



SHIELD Scientific

compliance comfort protection

SHIELDskin XTREME™ gloves
for CONTAMINATION CONTROL

Exceeding expectations
in critical environments

DI

DI+

DI++

STERILE



IT IS IN THE NAME!

The name of our company, SHIELD Scientific, reflects the particular focus we have on the laboratory and high technology sectors. Our aim is to bring to these markets personal protective equipment that for the first time is adapted to the needs of these segments.



Compliance

Today it may sound natural to select gloves that are CE marked, PPE Category III and have an AQL of 0.65. It was not always the case. We were among the first to offer cleanroom gloves classified as category III (Complex Design), as defined in the PPE Directive 89/686/EEC, highlighting the fact that only category III gloves were likely to provide the necessary personal protection. Likewise whether you are seeking an extra barrier for chemical protection or additional protection from microbiological hazards, SHIELD Scientific gloves continue to exceed your expectations by offering 40 cm gloves.

Comfort

Comfort is very often at the top of the user's criteria for selection of gloves. Whilst numerous manufacturers are engaged in a rationalisation process – in particular a reduction of thickness/length of the glove in an effort to cut costs – SHIELD Scientific continue to alert users about the importance of thickness and length in terms of maintaining the protection performance of the glove. We also embrace the latest advances in synthetic glove technology. By offering gloves based on nitrile with a blend of neoprene, users can experience a level of elasticity not normally associated with nitrile gloves.



Protection

When selecting a glove, its protective properties are often lost in the jungle of features offered to users by the manufacturers. The complexity maintained by glove producers surrounding norms, cost effectiveness, logistics and comfort usually drives the choice of the users at the expense of protection. Quite simply, **THE THICKER AND LONGER THE GLOVE, THE BETTER YOU WILL BE PROTECTED.** One of the newest techniques developed by SHIELD Scientific is twinSHIELD™ technology. This is a unique double layer system to improve significantly the protection and comfort mix and to bring to you a new era of disposable glove technology.



AT YOUR SERVICE!

SHIELD Scientific is a European company. The headquarters are strategically based in the Netherlands. In Malaysia we have storage space for up to 2000 pallets, whilst logistics management is tightly controlled. The manufacturing sites are all certified according to ISO 9001: 2008 and ISO 13485:2003. Distribution throughout Europe is provided by a network of Master Distributors. At SHIELD Scientific, everyone is focused on the needs of the customer with a view to developing long-term partnerships where the emphasis is on mutual gain.

www.shieldscientific.com is the nerve centre for the dissemination of information! Numerous information is available to the general public covering technical questions and those relating to the activities of SHIELD Scientific. Our website was built to be an interactive tool, a source of information to help users make the right decision.



Glove selection guide

Selecting laboratory or cleanroom gloves can be really agonizing, as there are important choices and understanding the advantages and disadvantages can be difficult to appreciate. Our On-Line Glove Selection Guide is designed to help you to facilitate this choice,



Chemical resistance guide

We have developed one of the most comprehensive chemical resistance guides. Data can be selected either by CAS number, chemical name or product type. The testing has been conducted by reputable testing laboratories according to EN374-3:2003 (Determination of resistance to permeation by chemicals).



Product specifications

For each glove, a product data sheet can be consulted online. This document covers all the technical aspects such as product and commercial information, physical properties, applicable norms, performance data, quality systems etc.



Certificates and tests reports

We offer a wide variety of certification on our disposable gloves. In this respect, Declarations of Conformity (DoC) are available on all cleanroom gloves. Additionally, we have conducted many tests to help the users in the selection process. As an example, upon request, test data based on ASTM D6978 (rather than the less stringent EN374-3) is available on a range of chemotherapy gloves.



Education

We are developing tools such as posters to help those engaged in risk assessments, process improvements and cost optimization. On a daily basis we conduct joint visits with our distributors and provide training of the distributor sales teams that are responsible for selling our products.



Extranet

Secure access is provided to distributors and customers wishing to obtain directly more specific commercial and technical information such as Certificates of Analysis or certificates of Irradiation.

