SIOEN



Sustainable Multinorm Protective Clothing



Sustainable protective clothing

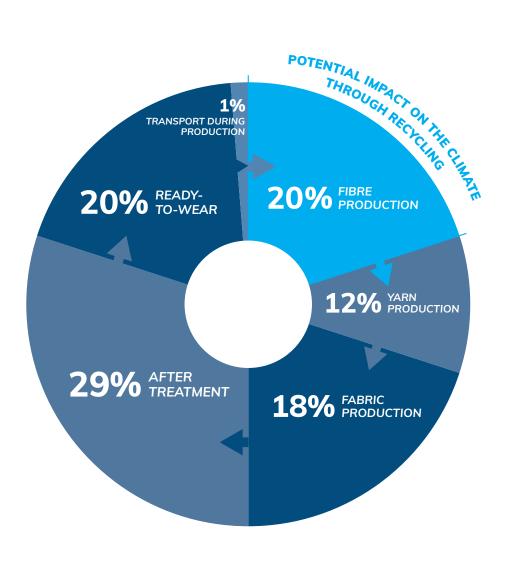
Our technical protective clothing is used in many different working conditions. Our garments often make the difference between life and death and should meet the highest standards. During product development, Sioen is always looking for the best solution for a particular protection level, considering comfort, ease of use and maintenance and sustainability.

We are always looking for the best balance, without compromising safety and protection. In this new collection we have paid special attention to the sustainability aspect.

Sustainability is obviously more than just recycling used products.

Production process of protective clothing and potential impact on the climate

In the graph below we see the various steps in the **production** process of protective clothing and their potential impact on the climate.



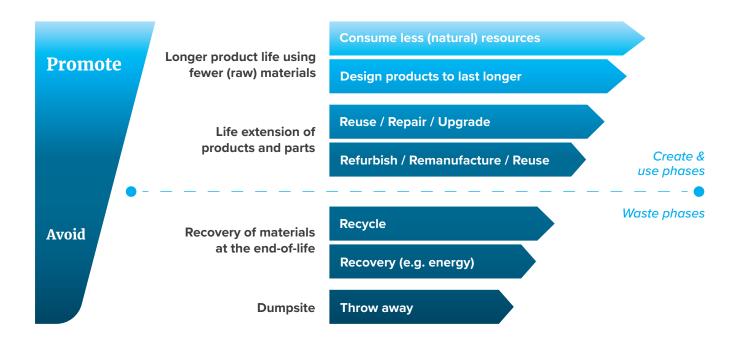
With recycling, we can only achieve a reduction of the impact on the climate in the production of the fibres, because we reuse the recycled raw materials.

When using recycled raw materials, there is no reduction of the impact in the other production steps.

This possible reduction of up to 20% certainly is worth mentioning.

However, we achieve a bigger impact if we manage to extend the products' lifespan. In that case, we reduce the impact on the environment in all stages of garment production, simply because we produce less.

Therefore, we apply a number of **important basic principles** in the development and production of our sustainable clothing. You can find those principles below in order of importance:



In this brochure we will further explain the following principles

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Efficient use of raw materials

The purest form of prevention.

We prefer to use **lighter materials and products**, always considering the required protection level and the expected lifespan of personal protective equipment (PPE). As a result, we automatically use less raw materials.

Where possible, we gradually introduce recycled (e.g. r-PET) or (bio-) renewable raw materials with the lowest possible footprint in terms of CO_2 emissions, water and energy consumption, use of chemicals, etc. (e.g. replacing cotton with viscose) or TencelTM Lyocell).

Using renewable raw materials

We use renewable raw materials, such as Tencel[™] Lyocell fibres, which is 100% bio-cellulose from sustainably produced wood.

Certified and checked wood:

Almost 100% of the wood and pulp used to make the Lyocell fibre is FSC® or PEFC™ certified or checked.

No use of chemical fertilisers:

No pesticides are needed in contrast to when you grow cotton.

