



**PRODUCT BROCHURE**  
Personal protective equipment  
and consumables

**berner**

# Legal foundations

EU directives

Legal

Standards

Safety

The reason behind the comprehensive range of standards and laws on the subject of personal protective equipment (PPE) is the safety of the user.

PPE is divided into 3 categories:

## CATEGORISATION AND DIFFERENCES OF PPE according to THE EU DIRECTIVE 89/686/EEC

Category	I	II	III
Protection	against minimal risks	against medium risks	against deadly hazards or serious irreversible damage to health
EC- Quality assurance	–	–	✓
EC- Type testing	–	✓	✓
Category	CE	CE	CE + identification no. <sup>1</sup>

<sup>1</sup> Number of notified body: <http://europa.eu.int>

The necessary PPE category for each case is determined as part of a risk analysis. For chemicals, CMR pharmaceuticals and biological agents it is the highest category III.

## PPE-USER REGULATIONS

The German PPE user regulations (PSA-BV) are the implementation of the EU-directive 89/686/EEC.

- §1 The law regulates the supply of personal protective equipment (PPE) by the employer as well as stating their use by the employees.
- §2 describes the basic requirements which the employer has to adhere to for the acquisition, maintenance and storage of the PPE.
- §3 contains information on how to instruct and train the employees in the use of PPE.

In Europe all PPE which is brought into circulation has to be tested to the harmonised European EN standards. Tests based on the American ASTM standards are not permissible according to European law. The adherence to the specific standards is intended to provide safety for the user. Values such as permeation times (for chemicals – breakthrough times on a molecular level) can only be compared if they were all tested to the same standard.

## LEGAL PROVISIONS WITHIN THE EU

1. EU – PPE directive (89/686/EEC)
2. General EN standards for specific PPE (e.g. EN 340 for protective clothing, EN 420 for protective gloves)
3. Test standards for specific applications (z.B. EN 374 part 1-3 for chemical protective gloves)
4. Implementation into national law (Laws regarding the availability of personal protective equipment on the market)
5. PPE- User regulations (eg. PSA-BV in Germany)

## VOLUNTARY, ADDITIONAL TESTS WHICH ARE NOT OBLIGATORY

Tests to the American standard ASTM (e.g. ASTM F 1671, ASTM D 6978-05, ...)



## OVERVIEW OF LEGAL FOUNDATIONS

### Important European test standards for: Protective clothing (only type 3 and 4) against chemical and infective agents

- EN 340 – Protective clothing for general requirements
- EN 14126 – Performance requirements and tests methods for protective clothing against infective agents
- EN 14325 – Protective clothing against chemicals - Test methods and performance classification of materials, seams, joins and assemblages
- EN 14605 – Protective clothing against liquid chemicals - Performance requirements for clothing with liquid-tight (type 3) or spray-tight (type 4) connections
- EN ISO 6529 – Protective clothing - Protection against chemicals - Determination of resistance of protective clothing materials to permeation by liquids and gases
- EN ISO 6530 – Protective clothing - Protection against liquid chemicals - Test method for resistance of materials to penetration by liquids
- EN ISO 17491-3 – Protective clothing - Test methods for clothing providing protection against chemicals - Part 3: Determination of resistance to penetration by a jet of liquid (jet test)
- EN ISO 17491-4 – Protective clothing - Test methods for clothing providing protection against chemicals - Part 4: Determination of resistance to penetration by a spray of liquid (spray test)
- EN 13921 – Personal protective equipment - Ergonomic principles

### Protective gloves against chemicals infective agents

- EN 420 – Protective gloves - General requirements and test methods
- EN 374-1 – Protective gloves against chemicals and micro-organisms - Part 1: Terminology and performance requirements
- EN 374-2 – Protective gloves against chemicals and micro-organisms - Part 2: Determination of resistance to penetration (Breakthrough due to micro holes)
- EN 374-3 – Protective gloves against chemicals and micro-organisms - Part 3: Determination of resistance to permeation by chemicals (Breakthrough at a molecular level)
- EN 374-4 – Protective gloves against chemicals and micro-organisms - Part 4: determination of the resistance against degradation by chemicals
- EN 388 – Protective gloves against mechanical risks

### Eye protection

- EN 166 – Personal eye protection - requirements

### Particle filtering masks

- EN 149 – Respiratory protective devices - Filtering half masks to protect against particles - requirements, testing, marking
- EN 136 – Respiratory protective devices - Full face masks - requirements, testing, marking

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for pharmaceutical, chemical and biological hazards

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# Protective Gloves

The right glove should not just fit – it should also be easy to change and above all, provide reliable protection against hazardous substances. In accordance with the relevant regulations in the EU, the employer is required to provide his employees with suitable protective gloves of the correct category when handling dangerous materials. Berner International offers certified gloves of premium quality - safe and comfortable. Therefore you should pay attention to the quality of your personal protective equipment.