Contamination Control Expertise

SHIELDskin Xtreme™ cleanroom gloves are branded very differently to many of our competitors. Whereas other glove manufacturers may wish to brand their gloves as ISO class 4 or ISO Class 5, we challenge this paradigm and would ask how classifications for airborne particulates relate to gloves. In reality there are no internationally recognised specification limits that would determine whether a cleanroom glove is ISO Class 4 or ISO Class 5 compatible. Accordingly it is left to users to decide what is suitable for their process.

From the following simple branding concept, the user can very clearly see that washing in deionised water provides the essential differentiation in terms of cleanliness properties.

BRANDING	PROCESS	USER BENEFITS
DI	BASIC CONTAMINATION CONTROL	Single washed in deionised water • Typical particle levels < 3000 per cm ² ≥ 0.5 µm
DI+	HIGH CONTAMINATION CONTROL	Triple washed in deionised water • Typical particle levels < 900-950 per cm ² ≥ 0.5 µm
DI++	EXTREME CONTAMINATION CONTROL	Multi Washed in deionised water • Typical particle levels < 650 per cm ² ≥ 0.5 µm
STERILE	BIO CONTAMINATION CONTROL	Gamma irradiated • Free from viable microorganisms plus guaranteed low levels of endotoxin

With the SHIELD Scientific product brand code, pre-selecting the right gloves becomes now an easy exercise!

SHIELDskin XTREME™

DI NON STERILE GLOVES



SHIELDskin Xtreme™ DI gloves offer low levels of particles and ions, by virtue of the gloves being rinsed in deionized water. This range of gloves represents the economic solution for non-sterile cleanrooms.

Decontamination & packing processes

The SHIELDskin Xtreme™ gloves are processed with deionised water laundering cycles to achieve low levels of particles, extractable ions and non-volatile residues. Prior to packaging, the gloves are dried under HEPA filter driers. These critical steps are performed in controlled environments.

Certificate of conformance / Certificate of irradiation

As a guarantee of industry leading performance, we supply certificates on all our gloves. The certificates of conformance provide lot specific data such as levels of particles and extractables, whilst for sterile gloves test data on endotoxin levels is also presented. The certificates of irradiation are available for every lot of sterile gloves. Sterile gloves are terminally sterilised by gamma irradiation to a Sterility Assurance Level (SAL) of 10⁻⁶, in accordance with guidelines detailed in ANSI/AAMI/ EN ISO 11137:2006 "Sterilization of Healthcare Products – Radiation".

ESD solutions

Uncontrolled static discharge can lead to serious losses in the electronics industry. It is also a concern in some areas of the pharmaceutical industry. For these reasons, SHIELDskin Xtreme™ non sterile nitrile gloves have undergone testing according to EN1149-1/2/3 & 5 (test methods for measuring electrostatic properties on protective clothing).

Cytotoxic substances protection

To respond to the need for greater personal protection when handling cytotoxic substances, we were amongst the first companies in Europe to promote testing of gloves against ASTM D6978 rather than the less stringent EN374-3.

Bio contamination protection

All our SHIELDskin Xtreme™ Sterile gloves (except SHIELDskin Xtreme™ Sterile Latex 300 DI) offer the highest level of process and personal protection with an Acceptable Quality Level (AQL) for pinholes of 0,65. AQL is a crucial parameter for determining barrier properties. An AQL of 0,65 represents over 50% less defects than comparable sterile gloves on the market, providing superior process and personal protection from liquid penetration by micro-organisms and chemicals.

SHIELDskin Xtreme™ Orange Nitrile™ 300 DI

Multi-polymer (nitrile + polychloroprene), powder free, twinSHIELD™ technology (double layers / twin colours: Orange/White), accelerator free, Single washed in deionised water (≤ 3000 particles/cm² ≥ 0.5µm), non-sterile.