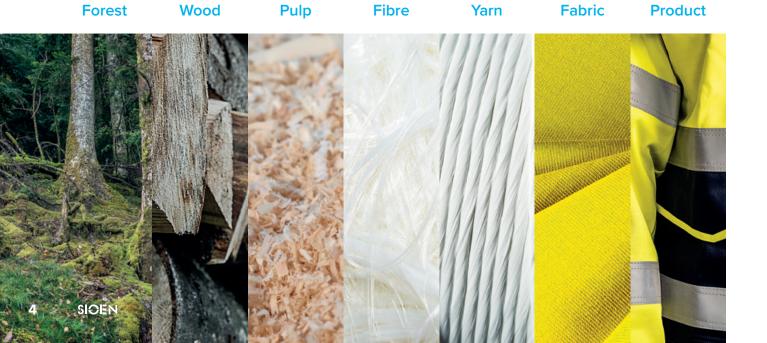
Closed production:

Converting wood pulp into bio-cellulose fibres is a closed cycle. Up to **99.8% of chemicals and solvents are recycled**.

Optimised water consumption:

Up to **21 x less water** needed compared to growing cotton.





Using recycled raw materials

For our sustainable range, we use sustainable raw materials, such as r-PES, which is 100% thermoplastic recycled polyester.

100% upcycling:

Use of 100% recycled polyester from PET bottles and post-industrial waste (fibres are traceable and certified).

45% energy, 20% water and 30% CO₂ emission is saved compared to the production of virgin polyester.

100% recycled polyester

-450/ energy use

-200/ water consumption

-300/ CO_2 -emissions

Certified to the Global Recycled Standard (GRS)

All our raw materials are certified according to the Global Recycled Standard (GRS). GRS is an international, voluntary standard applicable to the entire product and sets requirements for third-party certification in relation to recycled content, security chain, social and environmental practices and chemical restrictions. The GRS objective is to increase the use of recycled materials in products and to limit/eliminate the damage caused by its production.

The GRS objectives are:

- ☑ Offering assurance that the materials used in the end product are actually recycled and processed in a more sustainable manner.
- ☑ Making recycled source materials traceable.
- ☑ Offering customers, both brands and consumers, a tool in order to make informed decisions.
- $\ensuremath{\,\boxtimes\,}$ Reducing the harmful impact of production on people and the environment.



Oeko-Tex® 100 certified qualities

When choosing the raw materials used, Sioen makes maximum use of **Oeko-Tex® 100 certified qualities**. This standard is one of the world's most well-known labels for textiles that have been tested for harmful substances. If a textile product has the Oeko-Tex® 100 label, this means that even the smallest components have been tested for harmful substances and that the product is not harmful to health.

Of course, attention is also paid to sustainable packaging materials and methods, energy consumption, transport,...



STANDARD 100

> 1012048 Centexbel

Eco-design for extending the lifespan

The longer we can continue to use the same protective clothing, the lower the product's impact on the environment. Ultimately, this also significantly reduces the "total cost of ownership".

Choosing materials with the highest possible lifespan results in replacing PPE less quickly.

The following elements are important in the choice of materials:

- Paying attention to a high mechanical strength (tear strength, abrasion, pilling, etc.) and good colour fastness, during use and after washing.
- Increasing the max. number of washing and drying cycles of fabrics and components.
- Choosing better wash-resistant finishes (FLC, etc.).
- Setting high requirements in terms of resistance to hydrolysis (moisture, temperature, etc.) for plastics (adhesives, coatings, laminates, etc.).

PPE is, of course, sometimes used in aggressive work conditions where wear and damage cannot be avoided. Therefore, we pay as much attention as possible to ecodesign, meaning that our protective clothing is designed in such a way that repairs can be carried out more easily if necessary so that we can extend the lifespan. This can be done, for example, by providing an access or opening in the lining of a garment or, for ease of repair, by not incorporating retro-reflective bands into the seam.

Sioen is always available for additional information, such as repair and cleaning instructions.





Eco-design for reuse / dismantling & recycling

Eco-design means that from the protective clothing's concept, the follow-up process after the garment will be taken out of use is also taken into account.

The following matters should be considered:

homogeneity in the choice of materials and components. For example, the YKK zippers used are made from high-quality recycled polyester. In this way the zippers do not have to be separated from the rest of the garment when recycled because the zipper tape, the coil as well as the fabric used are produced in the same recycled polyester.

► Striving for a maximum

- ► The technical and economic feasibility of disassembling and sorting clothing materials. Therefore, research is also being carried out into how degradable yarns can be used in the future.
- ▶ Removing disruptive components for recycling. For example, we do not stitch the reflective tapes completely into the seam so that the tape can be easily removed during recycling.



