number of cleaning cycles means certification testing to be carried out after x cleaning cycles.
	Expiry date or 'do not use after' date.
	Certification tests carried out after an industrial laundry process (see http://sio.to/eudoc).
	The values entered in A, B, C are the corresponding body measurements (in cm) for which this garment is suitable. You will find the various sizing tables on our website http://sio.to/eudoc . (A: Waist girth - B: Chest girth - C: Length)

Do not allow your garment to become too soiled. **Soiled clothing can result in reduced protection.** Chemicals (including their long-term effect due to clothing being put away soiled) can impair the protective properties of the clothing.

When picking up your clothing check that you have the right size and that there is no visible damage in evidence.

As a general rule, garments should be selected in such a way that the work can be carried out comfortably and unhindered.

Manufacturing traceability

The requisite details are shown at the bottom of the label.

Storage instructions

When you are not wearing the garment, you should store it dry, uncompressed, in a well-ventilated room. Avoid extreme temperatures and avoid direct sunlight to prevent colour changes. Complaints about colour changes will not be considered.

Siolen cannot be held liable for damage occurring as a result of improper use of the P.P.E. or any use that does not comply 100% with the instructions for use set out above.

EN 343:2019

Protection against rain



EN 343

Protective clothing with reference WR x, y, R

<u>x or y</u> (See label)	x : Resistance to water penetration (m)	y : Water vapour resistance (Ret: m ² .Pa/W)
Class 1	≥ 0.8	> 40
Class 2	≥ 0.8*	25 < Ret ≤ 40
Class 3	≥ 1.3*	15 < Ret ≤ 25
Class 4	≥ 2*	≤ 15

(*) Water column, fabric tested after pre-treatment.

R = Readymade garment rain tower test, optional (replaced with 'x' when not been tested).

For clothing with y: class 1 the recommendation 'Restricted wearing time' has to be mentioned on the label. The table below is an indication of the recommended wearing time at different temperatures. Wearing time can be extended by the use for instance of ventilation apertures, etc.

Working environment temperature	25 °C	20 °C	15 °C	10 °C	5 °C
Max. recommended continuous wearing time	60 min	75 min	100 min	240 min	N/A

Water vapour permeability, a combination of modular multilayer clothing (e.g. underclothing with moisture-absorbing and wicking properties, thermal insulation), ergonomic factors (fit, size, elasticity, etc.) contribute towards your comfort.

EN 343:2003 +A1:2007
Protection against rain



Protective clothing with reference WR x, y

<i>x or y</i> (See label)	x: Resistance to water penetration (m)	y: Water vapour resistance (Ret: m².Pa/W)
Class 1	≥ 0.8	> 40
Class 2	≥ 0.8*	20 < Ret ≤ 40
Class 3	≥ 1.3*	≤ 20

(*) Water column, fabric tested after pre-treatment.

For clothing with y: class 1 the recommendation 'Restricted wearing time' has to be mentioned on the label. The table below is an indication of the recommended wearing time at different temperatures. Wearing time can be extended by the use for instance of ventilation apertures, etc.

Working environment temperature	25 °C	20 °C	15 °C	10 °C	5 °C
Max. recommended continuous wearing time	60 min	75 min	100 min	240 min	N/A

Water vapour permeability, a combination of modular multilayer clothing (e.g. underclothing with moisture-absorbing and wicking properties, thermal insulation), ergonomic factors (fit, size, elasticity, etc.) contribute towards your comfort.

Seasonal protective clothing - Protection against water

This pictogram **without** any mention of *EN 343* standard indicates seasonal protective clothing (self-certification) with basic protection against light rain and drizzle and with seams which are not necessarily made waterproof.



EN ISO 20471:2013 +A1:2016

This clothing makes the user stand out where visibility is poor in high-risk situations



EN ISO 20471

The combination of a fluorescent base material with retroreflective strips signals your presence in daylight or in the dark (in the light from headlamps) respectively.

Protective clothing with reference HRVx

<i>x</i> (See label)	Fluorescent (m ²)	Retroreflective (m ²)
Class 1	≥ 0.14	≥ 0.10
Class 2	≥ 0.50	≥ 0.13
Class 3	≥ 0.80	≥ 0.20

The garment must be fully closed and must not be covered in order to ensure visibility.

Visibility is dependent on use (e.g. soiling, etc.) care (repairs, cleaning, etc.) and storage (to be stored preferably in a dark environment). The maximum permissible number of care cycles is shown on the label as 'Max xx' (this is an indication of the number of laundry cycles after which certification has been carried out) but this is not the only factor that will determine the lifespan of the garment. The lifespan will also depend on use, care, storage conditions, etc. Caution is advised when laundering together with other dark garments (risk of colourstaining). After exposure to light, the colour may fall in a different colour area from the original, however the colour will then still comply with EN ISO 20471.

For P.P.E. with removable sleeves its class may (will) be lower with the sleeves unzipped (see label). A sleeveless EN ISO 20471 Class 3 garment must be combined with a garment which has long sleeves and/or long trouser legs with 2 retroreflective strips 5 cm wide and a minimum of 5 cm of fluorescence all around the sleeves and/or trouser legs respectively.