Size	XS/6	S/7	M/8	L/9	XL/10	XXL/11
Code	69 6451	69 6452	69 6453	69 6454	69 6455	69 6456

100 gloves / poly bag 10 poly bags / case

PPE CAT. III AQL 1,5 CE 0120 EN374:2003 EN374-2003 LEVEL 2

SHIELDskin Xtreme™ White Nitrile 300 DI

100% nitrile, powder free, white colour, single washed in deionised water (≤ 3000 particles/cm² ≥ 0.5µm), non-sterile.

Size	XS/6	S/7	M/8	L/9	XL/10	XXL/11
Code	69 8451	69 8452	69 8453	69 8454	69 8455	69 8456

100 gloves / poly bag 10 poly bags / case

PPE CAT. III AQL 1,5 CE 0120 EN374:2003 EN374-2003 LEVEL 2

SHIELDskin Xtreme™ DI+ gloves are manufactured for use in the cleanest environments in non-sterile cleanrooms. Ultra low levels of particles and ionic residues make these products particularly suitable for the microelectronic, medical device and pharmaceutical industries.



SHIELDskin Xtreme™ Eco Nitrile 300 DI+

100% nitrile, powder free, white colour, triple washed in deionised water (≤ 900 particles/cm² $\geq 0.5\mu\text{m}$), non-sterile.

Size	XS/6	S/7	M/8	L/9	XL/10	XXL/11
Code	68 8651	68 8652	68 8653	68 8654	68 8655	68 8656

100 gloves / poly bag 15 poly bags / case

PPE CAT. III AQL 1,5 CE 0120 EN374:2003 EN374:2003 LEVEL 2

SHIELDskin Xtreme™ Bright Latex 300 DI+

100% natural latex, powder free, fully textured, natural colour, triple washed in deionised water (≤ 900 particles/cm² $\geq 0.5\mu\text{m}$), non-sterile.

Size	XS/6	S/7	M/8	L/9	XL/10	XXL/11
Code	69 5651	69 5652	69 5653	69 5654	69 5655	69 5656

100 gloves / poly bag 10 poly bags / case

PPE CAT. III AQL 1,5 CE 0120 EN374:2003 EN374:2003 LEVEL 2

SHIELDskin Xtreme™ White Nitrile 300 DI+

100% nitrile, powder free, white colour, triple washed in deionised water (≤ 900 particles/cm² $\geq 0.5\mu\text{m}$), non-sterile.

Size	XS/6	S/7	M/8	L/9	XL/10	XXL/11
Code	69 8651	69 8652	69 8653	69 8654	69 8655	69 8656

100 gloves / poly bag 10 poly bags / case

PPE CAT. III AQL 1,5 CE 0120 EN374:2003 EN374:2003 LEVEL 2

SHIELDskin Xtreme™ DI++ gloves are produced to offer extremely low levels of particles and ionic residues to cover the needs of especially the semiconductor industry. The medical device and pharmaceutical industries may also in the face of increasing regulatory pressure seek the same high level of cleanliness.

SHIELDskin Xtreme™ White Nitrile 400 DI+

100% nitrile, powder free, white colour, extra-long, triple washed in deionised water (≤ 950 particles/cm² $\geq 0.5\mu\text{m}$), non-sterile.

Size	XS/6	S/7	M/8	L/9	XL/10	XXL/11
Code	69 8671	69 8672	69 8673	69 8674	69 8675	69 8676

100 gloves / poly bag 10 poly bags / case

PPE CAT. III AQL 1,5 CE 0120 EN374:2003 EN374:2003 LEVEL 2

SHIELDskin Xtreme™ White Nitrile 300 DI++

100% nitrile, powder free, white colour, accelerator-free, multi washed in deionised water (≤ 650 particles/cm² $\geq 0.5\mu\text{m}$), non-sterile.