Producing with care for people and the environment

SUSTAINABLE DEVELOPMENT GCALS

Sioen Apparel is a division of the international Sioen group, which is fully committed to sustainability.

At Sioen, Corporate Social Responsibility (CSR) - all actions we take to have a positive impact on the world - is a source of innovation and value creation for all parties involved. It is an important part of our corporate strategy, and it has been translated into our corporate slogan "Protection through innovation" for decades, improving people's lives.

We use the triple bottom line and the SDGs (Sustainable Development Goals) of the UN as a guideline for our activities and priorities. Our actions translate into certificates, audits, memberships and awards.

The group has CSR in its mission, vision, values and strategy. Sioen implements this in a sustainability policy.

In addition, the group also reports on the 5 Ps of CSR (People, Planet, Prosperity, Peace, Partnerships) and on actions within the 17 SDGs in a CSR manifest. You can read about our various initiatives on the group's website and social media channels.

csr.sioen.com

► Download our latest Environmental, Social and Governance Report 2022







STeP certification





STeP

14000049 Centexbel

Sioen Apparel is responsible for all parts of the production and sales process that are STeP (Sustainable Textiles Production) by Oeko-Tex® certified:

- ▶ R&D:
- design;
- product development;
- selection of suppliers, raw materials and purchasing;
- ▶ CE certification;
- production instructions;
- laboratory and quality control;
- planning;
- sales;
- logistics and distribution.

This means that those activities are checked by the STeP management system. Sioen achieves the highest score, which is level 3. The system's six pillars are:

- **1.** quality management (cf. ISO 9001);
- 2. environmental management (cf. ISO 14001);
- **3.** environmental performance;
- 4. chemical management;
- **5.** safety management (cf. ISO 45001);
- **6.** and social conformity (cf. SA8000).

We go beyond our own processes. We asked all our suppliers to sign a STeP by OEKO-TEX® Code of Conduct in which they agree that they will apply the same rules that apply to our company when it comes to CSR. At the same time, we also asked them to sign an Amfori BSCI Code of Conduct.

Our own production sites that are responsible for the production obtain their own ISO 14001 and ISO 45001 certificates and/or are audited for Corporate Social Responsibility (BSCI) according to AMFORI or WRAP (Worldwide Responsible Accredited Production).

ISO 14001

ISO 14001 is an internationally accepted standard that indicates the requirements of a good environmental management system. OHSAS 18001 is a management system standard for safe and healthy working conditions

It goes without saying that the United Nations' 17 Sustainable Development Goals are also central in our policy.





Sustainable multinorm protective clothing

SIO-SAFE™ ESSENTIAL ECO











SIO-SAFE™ EXTRA ECO





H46 Royal Blue B98 Navy blue M44 Grey



B98 Navy blue H46 Royal Blue M44 Grey



B98 Navy blue M44 Grey H46 Royal Blue



















SIO-SAFETM ESSENTIAL ECO

Innovative ecological FR fabric, 50 % green fibres, no compromise on safety

Sio-Safe™ Essential Eco is a high quality flame retardant treated fabric with the smallest environmental footprint possible and conforms to the highest standards for multi-norm protection. Eco-friendly Tencel™ Lyocell produced from responsibly-sourced wood and Repreve® 100 % recycled polyester fibres replace the regular cotton and polyester fibres, resulting in a FR-treated fabric containing almost 50 % green fibres.

A greener composition without compromising on comfort and protection. Is it even possible? Sio-SafeTM Essential Eco performs exceptionally on FR protection in an industrial setting. The fabric is soft on the skin and is very durable withstanding frequent industrial washing. The fabric even provides improved breathability and moisture management properties thanks to the use of TencelTM Lyocell.

Sio-Safe[™] Essential Eco is a blend of 50% FR cotton – 30% Tencel[™] Lyocell – 19% Repreve© recycled polyester – 1% AST; weight +- 320 g/m²









Jasper - 086VA2PJH

ECO jacket with ARC protection (APC1)

Looking for a jacket with ARC protection level 1 that has the lowest possible impact on the environment? This durable jacket was made of our Sio-SafeTM Essential Eco fabric. We use Eco-friendly TencelTM Lyocell and Repreve[©] 100 % recycled polyester instead of the regular cotton and polyester. The Jasper is soft, comfortable and breathable without compromising on protection. In addition, this jacket is designed for disassembly, meaning that it can be dismantled easily once it's taken out of use.

