SHIELD Scientific
compliance comfort protection

CLEANROOM GLOVES

WWW.SHIELDSCIENTIFIC.COM

IT'S IN THE NAME

A TOP QUALITY SERVICE

SHIELD Scientific is a European company. The headquarters are strategically based in the Netherlands. Our international logistics hub, located in Malaysia, has storage space for up to 1700 pallets (60 000 cases), whilst logistics management is tightly controlled. Our production management system is certified according to ISO 9001:2015 and ISO 13485:2016. Distribution 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.

COMPLIANCE

Following the introduction of Regulation (EU) 2016/425, SHIELD Scientific remains at the forefront offering cleanroom gloves CE marked PPE category III (Complex Design) which meet or exceed European and International Standards.

DISTRIBUTOR RESOURCES

Enjoy faster response times and benefit from secure access to all the information you need.

COMFORT

Comfort is very often at the top of the user's criteria for selection of gloves. At SHIELD Scientific we continue to develop new technologies which improve users' well-being without compromising skin care and protection.

POSTER MAKER

Select your glove(s), your chemical(s), add your logo and your warning notifications: create your own poster!

PROTECTION

When selecting a glove, its protective properties are often lost in the jungle of features offered to users by the manufacturers. At SHIELD Scientific we believe that THE THICKER AND LONGER THE GLOVE, THE BETTER YOU WILL BE PROTECTED.

CERTIFICATES

Download your certificate of conformance and certificate of irradiation using a secure download service.

COMPLIANCE - COMFORT - PROTECTION

The name of our company, SHIELD Scientific, reflects the particular focus we have on hand protection and the laboratory/high technology sectors.

WWW.SHIELDSCIENTIFIC.COM

is the nerve centre for the dissemination of information. Our website was built to be an interactive tool and a source of information to help users make the right decision.

LEARNING CENTRE

Expand your glove knowledge and understanding through a set of technical articles.

SELECTION GUIDE

Filter either by use, risk or attribute to facilitate your selection of the appropriate glove.

CHEMICAL RESISTANCE GUIDE

Select your chemical, select 1 to 3 gloves, get the breakthrough time: compare and choose.

REGULATIONS & STANDARDS

Understand the Regulations and Standards to satisfy your Health & Safety duties and responsibilities.

DOCUMENTATION

Access from one place to all our product documentation using a free download service.

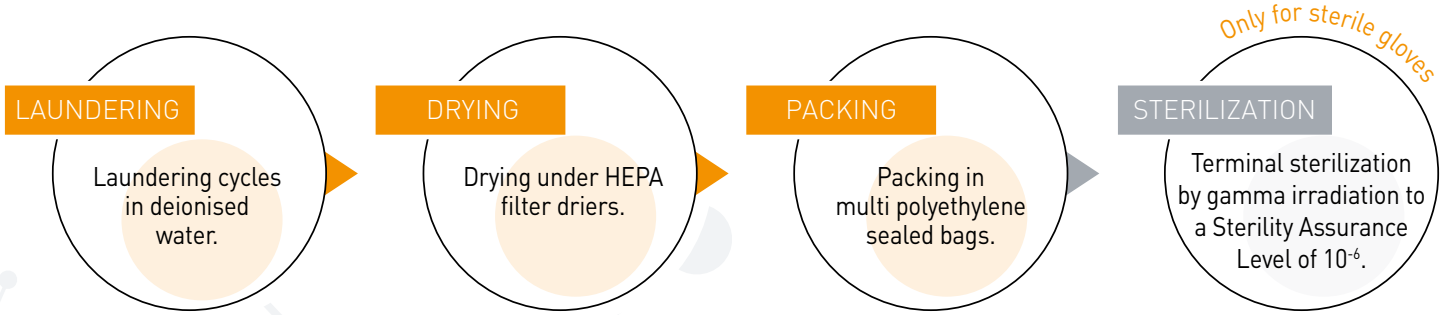
GLOVES CONTAMINATION CONTROL EXPE

FOR PERSONAL, PROCESS AND PRODUCT PROTECTION

Selecting cleanroom gloves is typically a long process. Even if personal safety is an important priority, maintaining the cleanliness of the environment is the primary purpose for wearing gloves to avoid contamination of the product.

CONTAMINATION CONTROL IN OUR GLOVES

All the critical decontamination steps of our gloves are performed in controlled environments:



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.

DI Basic Contamination Control	Single washed in deionised water	Particle level specification < 3,000 per cm² ≥ 0.5 µm
DI+ High Contamination Control	Triple washed in deionised water	Particle level specification < 1,200 per cm² ≥ 0.5 µm
DI++ Extreme Contamination Control	Multi washed in deionised water	Particle level specification < 850 per cm² ≥ 0.5 µm
STERILE	Gamma irradiated	Free from viable micro-organisms plus guaranteed low level of endotoxins

PERSONAL PROTECTION AND COMFORT

PPE Regulation: All our SHIELDskin XTREME™ gloves are registered as Personal Protective Equipment Category III (Complex design) as defined in the Regulation (EU) 2016/425.