Seasonal protective clothing - Thermal protection

This pictogram **without** any mention of EN 14058 standard indicates seasonal protective clothing (self-certification) with a basic thermal lining that is to be used in an environment with humidity and windchill (for mild cold, temperatures above -5°C).



EN 14058:2017

Protection against cool environments (possible combination of humidity and wind at temperatures not lower than -5°C)



EN 14058

Protective clothing with reference LC a, b, c, d

- a Thermal resistance R_{ct} measured on fabric combination: class 1 to 4. (see label)
- b Optional: air permeability class: classes 1 to 3. (see label)
- c Optional for a = 1, 2 or 3: resultant effective thermal insulation value $I_{cl,er}$ (in m².K/W), measured dynamically on clothing combined with type R underclothing item code (see label for value).

d Optional: resistance to water penetration > 0.8 m water column.

An 'X' on the label means that this optional property has not been tested.

	a: Rct (m² K/W)	b: Air permeability AP (mm/s)
Class 1	$0.06 \leq Rct < 0.12$	$100 > AP$
Class 2	$0.12 \leq Rct < 0.18$	$5 < AP \leq 100$
Class 3	$0.18 \leq Rct < 0.25$	$AP \leq 5$
Class 4	$0.25 \leq Rct$	/

For the intended field of use of classes 1 to 4 inclusive, see tables on Sioen website:
<http://sio.to/eudoc>

Thermal insulation can decrease after laundering or due to compression. This garment protects only those parts of the body that are covered by the garment. For complete protection, the entire body including arms and legs needs to be covered. A bodywarmer or waistcoat only provides supplementary protection.

EN 342:2017

Protection against cold environments (possible combination of humidity and wind at temperatures below -5 °C)



Protective clothing with reference DF

- a Resultant effective thermal insulation value $I_{cl,er}$ (in m².K/W), measured dynamically on clothing combined with type B underclothing. (or alternatively type C or R underwear, see label for value)
- b Air permeability: classes 1 to 3. (see label)
- c Optional: WP means 'Resistance to waterpenetration' > 0.8 m water column.

An 'X' on the label means that this optional property has not been tested.

	b: Air permeability AP (mm/s)	Application: air speed
Class 1	$100 < AP$	< 1 m/s indoors
Class 2	$5 < AP \leq 100$	< 5 m/s
Class 3	$AP \leq 5$	≥ 5 m/s, typical for outdoors

You locate the $I_{cl,er}$ value (in m².K/W), which you can read off the label, in the left-hand column in the table below. In the corresponding row to the right of it you will find an indication of the minimum temperature in °C (corrected for wind chill) for various activity levels and air speeds to which one can be exposed for 1 or 8 hours (provided it is worn with the corresponding underclothing). Over-insulation should also be avoided, as should perspiration.

In order to benefit from optimum protection in your specific work situation, it needs to be interspersed with adequate breaks in a heated room, in which this P.P.E. should preferably be (partially) removed or opened.

	Wearer: Standing			
Insulation	Light activity, 75 W/m ²			
	Air speed			
	0.4 m/s		3 m/s	
	8 h	1 h	8 h	1 h
0.265 m ² .K/W	13	0	19	7
0.310 m ² .K/W	10	-4	17	3
0.390 m ² .K/W	5	-12	13	-3
0.470 m ² .K/W	0	-20	7	-9
0.540 m ² .K/W	-5	-26	4	-14
0.620 m ² .K/W	-10	-32	0	-20

	Wearer: moving							
Insulation	Light activity, 115 W/m ²				Moderate activity, 170 W/m ²			
	Air speed				Air speed			
	0.4 m/s		3 m/s		0.4 m/s		3 m/s	
	8 h	1 h	8 h	1 h	8 h	1 h	8 h	1 h
0.265 m ² .K/W	3	-12	9	-3	-12	-28	-2	-16
0.310 m ² .K/W	-2	-18	6	-8	-18	-36	-7	-22
0.390 m ² .K/W	-9	-28	0	-16	-29	-49	-16	-33
0.470 m ² .K/W	-17	-38	-6	-24	-40	-60	-24	-43
0.540 m ² .K/W	-24	-45	-11	-30	-49	-71	-32	-52
0.620 m ² .K/W	-31	-55	-17	-38	-60	-84	-40	-61

Additional measures may need to be taken for applications below -50°C (respiratory protection, skin protection, etc.)!

Thermal insulation can decrease due to laundering or compression. A freezer jacket, trousers and hood plus corresponding underclothing must always be worn together in order to meet the above specifications.

Info: Type B underwear: long-sleeve T-shirt, long underpants, socks, felt slippers, thermal coat, thermal trousers, knitted gloves and balaclava with this P.P.E. as the outer layer. Specific information about type C underwear can be found on the Sioen website: <http://>

EN 510

Risk of entanglement with moving parts



EN 510

Protective clothing with RO item code

Protective clothing that reduces the risk of entanglement with moving machinery - or parts thereof - for wearers who work in the vicinity of machinery or equipment with hazardous moving parts.

With a 2-piece P.P.E. suit, it requires to be worn together and there must be no gaps occurring between the jacket and trousers as a result of body movements. This clothing must be worn as far as possible fitted/close to the body and be closed completely.

Clothing capable of signaling the user's presence visually

This clothing does not meet the requirements and is not in accordance with EN ISO 20471.



SIOEN

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