Fabric:

Sio-Safe™ Essential Eco: 50% cotton + 30% Tencel™ Lyocell + 19% recycled polyester + 1% ast; \pm 320 g/m

Colour:

987 Navy/Hi-vis yellow

European Standards:

















-1,66 kg CO₂ eq/pc



-33,5 m³ H₃O eq/pc

Calangues - 084VA2PJH

ECO trousers with ARC protection (APC1)

The Calanques durable trousers perfectly fit our Jasper jacket. They provide the same level 1 ARC protection, have matching designs and are also made of our durable Sio-SafeTM Essential Eco fabric. These sustainable trousers are very soft and comfortable. Their durable features can be attributed to using Eco-friendly TenceITM Lyocell and Repreve® recycled polyester instead of the regular cotton and polyester. In addition, they are designed for disassembly.

Sio-Safe[™] Essential Eco: 50% cotton + 30% Tencel[™] Lyocell + 19% recycled polyester + 1% ast; ± 320 g/m

Colour:

987 Navy/Hi-vis yellow

European Standards:









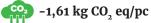














-32,6 m3 H2O eq/pc



Komodo - 087VA2PJH

Hi-vis ECO jacket with ARC protection (APC1)

The Komodo is the hi-vis version of our Jasper ECO jacket. Thanks to using the Sio-SafeTM Essential Eco fabric, we switched to Eco-friendly TencelTM Lyocell and Repreve® recycled polyester instead of the regular cotton and polyester. Even though the FR-treated fabric is made with 50% recycled materials, the jacket offers the same high quality protection. It is soft, comfortable and breathable. In addition, this jacket is designed for disassembly, meaning that it can be dismantled easily once it's taken out of use.

Sio-Safe™ Essential Eco: 50% cotton + 30% Tencel™ Lyocell + 19% recycled polyester + 1% ast; \pm 320 g/m

Colour:

049 Hi-Vis Yellow/Navy

European Standards:

















-1,64 kg CO₂ eq/pc



-33,2 m³ H₃O eq/pc

Rondane - 085VA2PJH

Hi-vis ECO trousers with ARC protection

The Rondane are durable hi-vis trousers that match the Komodo jacket. As part of our sustainable range, these trousers are made with about 50% of green materials. Durable materials doesn't mean compromising on protection level. The Sio-SafeTM Essential Eco fabric provides high quality protection with a lower ecological impact. These breathable, very soft and comfortable trousers are also designed for disassembly.

Fabric:

Sio-Safe™ Essential Eco: 50% cotton + 30% Tencel™ Lyocell + 19% recycled polyester + 1% ast; ± 320 g/m

Colour:

049 Hi-Vis Yellow/Navy

European Standards:









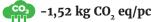














-30,8 m3 H2O eq/pc

15

SIO-SAFETM EXTRA ECO

Environmentally-friendly inherent flame retardant fabric

For **Sio-Safe[™] Extra Eco** we use the renewable Tencel[™] Lyocell fibres. They are 100% bio-cellulose from sustainably sourced wood, significantly reducing the fabric's water consumption.

Even though Sio-SafeTM Extra's composition has changed, the fabric's softness and suppleness remains, together with its excellent protection against severe body burns caused by the exposure to an electric arc or other industrial heat and flame hazards. Thanks to choosing TencelTM Lyocell fibres, Sio-safeTM Extra Eco even provides better moisture management, improving your comfort.

For PF9: 54% FR Modacrylic, 45% TencelTM Lyocell + 1% AST; weight +/- 300 g/m²





M44 Grev





















Modena - 019VA2PF9

ECO Jacket with ARC protection

This very comfortable jacket is made from a light, inherently flame-retardant, breathable and supple fabric with moistureregulating properties, harmless to the skin. Modena is shrink and pilling resistant even after frequent washing. This jacket with arc protection is anti-static and offers excellent protection against heat and metal splashes. The extended back contributes to extra wearing comfort.