Chemical protection: Thicker and longer gloves provide extra protection against chemicals. Visit our online chemical resistance guide with over 100 chemicals tested against chemical permeation (EN 16523-1:2015+A1:2018).

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 D6978-05 (2019) rather than the less stringent EN 16523-1:2015+A1:2018.

Dexterity and comfort: Our aim is to supply gloves that satisfy the wellbeing of users, without compromising skin care and protection. Our SHIELDskin XTREME™ gloves are powder-free and are either accelerator-free or low in chemical residues to reduce glove-associated reactions.

SHIELD Scientific
compliance comfort protection

PROCESS AND PRODUCT PROTECTION

PARTICLE AND EXTRACTABLE LEVELS:

SHIELDskin XTREME™ gloves undergo deionised water laundering cycles to achieve low level of particles, extractable ions and non-volatile residues, which is crucial within the cleanroom manufacturing environment.

ESD SOLUTIONS:

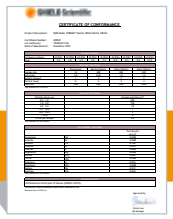
SHIELDskin XTREME™ synthetic gloves have been tested according EN 1149-1/2/3/5 (test methods for measurement of electrostatic properties) to address concerns regarding environmental and process protection.

BIO CONTAMINATION PROTECTION:

SHIELDskin XTREME™ gloves provide superior process and personal protection from liquid penetration (ISO 374-2:2019). Gloves are tested for viral penetration resistance using a Phi-X174 bacteriophage (ISO 16604:2004 Procedure B). Gloves are gamma irradiated to meet the highest level of contamination control required by specific industries working in aseptic environment.

THE LOWER THE ACCEPTABLE QUALITY LEVEL (AQL), THE HIGHER THE LEVEL OF BARRIER PERFORMANCE IN TERMS OF REDUCED RISK OF PINHOLES.

SAMPLES	AQL 4.0	AQL 1.5	AQL 0.65	AQL 0.25
Number of tested gloves	315	315	315	315
Accepted	21	10	5	2
(Gloves - %)	6.67%	3.17%	1.59%	0.63%
Rejected	22	11	6	3
(Gloves - %)	6.98%	3.49%	1.90%	0.95%



DOCUMENTATION

Product Data Sheet (PDS):

Details on the specifications and performance of SHIELDskin XTREME™ gloves are outlined in the Product Data Sheet, which is readily accessible from our website.

Certificate of Conformance (CoC):

As a guarantee of industry leading performance, SHIELD Scientific provides Certificate of Conformance with lot-specific data such as particles and extractables. For sterile gloves, test data on endotoxin levels is also presented.

Certificate of Irradiation (CoI):

As SHIELDskin XTREME™ sterile gloves are terminally sterilised by gamma irradiation to a Sterility Assurance Level (SAL) of 10^{-6} (ISO 11137-2:2015), SHIELD Scientific provides a Certificate of Irradiation for each lot of sterile gloves.

Contamination data monitoring:

SHIELD Scientific aims to provide the most comprehensive and accurate statistical data to demonstrate the consistency of contamination control performance.

GLOVE SELECTION GUIDE

With the SHIELD Scientific product brand code, pre-selecting

SHIELDskin XTREME™

		ORANGE NITRILE™ 300 DI	White Nitrile 300 DI	Eco Nitrile 300 DI+	White Nitrile 400 DI+
	PRODUCT CODE	69 645X	69 845X	68 865X	69 867X
	SIZE	6/XS to 11/XXL	6/XS to 11/XXL	6/XS to 11/XXL	6/XS to 11/XXL
	GLOVES PER PE BAG X BAG per POLYBAG X POLYBAG PER CARTON (For non-sterile gloves)	100 X 10 X 1	100 X 10 X 1	100 X 15 X 1	100 X 10 X 1
	GLOVES PAIR POUCH PER POLYBAG X POLYBAG PER CASE (For sterile gloves)				

REGULATION

Regulation (EU) 2016/425	PERSONAL PROTECTIVE EQUIPMENT	Category III	Category III	Category III	Category III
ISO 21420:2020	PPE GLOVES GENERAL REQUIREMENTS	✔	✔	✔	✔
EN 455-2:2015	MEDICAL GLOVES PHYSICAL PROPERTIES	✔	✔	✔	✔