Size	XS/6	S/7	M/8	L/9	XL/10	XXL/11
Code	69 8851	69 8852	69 8853	69 8854	69 8855	69 8856

100 gloves / poly bag 10 poly bags / case

PPE CAT. III AQL 1,5 CE 0120 EN374:2003 EN374:2003 LEVEL 2

Depending on the procedure for sterile gowning, those engaged in aseptic work may double-glove with two pairs of sterile gloves. Disinfected bare hands may be used for putting on non-sterile garments such as bouffant caps and face-mask. However as soon as we start putting on sterile garments, then it is important that we are wearing sterile gloves. SHIELDskin™ Orange Nitrile™ 300 Sterile (30cm) and SHIELDskin Xtreme™ Sterile Orange Nitrile™ 300 DI (30cm) gloves are the ideal solution for the underglove. Once we have finished putting on all the sterile garments, then we can don the second pair of sterile gloves. In this case the SHIELDskin Xtreme™ Sterile White Nitrile 330 DI+ is the perfect partner, with the added benefit of extra length. With this two colour system, it is easy to detect punctures, pin-pricks etc on the white outer glove thanks to the bright colour of the orange under-glove. It's also easy to replace the outer-glove in the cleanroom and the presence of the sterile under-glove will minimize contamination of the product.



STEP 1: FIRST PAIR UNPACKING

Pictures 1.1 to 1.3

Select the appropriate gloves and size. Inspect the packages to check that they are intact. Aseptically peel open pouch and deposit the wallet on a clean dry surface above waist height. Open wallet, handling only the outer flap of the wallet. Expose the gloves, whilst maintaining the sterile field.



STEP 2: FIRST PAIR DONNING

Pictures 2.1 to 2.4

Grasp the folded cuff of the right glove with the left hand and insert fingers of right hand in right glove. Ensure that you touch only the inside of the glove. Pull the right glove onto the right hand by pulling the glove at the folded cuff. Ensure that the cuff remains folded. Slide fingers of the gloved right hand inside the folded cuff of the left glove. Insert the fingers of the left hand into the left glove. Pull the left glove on the hand, only touching the outside of glove with the gloved right hand. Unfold both right and left glove by handling only the outside of the glove with the gloved hand. Ensure to pull at least 3 cm from the beaded cuff as pulling near the bead may lead to tearing.



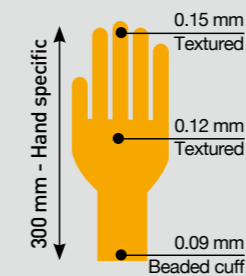
STEP 3: SECOND PAIR UNPACKING & DONNING

Pictures 3.1 to 3.5

Prepare the second pair of gloves the same way as the first pair (see 1. first pair unpacking). Grasp the folded cuff of the right glove with the left hand and insert fingers of right hand in right glove. Ensure to touch only the inside of the glove. Pull the right glove onto the right hand by pulling the glove at the folded cuff. Ensure the cuff remains folded. Slide fingers of the double gloved right hand inside the folded cuff of the left glove. Insert the fingers of the left hand into the left glove. Pull the left glove on the hand only touching the outside of glove with the gloved right hand. Unfold both right and left glove by handling only the outside of the glove with the gloved hand. Ensure to pull at least 3 cm from the beaded cuff as pulling near the bead may lead to tearing.



SHIELDskin Xtreme™ Sterile Orange Nitrile™ 300 DI

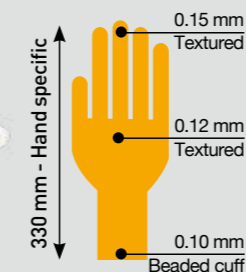


Multi-polymer (nitrile + polychloroprene), powder-free, orange colour, accelerator-free, single washed in deionised water (≤ 3000 particles/cm² $\geq 0.5\mu\text{m}$), sterile.



Size	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9	10
Code	69 6551	69 6552	69 6553	69 6554	69 6555	69 6556	69 6557	69 6558	69 6559
	1 pair / pouch		20 pouches / poly bag			10 poly bags / case			

SHIELDskin Xtreme™ Sterile White Nitrile 330 DI+



100% nitrile, powder free, longer cuff, white colour, triple washed in deionised water (≤ 900 particles/cm² $\geq 0.5\mu\text{m}$), sterile.