Fabric:

Sio-Safe™ Extra Eco: 54% modacrylic + 45% Tencel™ Lyocell + 1% AST; $\pm 300 \text{ g/m}^2$

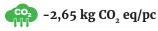
Colour:

H46 Royal Blue B98 Navy blue M44 Grey

European Standards:









-83,4 m3 H,O eq/pc

Varese - 021VN2PF9

ECO Trousers with ARC protection

Are you looking for light and comfortable trousers that protect you from heat and metal splashes at the same time? The Varese, made from an inherently flame-retardant, breathable and supple fabric with moisture-regulating properties, is exactly what you are looking for. It is anti-static, offers arc protection and is resistant to shrinking and pilling. With five pockets and knee pockets for knee protection, this is a very functional pair of trousers.

Fabric:

Sio-Safe™ Extra Eco: 54% modacrylic + 45% Tencel™ Lyocell + 1% AST; ± 300 g/m²

Colour:

B98 Navy blue H46 Royal Blue M44 Grey

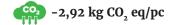
European Standards:













-91,9 m3 H2O eq/pc

Gramat - 023VN2PF9

ECO Bib & brace with ARC protection

These very comfortable and practical bib and brace feels light and supple thanks to the breathable fabric with moisture-regulating properties. The fabric is anti-static and inherently flame retardant; it protects you against heat and metal splashes. In addition, the Gramat retains its strength, it does not shrink and is resistant to pilling even after frequent washing. Both the braces and the waist are elastic and adjustable. With six pockets you can certainly store all your tools in these handy bib and brace trousers.

Fabric:

Sio-Safe[™] Extra Eco: 54% modacrylic + 45% TencelTM Lyocell + 1% AST; \pm 300 g/m²

Colour:

B98 Navy blue M44 Grey H46 Royal Blue

European Standards:















Couvin - 031VN2PF9

ECO Coverall with ARC protection

The Couvin is a very comfortable coverall with arc protection made from a light, inherently flame-retardant, breathable and supple fabric with moisture-regulating properties, harmless to the skin. This anti-static coverall protects against heat and metal splashes and is shrink and pilling resistant, even after frequent washing. The double-stitched reflective FR strips ensure that you are visible. The many pockets, six on the outside, one on the inside, are extra just like the knee pockets in which you can slide knee protection for extra comfort!

Fabric:

Sio-Safe™ Extra Eco: 54% modacrylic + 45% TencelTM Lyocell + 1% AST; \pm 300 g/m²

Colour:

B98 Navy blue

European Standards:







Sartis - 079VA2PF9

ECO Jacket with ARC protection

The Sartis jacket is a soft and comfortable jacket that offers protection against many industrial hazards such as protection against the thermal hazards of an electric ARC. The jacket has a stand up collar so your neck is protected. The elongated back tail ensures that there is sufficient overlap between jacket and trousers so your body is fully covered and protected. Flame retardant reflective stripes were added for some extra visibility. The jacket has also good moisture regulating properties thanks to a special blend of fibres that was used. In short, the Sartis gives you a comfortable and protective feeling.

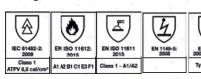
Fabric:

Sio-Safe™ Extra Eco: 54% modacrylic + 45% TencelTM Lyocell + 1% AST; \pm 300 g/m²

Colour:

B98 Navy blue

European Standards:





Rumes - 080VA2PF9

ECO Trousers with ARC protection

The Rumes trousers are made from an inherently flame retardant fabric and offer excellent protection against heat, flames and the thermal hazards of an electric ARC. The Rumes can be worn in many industrial environments as these trousers also protect you against welding sparks and liquid chemicals. For tasks where this is necessary, knee protection can be slid in the knee pockets for extra comfort. For your visibility and protection, the leg ends are equipped with reflective tape.

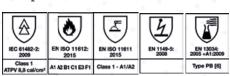
Fabric:

Sio-Safe™ Extra Eco: 54% modacrylic + 45% TencelTM Lyocell + 1% AST; \pm 300 g/m²

Colour:

B98 Navy blue

European Standards:







Reggio - 020VA2PF9

Hi-vis ECO jacket with ARC protection

The Reggio hi-vis jacket really stands out. Not only because of its double stitched reflective FR strips, but also because of its looks. The flaps of the chest and waist pockets are finished with a piping in contrasting colour. The jacket with arc protection is anti-static and not only protects against heat and metal splashes, but at the same time it feels comfortable to wear. This is the result of the light, inherently flame-retardant, breathable and supple fabric of which it is made. The Reggio is shrinkage and pilling resistant, even after frequent washing. The reinforced seams increase the lifespan of the jacket.