PHYSICAL PROPERTIES

	GLOVE COLOUR				
	MATERIAL	Nitrile/Neoprene	Nitrile	Nitrile	Nitrile
	DESIGN	Ambidextrous	Ambidextrous	Ambidextrous	Ambidextrous
		Textured fingertips	Textured fingertips	Textured fingertips	Textured palm and fingers
		Powder-free	Powder-free	Powder-free	Powder-free
	ACCELERATOR ALLERGENS	Accelerator-free	Free of Thiurams and Thiazoles	Free of Thiurams and Thiazoles	Free of Thiurams and Thiazoles
	LATEX PROTEIN ALLERGENS	Latex-free	Latex-free	Latex-free	Latex-free
	TECHNOLOGY PROTECTION	twinSHIELD™	uniSHIELD™	uniSHIELD™	uniSHIELD™
	PALM NOMINAL THICKNESS (mm)	0.14	0.13	0.10	0.15
	PALM NOMINAL THICKNESS (mil)	5.5	5.1	3.9	5.9
	LENGTH (mm)	300	300	300	400
	LENGTH (inch)	11.8	11.8	11.8	15.7

CLEANLINESS PROPERTIES

IEST-RP-CC005.4	CONTAMINATION	CONTAMINATION CONTROL LEVEL	BASIC	BASIC	HIGH	HIGH
		CONTAMINATION CONTROL PROCESS	Single washed DI	Single washed DI	Triple washed DI	Triple washed DI
		CONTAMINATION SPECIFICATION PARTICLES LEVEL	< 3,000 particles	< 3,000 particles	< 1,200 particles	< 1,200 particles
		CONTAMINATION TYPICAL PARTICLES VALUE	2,100 particles	2,300 particles	1,100 particles	1,000 particles
	NVR	NON-VOLATILE RESIDUE	< 30 µg/g	< 30 µg/g	< 30 µg/g	< 30 µg/g
	FTIR	SILICONE, AMIDE, DOP LEVEL	Non detectable level	Non detectable level	Non detectable level	Non detectable level
ISO 11137-2:2015	STERILITY	STERILITY ASSURANCE LEVEL	N/A	N/A	N/A	N/A
EN 455-3:2015	ENDOTOXINS	ENDOTOXINS LEVEL	N/A	N/A	N/A	N/A
EN 1149-1/2/3&5	ESD	ELECTROSTATIC PROPERTIES	✔	✔	✔	✔

PROTECTION PROPERTIES

		TYPE	B (JKPT)	B (KPT)	B (KPT)	B (KPT)
ISO 374-1:2016+A1:2018	CHEMICAL	PERMEATION (EN 16523-1:2015+A1:2018)	✔	✔	✔	✔
		PENETRATION (ISO 374-2:2019)	✔	✔	✔	✔
		DEGRADATION (ISO 374-4:2019)	✔	✔	✔	✔
ISO 374-5:2016	BIOLOGICAL	VIRUS (ISO 16604:2004 Procedure B)	✔	✔	✔	✔
		BACTERIA, FUNGI (ISO 374-2:2019)	✔	✔	✔	✔
		AQL (Level) (ISO 374-2:2019)	0.25 (Level 3)	1.5 (Level 2)	1.5 (Level 2)	1.5 (Level 2)
ASTM D6978-05 (2019)	CYTOTOXIC DRUG	7+2 DRUGS TESTED	✔	✔	✘	✔

Disclaimer: Being compliant with the standards does not guarantee absolute

uniSHIELD™ technology

> uniSHIELD™ are single-walled gloves for standard protection.

COMPLIANCE - COMFORT - PROTECTION

The comfort and protection of the workers are as important as process protection. Cleanroom gloves should protect the hands from the hazards for which they were selected, as well as contributing to the overall cleanliness of the cleanroom in sterile or non-sterile environments.

the right gloves is now an easy exercise!