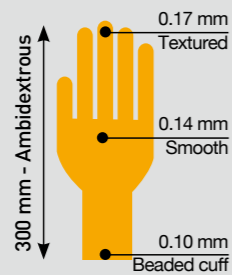
Size	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9	10
Code	69 8761	69 8762	69 8763	69 8764	69 8765	69 8766	69 8767	69 8768	69 8769
	1 pair / pouch		20 pouches / poly bag			10 poly bags / case			

SHIELDskin Xtreme™ DI sterile latex and nitrile gloves are developed specifically for sterile production in the pharmaceutical industry. These products provide appropriate process and product protection, along with personal protection for most aseptic environments.

SHIELDskin Xtreme™ DI+ sterile latex and sterile nitrile gloves have been specifically developed for the most critical environments in the pharmaceutical industry. A combination of different lengths and the highest level of barrier performance (as defined by AQL) ensure that these gloves offer maximum process and product protection as well as personal protection.



SHIELDskin™ Orange Nitrile™ 300 Sterile

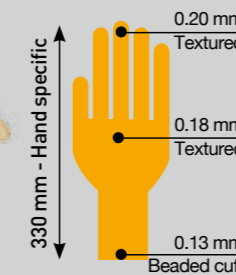
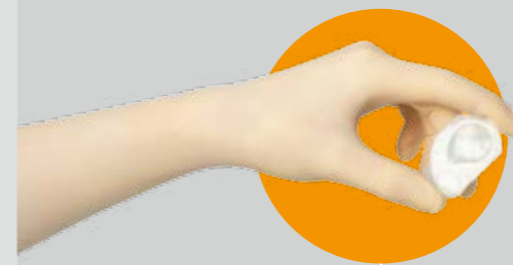


Multi-polymer (nitrile + polychloroprene), powder-free, twinSHIELD™ technology (double layers / twin colours: orange/white), accelerator-free, single washed in deionised water (≤ 3000 particles/cm² $\geq 0.5\mu\text{m}$), sterile.



Size	XS/6	S/7	M/8	L/9	XL/107.5
Code	67 6351	67 6352	67 6353	67 6354	67 6355
	1 pair / pouch	20 pouches / poly bag	8 poly bags / case		

SHIELDskin Xtreme™ Sterile Latex 330 DI+

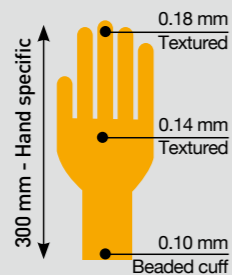


100% natural latex, powder free, longer cuff, natural colour, triple washed in deionised water (≤ 950 particles/cm² $\geq 0.5\mu\text{m}$), sterile



Size	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9	10
Code	69 5761	69 5762	69 5763	69 5764	69 5765	69 5766	69 5767	69 5768	69 5769
	1 pair / pouch	20 pouches / poly bag	10 poly bags / case						

SHIELDskin Xtreme™ Sterile Latex 300 DI

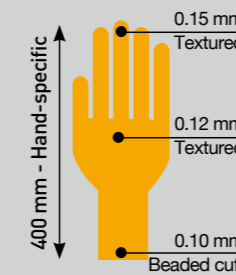


100% natural latex, powder free, partly textured, natural colour, single washed in deionised water (≤ 3000 particles/cm² $\geq 0.5\mu\text{m}$), sterile.



Size	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9	10
Code	69 5551	69 5552	69 5553	69 5554	69 5555	69 5556	69 5557	69 5558	69 5559
	1 pair / pouch	20 pouches / poly bag	10 poly bags / case						

SHIELDskin Xtreme™ Sterile White Nitrile 400 DI+



100% nitrile, powder free, extra-long, white colour, triple washed in deionised water (≤ 900 particles/cm² $\geq 0.5\mu\text{m}$), sterile.



Size	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9	10
Code	69 8771	69 8772	69 8773	69 8774	69 8775	69 8776	69 8777	69 8778	69 8779
	1 pair / pouch	20 pouches / poly bag	8 poly bags / case						

DI

Basic contamination control

DI+

High contamination control

DI++

Extreme contamination control

STERILE

Bio contamination control

www.shieldscientific.com

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