Fabric:

Sio-Safe™ Extra Eco: 54% modacrylic + 45% Tencel™ Lyocell + 1% AST; \pm 300 g/m²

Colour:

049 Hi-Vis Yellow/Navy

European Standards:



















-2,72 kg CO₂ eq/pc



-85,6 m3 H,O eq/pc

Matour - 022VN2PF9

Hi-vis ECO trousers with ARC protection

Safety first with the Matour hi-vis trousers: you are very visible as a result of the double-stitched reflective FR strips, and optimally protected by the arc protective properties of these trousers. On the one hand, the fabric has inherently flame retardant and anti-static properties and on the other hand, moisture-regulating properties, so that the trousers are not only breathable and supple, but also protect you against heat and metal splashes. With five pockets, knee pockets for protection and an elastic waist with belt loops, these trousers are very practical.

Fabric:

Sio-Safe[™] Extra Eco: 54% modacrylic + 45% Tencel[™] Lyocell + 1% AST; ± 300 g/m²

Colour:

049 Hi-Vis Yellow/Navy

European Standards:

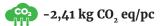














-76 m³ H₂O eq/pc

Ambier - 024VN2PF9

Hi-vis ECO bib & brace with ARC protection

The Ambier signalisation bib trousers feel light and supple thanks to the breathable fabric with moisture-regulating properties. The double-stitched reflective FR strips increase your visibility and the inherently flame-retardant properties of the fabric protect you from heat and metal splashes. These stylish and comfortable bib and brace are shrink and pilling resistant and have a high wear resistance. The many functional pockets are a plus, as are the knee pockets.

Fabric:

Sio-Safe™ Extra Eco: 54% modacrylic + 45% Tencel™ Lyocell + 1% AST; ± 300 g/m²

Colour:

049 Hi-Vis Yellow/Navy

European Standards:















-3 kg CO₂ eq/pc



-94,4 m3 H2O eq/pc

Fareins - 026VN2PF9

Hi-vis ECO coverall with ARC protection

Protect yourself against the everyday dangers of your job with this hi-vis coverall with arc protection. The coverall has double stitched reflective FR strips for increased visibility. In this flame retardant anti-static coverall you are protected from heat and metal splashes, but you feel comfortable because of the light, breathable and supple fabric with moisture-regulating and flame-retardant properties. Increase your comfort by inserting knee protection into the knee pockets that are provided and narrow your sleeves for a perfect fit. The Fareins retains its shape as the coverall is shrink and pilling resistant, even after frequent washing.

Fabric:

Sio-Safe™ Extra Eco: 54% modacrylic + 45% Tencel™ Lyocell + 1% AST; ± 300 g/m²

Colour:

049 Hi-Vis Yellow/Navy

European Standards:





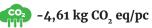














-145,4 m3 H,O eq/pc

Glacier - 7297A2PJD

ECO hi-vis rain jacket with ARC protection (APC 2)



The Glacier is based on our Nash, one of our bestsellers and a reliable, very comfortable rain jacket of sublime quality. This ARC class 2 jacket is perfectly windand waterproof and now has the Sustainable Sioen label, meaning that we have updated its design and construction to reduce its environmental impact. Having a closer look, we reduced the weight of the used fabrics, changed the former cotton to renewable TenceITM Lyocell, modified its confection to recycle it more easily at its end of life and made it easier to repair so that the lifetime of the garment can be extended.

Fabric:

Sio-Safe™ Extra Eco: 51% FR modacrylic + 43% Tencel™ Lyocell + 5% aramid + 1% AST; ± 245g/m²

Colour

278 Hi-Vis Yellow/Navy

European Standards:





Rea - 7299A2PJD

Hood with ARC protection (Cl 2)

The Rea hood not only protects you from the wind and rain, but it also provides APC2 ARC protection. This hood is based on our Anderson and has a flap, chin guard, drawstring and a touch & close fastening. The Rea is the perfect addition to our Glacier ECO high visibility jacket with ARC protection.

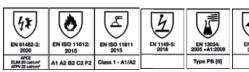
Fabric:

Sio-Safe™ Extra Eco: 51% FR modacrylic + 43% Tencel™ Lyocell + 5% aramid + 1% AST; \pm 245g/m²

Colour:

B75 Navy blue

European Standards:







-3 kg CO₂ eq/pc



-94,4 m³ H₂O eq/pc





Sioen PPC

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