DI Basic contamination Control

DI+ High contamination Control

DI++ Extreme contamination Control

STERILE

Bright Latex 300 DI+	White Nitrile 300 DI++	Sterile ORANGE NITRILE™ 300 DI	Sterile Latex 300 DI	Sterile White Nitrile 330 DI+	Sterile Latex 400 DI+	Sterile White Nitrile 400 DI+	Sterile White Nitrile 600 DI+	ORANGE NITRILE™ 300 Sterile*
69 565X	69 885X	69 655X	69 555X	69 876 X	69 577X	69 877X	69 878X	67 635X
6/XS to 11/XXL	6/XS to 11/XXL	5.5 to 10.0	5.5 to 10.0	5.5 to 10.0	5.5 to 10.0	5.5 to 10.0	5.5 to 10.0	6/XS to 11/XXL
100 X 10 X 1	100 X 10 X 1							
		20 X 10	20 X 10	20 X 10	20 X 8	20 X 8	20 X 5	20 X 8
Category III	Category III	Category III	Category III	Category III	Category III	Category III	Category III	Category III
✔	✔	✔	✔	✔	✔	✔	✔	✔
✔	✔	✔	✔	✔	✔	✔	✔	✔
Natural Latex	Nitrile	Nitrile/Neoprene	Natural Latex	Nitrile	Natural Latex	Nitrile	Nitrile	Nitrile/Neoprene
Ambidextrous	Ambidextrous	Hand-specific	Hand-specific	Hand-specific	Hand-specific	Hand-specific	Hand-specific	Ambidextrous
Fully textured	Textured fingertips	Textured palm and fingers	Textured palm and fingers	Textured palm and fingers	Fully textured	Textured palm and fingers	Textured palm and fingers	Textured fingertips
Powder-free	Powder-free	Powder-free	Powder-free	Powder-free	Powder-free	Powder-free	Powder-free	Powder-free
Free of Thiurams and Thiazoles	Accelerator-free	Accelerator-free	Free of Thiurams and Thiazoles	Free of Thiurams and Thiazoles	Free of Thiurams and Thiazoles	Free of Thiurams and Thiazoles	Free of Thiurams and Thiazoles	Accelerator-free
≤ 50 µg/g	Latex-free	Latex-free	≤ 50 µg/g	Latex-free	≤ 50 µg/g	Latex-free	Latex-free	Latex-free
uniSHIELD™	uniSHIELD™	uniSHIELD™	uniSHIELD™	uniSHIELD™	uniSHIELD™	uniSHIELD™	uniSHIELD™	twinSHIELD™
0.18	0.14	0.14	0.18	0.14	0.18	0.15	0.17	0.14
7.1	5.5	5.5	7.1	5.5	7.1	5.9	6.7	5.5
300	300	300	300	330	400	400	600	300
11.8	11.8	11.8	11.8	13.0	15.7	15.7	23.6	11.8
HIGH	EXTREME	BASIC	BASIC	HIGH	HIGH	HIGH	HIGH	BASIC
Triple washed DI	Multi washed DI	Single washed DI	Single washed DI	Triple washed DI	Triple washed DI	Triple washed DI	Triple washed DI	Single washed DI
< 1,200 particles	< 850 particles	< 3,000 particles	< 3,000 particles	< 1,200 particles	< 1,200 particles	< 1,200 particles	< 1,200 particles	< 3,000 particles
1,000 particles	600 particles	1,000 particles	1,100 particles	1,000 particles	1,100 particles	1,000 particles	1,000 particles	
< 30 µg/g	< 30 µg/g	< 30 µg/g	< 30 µg/g	< 30 µg/g	< 30 µg/g	< 30 µg/g	< 30 µg/g	✘
Non detectable level	Non detectable level	Non detectable level	Non detectable level	Non detectable level	Non detectable level	Non detectable level	Non detectable level	✘
N/A	N/A	10^{-6}	10^{-6}	10^{-6}	10^{-6}	10^{-6}	10^{-6}	10^{-6}
N/A	N/A	< 20 EU/pair	< 20 EU/pair	< 20 EU/pair	< 20 EU/pair	< 20 EU/pair	< 20 EU/pair	< 20 EU/pair
✘	✔	✔	✘	✔	✘	✘	✘	✔
B (KPT)	B (KPT)	B (KPT)	B (KPT)	B (JKP)	B (KPT)	B (KPT)	B (KPT)	B (JKPT)
✔	✔	✔	✔	✔	✔	✔	✔	✔
✔	✔	✔	✔	✔	✔	✔	✔	✔
✔	✔	✔	✔	✔	✔	✔	✔	✔
✔	✔	✔	✔	✔	✔	✔	✔	✔
✔	✔	✔	✔	✔	✔	✔	✔	✔
1.5 (Level 2)	1.5 (Level 2)	0.65 (Level 3)	0.65 (Level 3)	0.65 (Level 3)	0.65 (Level 3)	0.65 (Level 3)	0.65 (Level 3)	0.25 (Level 3)
✘	✘	✔	✘	✔	✘	✔	✘	✔

protection because what is tested relates to the materials used, methods of manufacture, length and thickness of the glove.

*SHIELDskin™ brand.

*ShieldSkin™ Brand

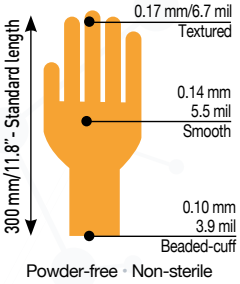
twinSHIELD™ technology

- twinSHIELD™ are double-walled gloves for double protection.
- Double dipping: To reduce the risk of pinholes and to improve the level of barrier protection.
- Double layer: If there is a defect in one of the two layers, the second layer will keep your hand and your environment safe!