**Your safety is at stake.**



You would like further details? To access more information using your smartphone or tablet  
[www.berner-safety.de/gloves](http://www.berner-safety.de/gloves)

## COMPLETE DOCUMENTATION

For the GMP-compliant manufacturing of e.g. cytotoxic drugs sterile protective gloves which are suitable for cleanroom use are an absolute must. On request Berner International can automatically send you the appropriate sterility certificates for every batch.

## PROTECTION AGAINST CHEMICALS AND CMR DRUGS

Permeation tests in Europe are always carried out in accordance with the directive 89/686/EEC (PPE) to EN 374-3. This is to ensure comparability of the protective properties.

However, some products can always be found on the market which have either only been tested to the American standard ASTM F739 or ASTM6978, or which comply solely with the directive for medical gloves (EN 455).

## PROTECTION AGAINST VIRUSES AND BIOLOGICAL AGENTS

Penetration tests (breakthrough through microholes) are tested within the EU in accordance to EN 374-2. Unfortunately the test to EN 374-2 does not include a virus test. For this reason, Berner International always makes sure that all protective gloves are additionally tested to the American standard ASTM F 1671 .

**NEW**



## \*Dermagrip Ultra LT

Protective glove with innovative SafeDon-dispensing system

Short nitrile protective glove for working in non-sterile areas (e.g. preparatory work in the cytostatic laboratory, biology laboratory, oncology ward, veterinary practice, etc.). With the new SafeDon dispenser system contaminations have been shown to be greatly reduced. At the same time the size of the packaging has been reduced. Available as a 250 dispenser box (suitable dispensing system available) or 50 dispenser box for mobile applications.

Permeation list: Tested for various substances.

Detailed information available at [www.berner-safety.de/safedon\\_gb](http://www.berner-safety.de/safedon_gb)

### Certified safety

- + AQL = 1.5 (water test)
- + Additionally tested as medical gloves according to 93/42/EEC (CE class 1) EN 455.

### Material

- + Special nitrile mix
- + Non-sterile
- + No detectable allergens
- + Especially resistant against many chemicals

**To order** Dermagrip Ultra LT – colour light blue

Size	S (6)	M (7)	L (8)	XL (9)
Order No. (250 box)	5010	5015	5020	5025*
Order No. (8 x 50 box)	5011	5016	5021	5026

\* Size XL 240 box

8 hours  
without  
breakthrough



## Manu N

Nitrile protective glove – the marathon glove

N stands for nitrile, a synthetic copolymer with a special composition. To guarantee the highest level of protection of nitrile protective gloves, many years of experience and various permeation tests have been necessary. The Berner protective glove Manu N sets new standards when handling chemicals, CMR drugs (e.g. cytostatics) and biological agents.

A comprehensive permeation list: Tested for numerous substances.

Detailed information available at [www.berner-safety.de/manu\\_n\\_gb](http://www.berner-safety.de/manu_n_gb)

### Certified safety

- + AQL = 1.5 (water test)
- + Ideal for e.g. the GMP-compliant production of cytostatics
- + Suitable for cleanrooms up to ISO class 5 to EN ISO 14644-1:1999
- + Sterile poly/poly bag packaging
- + Viral protection in accordance to ASTM F 1671

### Material

- + Special nitrile mixture
- + Sterile and non-sterile
- + No detectable allergens
- + High resistance to many chemicals
- + Extra long: 300 mm
- + 15 cytostatics tested
- + Special stainless steel dispensing system available

**To order** Manu N Z+B+® – colour light blue

Size	XS (6)	S (7)	M (8)	L (9)	XL (10)
Order No. (non-sterile)	3010	3015	3020	3025	3030
Order No. (sterile)	3011	3016	3021	3026	3031

## Manu Prene XP

Latex-free neoprene glove – not just for allergy sufferers

Neoprene protective gloves made from especially high quality polychloroprene and protect the user from CMR substances e.g. cytostatics, various chemicals, biological agents and viruses. Due to the material composition these gloves are to be particularly recommended for existing latex allergies.