SHIELDskin XTREME™

NON-STERILE GLOVES

SHIELDskin XTREME™ ORANGE NITRILE™ 300 DI



Powder-free · Non-sterile

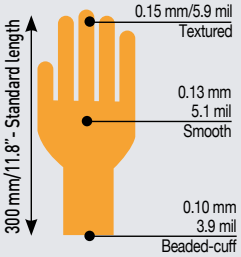
FORMULATION	COLOUR	DESIGN	ALLERGIES	CLEANLINESS
Nitrile/Neoprene	Orange (outer) White (inner)	Ambidextrous Textured fingertips	Accelerator-free Latex-free	Single washed in deionized water (< 3,000 particles/ cm² ≥ 0.5 µm)

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

100 gloves/PE bag · 10 PE bags/poly bag · 1 poly bag/carton

PPE Personal Protective Equipment Category III REGULATION (EU) 2016/425 · CE 0598

SHIELDskin XTREME™ White Nitrile 300 DI



Powder-free · Non-sterile

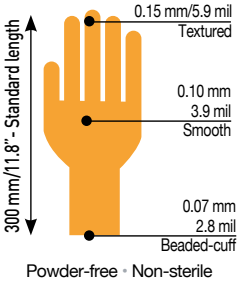
FORMULATION	COLOUR	DESIGN	ALLERGIES	CLEANLINESS
Nitrile	White	Ambidextrous Textured fingertips	Free of Thiurams and Thiazoles Latex-free	Single washed in deionized water (< 3,000 particles/ cm² ≥ 0.5 µm)

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

100 gloves/PE bag · 10 PE bags/poly bag · 1 poly bag/carton

PPE Personal Protective Equipment Category III REGULATION (EU) 2016/425 · CE 0123

SHIELDskin XTREME™ Eco Nitrile 300 DI+



Powder-free · Non-sterile

FORMULATION	COLOUR	DESIGN	ALLERGIES	CLEANLINESS
Nitrile	White	Ambidextrous Textured fingertips	Free of Thiurams and Thiazoles Latex-free	Triple washed in deionized water (< 1,200 particles/ cm² ≥ 0.5 µm)

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

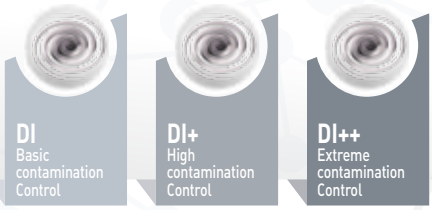
100 gloves/PE bag · 15 PE bags/poly bag · 1 poly bag/carton

PPE Personal Protective Equipment Category III REGULATION (EU) 2016/425 · CE 0598

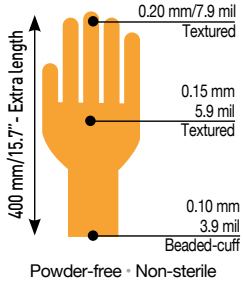
COMPLIANCE - COMFORT - PROTECTION

CONTAMINATION CONTROL

THE MORE THE GLOVE IS DI WATER WASHED,
THE LOWER THE LEVEL OF PARTICLES



SHIELDskin XTREME™ White Nitrile 400 DI+



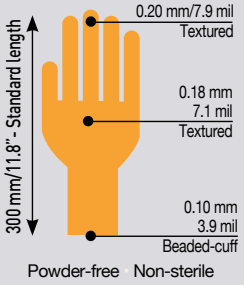
Powder-free • Non-sterile

FORMULATION	COLOUR	DESIGN	ALLERGIES	CLEANLINESS
Nitrile	White	Ambidextrous Textured palm and fingers	Free of Thiurams and Thiazoles Latex-free	Triple washed in deionized water (< 1,200 particles/ cm² ≥ 0.5 µm)

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

100 gloves/PE bag | 10 PE bags/poly bag | 1 poly bag/carton

SHIELDskin XTREME™ Bright Latex 300 DI+



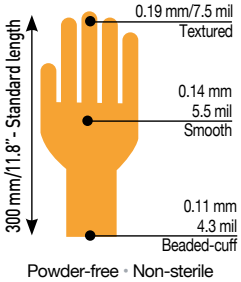
Powder-free Non-sterile

FORMULATION	COLOUR	DESIGN	ALLERGIES	CLEANLINESS
Natural Rubber Latex	Natural colour	Ambidextrous Fully textured	Free of Thiurams and Thiazoles Low protein level	Triple washed in deionized water (< 1,200 particles/ cm² ≥ 0.5 µm)

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

100 gloves/PE bag | 10 PE bags/poly bag | 1 poly bag/carton

SHIELDskin XTREME™ White Nitrile 300 DI++



Powder-free • Non-sterile

FORMULATION	COLOUR	DESIGN	ALLERGIES	CLEANLINESS
Nitrile	White	Ambidextrous Textured fingertips	Accelerator-free Latex-free	Multi washed in deionized water (< 850 particles/cm² ≥ 0.5 µm)

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

100 gloves/PE bag | 10 PE bags/poly bag | 1 poly bag/carton

SHIELDskin XTREME™

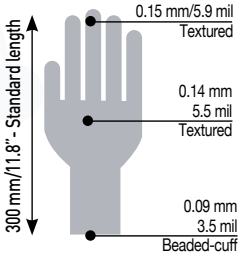
STERILE GLOVES

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 facemasks. However as soon as we start putting on sterile garments, then it is important that we are wearing sterile gloves.

SHIELDskin XTREME™ Sterile ORANGE NITRILE™ 300 DI (30cm) gloves are the ideal solution for the under-glove. 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+ (33 cm) is the perfect partner, with the added benefit of extra length.

With this two-colour system, it is easy to detect punctures, pinpricks 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.

SHIELDskin XTREME™ Sterile ORANGE NITRILE™ 300 DI



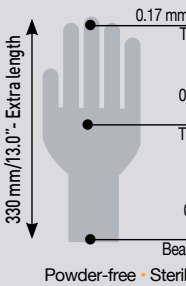
Powder-free • Sterile

FORMULATION	COLOUR	DESIGN	ALLERGIES	CLEANLINESS
Nitrile/Neoprene	Orange	Hand-specific Textured palm and fingers	Accelerator-free Latex-free	Single washed in deionized water (< 3,000 particles/ cm² ≥ 0.5 µm)

Size	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	10.0
Code	69 6551	69 6552	69 6553	69 6554	69 6555	69 6556	69 6557	69 6558	69 6559

1 pair/pouch — 20 pouches/sealed poly bag — 10 sealed poly bags/carton

SHIELDskin XTREME™ Sterile White Nitrile 330 DI+



Powder-free • Sterile

FORMULATION	COLOUR	DESIGN	ALLERGIES	CLEANLINESS
Nitrile	White	Hand-specific Textured palm and fingers	Free of Thiurams and Thiazoles Latex-free	Triple washed in deionized water (< 1,200 particles/ cm² ≥ 0.5 µm)

Size	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	10.0
Code	69 8761	69 8762	69 8763	69 8764	69 8765	69 8766	69 8767	69 8768	69 8769

1 pair/pouch — 20 pouches/sealed poly bag — 10 sealed poly bags/carton

COMPLIANCE - COMFORT - PROTECTION

DOUBLE DONNING
2 COLOUR SYSTEM

STERILE DI
Basic contamination Control

STERILE DI+
High contamination Control

STEP 1: FIRST PAIR UNPACKING

Select the appropriate gloves and size. Inspect the packages to check they are intact. Aseptically open peel 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.


1.1


1.2


1.3

STEP 2: FIRST PAIR DONNING

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 that you pull at least 3 cm from the beaded cuff as pulling near the bead may lead to tearing.


2.1


2.2


2.3


2.4

STEP 3: SECOND PAIR UNPACKING & DONNING

Prepare the second pair of gloves the same way as the first pair (see step 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 that you only touch 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 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 onto the left 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 that you pull at least 3 cm from the beaded cuff as pulling near the bead may lead to tearing.


3.1


3.2


3.3

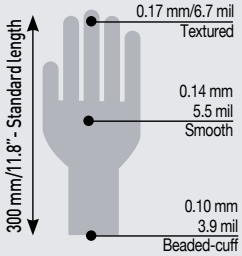

3.4


3.5

SHIELDskin XTREME™

STERILE GLOVES

SHIELDskin™ ORANGE NITRILE™ 300 STERILE



Powder-free • Sterile

FORMULATION	COLOUR	DESIGN	ALLERGIES	CLEANLINESS
Nitrile/Neoprene	Orange (outer) White (inner)	Ambidextrous Textured fingertips	Accelerator-free Latex-free	Single washed in deionized water (< 3,000 particles/ cm² ≥ 0.5 µm)

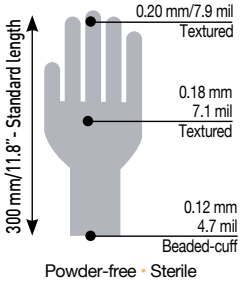
Size	6/XS	7/S	8/M	9/L	10/XL	11/XXL
Code	67 6351	67 6352	67 6353	67 6354	67 6355	67 6356

1 pair/pouch — 20 pouches/sealed poly bag — 8 sealed poly bags/carton

SHIELDskin XTREME™ DI sterile latex and sterile 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 XTREME™ Sterile Latex 300 DI



Powder-free • Sterile

FORMULATION	COLOUR	DESIGN	ALLERGIES	CLEANLINESS
Natural Rubber Latex	Natural colour	Hand-specific Textured palm and fingers	Free of Thiurams and Thiazoles Low protein level	Single washed in deionized water (< 3,000 particles/ cm² ≥ 0.5 µm)

Size	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	10.0
Code	69 5551	69 5552	69 5553	69 5554	69 5555	69 5556	69 5557	69 5558	69 5559