Comprehensive permeation list: Tested for numerous substances.  
Detailed information available at [www.berner-safety.de/manuprene\\_gb](http://www.berner-safety.de/manuprene_gb)

### Certified safety

- + AQL = 1.0 (water test)
- + Ideal for e.g. the GMP-compliant production of cytostatics
- + Suitable for cleanrooms up to ISO class 5 to EN ISO 14644-1:1999
- + sterile plastic packaging
- + Viral protection in accordance to ASTM F 1671
- + Additionally tested as medical gloves in accordance to EN 455

### Material

- + Sterile and non-sterile
- + No detectable allergens
- + Polymer-coating for easy donning and removal
- + Anatomical shape
- + Length: 295 mm
- + Special stainless steel dispenser system available

**To order** Manu Prene XP Z+B+® – colour latte macchiato

Size	XS (6)	S (6 ½)	SM (7)	M (7 ½)	ML (8)	L (8 ½)	XL (9)
Order No. (non-sterile)	2010	2012	2014	2016	2018	2020	2022
Order No. (sterile)	2011	2013	2015	2017	2019	2021	2023

## Manu L

Latex protective glove – the tough standard

L stands for „Latex“, a natural product, which is made from the sap of the rubber tree. The protective gloves' distinguishing features are their special elasticity, high wearing comfort and extra protective properties for cytostatic substances, many chemicals and biological agents. A special virus protection test provides additional safety.

Comprehensive permeation list: Tested for numerous substances.  
Detailed information available at [www.berner-safety.de/manu\\_l\\_gb](http://www.berner-safety.de/manu_l_gb)

### Certified safety

- + AQL = 1.0 (water test)
- + Ideal for e.g. the GMP-compliant production of cytostatics
- + Suitable for cleanrooms up to ISO class 5 to EN ISO 14644-1:1999
- + sterile polythene packaging
- + Viral protection in accordance to ASTM F 1671
- + Additionally tested as medical gloves in accordance to EN 455

### Material

- + Sterile and non-sterile
- + Powder-free
- + Low in protein: 17 µg/g
- + Very low allergenic: 0.5 µg/g
- + Anatomical shape
- + Length: 295 mm
- + High material thickness
- + Special stainless steel dispenser system available

**To order** Manu L Z+B+® – colour dark blue

Size	S (6 ½)	SM (7)	M (7 ½)	ML (8)	L (8 ½)	XL (9)
Order No. (non-sterile)	4010	4015	4020	4025	4030	4040
Order No. (sterile)	4011	4016	4021	4026	4031	4041



**NEW**



## \*Profeel NR

Latex glove - low material thickness with good protection

New, top quality chemical protective glove (Erlenmeyer flask) with optimised fit for long, fatigue-free working. Due to the low wall thickness offers the protective glove offers "double-gloving" good texture. The inner coating makes it easier to change the gloves, the rolled edge fixed the glove shaft to the coverall or oversleeve. Also suitable for use with isolator rings.

### Certified safety

- + AQL = 1.0 (water test)
- + Optimal for GMP-compliant production of cytostatics
- + Suitable for cleanrooms up to ISO class 5 to EN ISO 14644-1:1999
- + Poly/poly sterile packaging
- + Viral protection in accordance to ASTM F 1671
- + Additionally tested as medical gloves in accordance to EN 455