1 pair/pouch — 20 pouches/sealed poly bag — 10 sealed poly bags/carton

BIO CONTAMINATION CONTROL

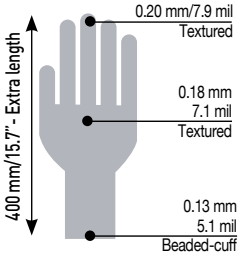
PROTECT YOUR PROCESS, PRODUCT AND PERSONNEL IN ASEPTIC ENVIRONMENTS

STERILE

STERILE DI
Basic contamination Control

STERILE DI+
High contamination Control

SHIELDskin XTREME™ Sterile Latex 400 DI+



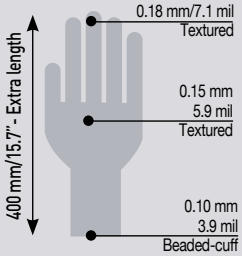
Powder-free • Sterile

FORMULATION	COLOUR	DESIGN	ALLERGIES	CLEANLINESS
Natural Rubber Latex	Natural colour	Hand-specific Fully textured	Free of Thiurams and Thiazoles Low protein level	Triple washed in deionized water (< 1,200 particles/ cm² ≥ 0.5 µm)

Size	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	10.0
Code	69 5771	69 5772	69 5773	69 5774	69 5775	69 5776	69 5777	69 5778	69 5779

1 pair/pouch — 20 pouches/sealed poly bag — 8 sealed poly bags/carton

SHIELDskin XTREME™ Sterile White Nitrile 400 DI+



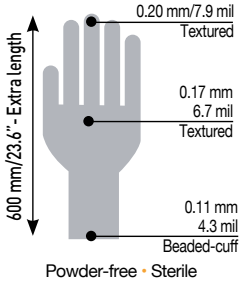
Powder-free • Sterile

FORMULATION	COLOUR	DESIGN	ALLERGIES	CLEANLINESS
Nitrile	White	Hand-specific Textured palm and fingers	Free of Thiurams and Thiazoles Latex-free	Triple washed in deionized water (< 1,200 particles/ cm² ≥ 0.5 µm)

Size	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	10.0
Code	69 8771	69 8772	69 8773	69 8774	69 8775	69 8776	69 8777	69 8778	69 8779

1 pair/pouch — 20 pouches/sealed poly bag — 8 sealed poly bags/carton

SHIELDskin XTREME™ Sterile White Nitrile 600 DI+



Powder-free • Sterile

FORMULATION	COLOUR	DESIGN	ALLERGIES	CLEANLINESS
Nitrile	White	Hand-specific Textured palm and fingers	Free of Thiurams and Thiazoles Latex-free	Triple washed in deionized water (< 1,200 particles/ cm² ≥ 0.5 µm)

Size	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	10.0
Code	69 8781	69 8782	69 8783	69 8784	69 8785	69 8786	69 8787	69 8788	69 8789

1 pair/pouch — 20 pouches/sealed poly bag — 5 sealed poly bags/carton

UNDERSTANDING DISPOSABLE GLOVE REGULATIONS AND STANDARDS

REGULATIONS AND STANDARDS

RELATING TO GLOVES	SCOPE
Regulation (EU) 2016/425	General requirements for the design and manufacture of Personal Protective Equipment (PPE).

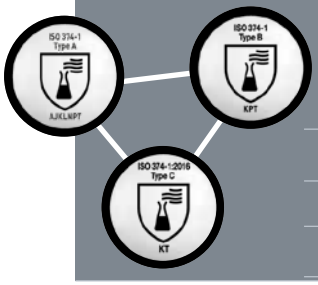
GLOVE CATEGORY	RISK LEVEL	MARKING
Category I	For minimal risks only.	CE
Category II	For risks other than those listed in cat. I & III.	CE
Category III	For risks that may cause very serious consequences such as death or irreversible damage to health.	CE + Notified Body CE 0598

ISO 21420:2020	Protective gloves - General requirements and test methods. This standard defines the general requirements and relevant test procedures for glove design and construction, resistance of glove materials to water penetration, innocuousness, comfort and efficiency, markings and information supplied by the manufacturer applicable to all protective gloves.

CHEMICAL RISK

STANDARDS REFERENCE	SCOPE
ISO 374-1:2016+A1:2018	Protective gloves against dangerous chemicals and micro-organisms. Part 1: Terminology and performance requirements for chemical risks.
ISO 374-2:2019	Protective gloves against dangerous chemicals and micro-organisms. Part 2: Determination of resistance to penetration.
EN 16523-1:2015+A1:2018	Determination of material resistance to permeation by chemicals. Part 1: Permeation by liquid chemical under conditions of continuous contact.
ISO 374-4:2019	Protective gloves against dangerous chemicals and micro-organisms. Part 4: Determination of resistance to degradation by chemicals.

Gloves are classified as type A, B or C depending on their performance level when tested against a number of chemicals and degradation expressed in terms of mean average (% change in puncture resistance before and after chemical exposure).



CLASSIFICATION	MINIMUM PERFORMANCE LEVEL REQUIRED	MINIMUM NUMBER OF CHEMICALS FROM THE 18 LISTED
Type A	Level 2 (min 30 minutes breackthrough)	6
Type B	Level 2 (min 30 minutes breackthrough)	3
Type C	Level 1 (min 10 minutes breackthrough)	1

CODE LETTER	CHEMICAL	CAS NUMBER	CODE LETTER	CHEMICAL	CAS NUMBER
A	Methanol	67-56-1	J	n-Heptane	142-82-5
B	Acetone	67-64-1	K	Sodium hydroxide 40%	1310-73-2
C	Acetonitrile	75-05-8	L	Suphuric acid 96%	7664-93-9
D	Dichloromethane	75-09-2	M	Nitric acid 65 %	7697-37-2
E	Carbon disulphide	75-15-0	N	Acetic acid 99 %	64-19-7
F	Toluene	108-88-3	O	Ammonium hydroxide 25%	1336-21-6
G	Diethylamine	109-89-7	P	Hydrogen proxide 30%	7722-84-1
H	Tetrahydrofuran	109-99-9	S	Hydrofluoric acid 40%	7664-39-3
I	Ethyl acetate	141-78-6	T	Formaldehyde 37%	50-00-0

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BIOLOGICAL RISK

STANDARDS REFERENCE	SCOPE
ISO 374-5:2016	Protective gloves against dangerous chemicals and micro-organisms. Part 5: Terminology and performance requirements for micro-organisms risks.
ISO 374-2:2019	Protective gloves against dangerous chemicals and micro-organisms. Part 2: Determination of resistance to penetration.
ISO 16604:2004 Procedure B	Clothing for protection against contact with blood and body fluids. Determination of resistance of protective clothing materials to penetration by blood-borne pathogens. Test method using Phi-X174 bacteriophage.

ISO 374-2:2019 remains the basic test for assessing resistance to penetration by micro-organisms. Here performance is measured on the basis of AQL (AQL < 4 or Level 1 to AQL < 0.65 or Level 3, with Level 3 being the highest performance level). For protective gloves against bacteria and fungi, the biohazard pictogram is applied.

For protection against bacteria, fungi, and virus, the biohazard pictogram is accompanied with the term "VIRUS " underneath. To fulfil this requirement, the glove must be tested according to ISO 374-2:2019 for bacteria and fungi and also tested according to ISO 16604:2004 (Procedure B) using the bacteriophage penetration test.

CONTAMINATION RISK

	STANDARDS REFERENCE	SCOPE
CLEANLINESS NVR - FTIR	IEST-RP-CC005.4	Procedures for testing and evaluating gloves and finger cots used in cleanrooms and other controlled environments.
STERILITY	ISO 11137-2:2015	Sterilization of health care products - Radiation. Part 2: Establishing the sterilization dose.
ENDOTOXINS	EN 455-3:2015	Medical gloves for single use Part 3: Requirement and testing for biological evaluation.
ESD	EN 1149-1/2/3&5	Protective clothing - Electrostatic properties. Part 1: Test method for measurement of surface resistivity. Part 2: Test method for measurement of the electrical resistance through a material (vertical resistance). Part 3: Test methods for measurement of charge decay. Part 5: Material performance and design requirements.
CYTOTOXIC DRUGS	ASTM D6978-05 (2019)	Standard Practice for Assessment of Resistance of Medical Gloves to Permeation by Chemotherapy Drugs.

MEDICAL USE

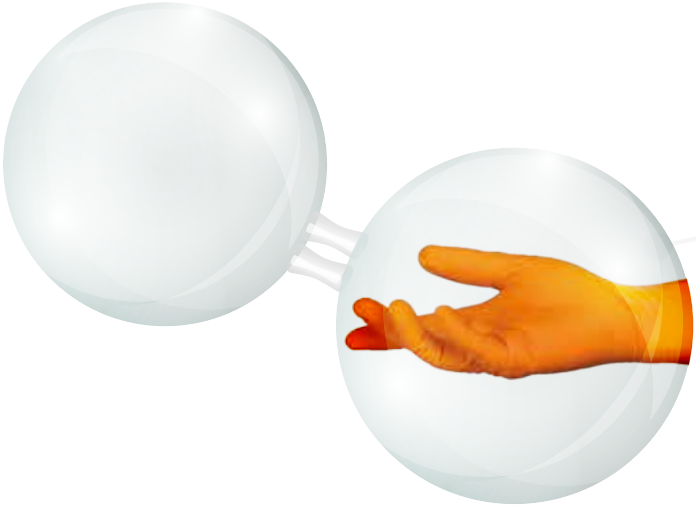
STANDARDS REFERENCE	SCOPE
EN 455-1:2000	Medical gloves for single use – Part 1: Requirements and testing for freedom from holes.
EN 455-2:2015	Medical gloves for single use – Part 2: Requirements and testing for physical properties.
EN 455-3:2015	Medical gloves for single use – Part 3: Requirements and testing for biological evaluation.
EN 455-4:2009	Medical gloves for single use – Part 4: Requirements and testing for shelf-life determination.

DI

DI+

DI++

STERILE



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