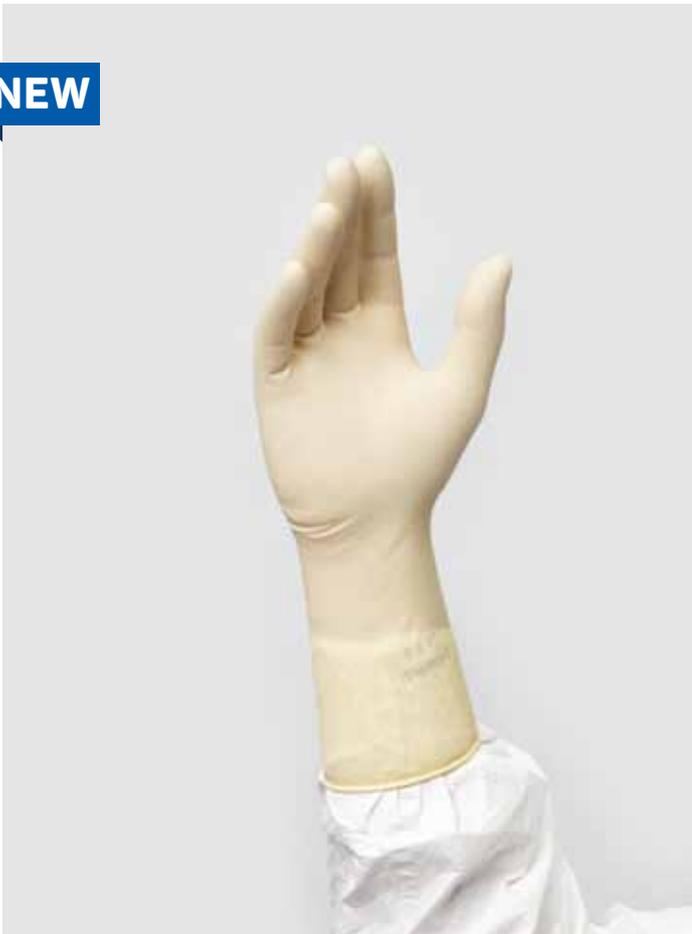
### Material

- + Sterile
- + Powder-free
- + Low in protein: 12 µg/g
- + Very low allergenic: 0.3 µg/g
- + Anatomical shape
- + Length: 290 mm

### To order Profeel NR – colour vanilla

Size	XS (6)	S (6 ½)	SM (7)	M (7 ½)
Order No. (200 pairs)	100000	100001	100002	100003
Size	ML (8)	L (8 ½)	XL (9)	
Order No. (200 pairs)	100004	100005	100006	

**NEW**



## \*Dermagrip-D

The non-sterile version of the Profeel NR

New, top quality chemical protective glove (Erlenmeyer flask) with optimised fit for long, fatigue-free working. Due to the low wall thickness offers the protective glove offers "double-gloving" good texture. The inner coating makes it easier to change the gloves, the rolled edge fixed the glove shaft to the coverall or oversleeve. Also suitable for use with isolator rings. The protective glove has also been tested to EN 455 as medical gloves and also the virus protection test in accordance to ASTM F1671.

### Certified safety

- + AQL = 1.5 (water test)
- + Dispenser box with 25 pairs
- + Viral protection in accordance to ASTM F 1671
- + Additionally tested as medical gloves in accordance to 93/42/EEC (CE class 1) EN 455

### Material

- + Sterile
- + Powder-free
- + Low in protein: 12 µg/g
- + Very low allergenic: 0.3 µg/g
- + Anatomical shape
- + Length: 290 mm

### To order Dermagrip-D – colour vanilla

Size	XS (6)	S (6 ½)	SM (7)	M (7 ½)
Order No. (25 pairs)	100007	100008	100009	100010
Size	ML (8)	L (8 ½)	XL (9)	
Order No. (25 pairs)	100011	100012	100013	

\*Not available in all countries.



## Isolator-glove changing system

Changing gloves safely during normal operation

When handling cytostatic substances and CMR drugs, but also chemicals, there are recommendations set out by the German Federal Association for Health and Welfare (BGW), which states that protective gloves should be changed at least every 30 minutes. The reason for this is the breakthrough on a molecular level (permeation), which is the movement of a chemical through the unbroken protective material. The innovative glove changing system makes it easy and safe to keep to the recommended changing times for protective gloves. The complete glove changing system can also be installed at other commercially available isolators and glove boxes. Should you already have a double ring system- our gloves will very likely fit your system, too.

- + Keeping to the recommended glove changing frequency is easily achieved even when working at an isolator
- + Changing gloves safely while in use due to multiple sealing system
- + Cost-effective: Expensive special gloves are unnecessary
- + Perfect protection: Tested and certified protective gloves

**To order** Isolator-glove-changing system Z+B+®

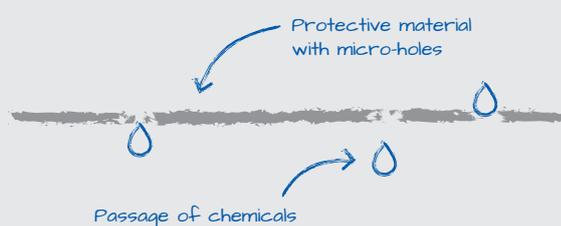
Locking ring	014690	Isolator sleeve covers (vinyl)	014666
Glove inner ring	014691	Double seal for inner ring	014917
Retaining ring 85 mm	014902		
Retaining ring 300 mm	014665	Sleeve covers Isolator	6451

## Expert knowledge safety gloves

### DIFFERENCE BETWEEN PENETRATION AND PERMEATION

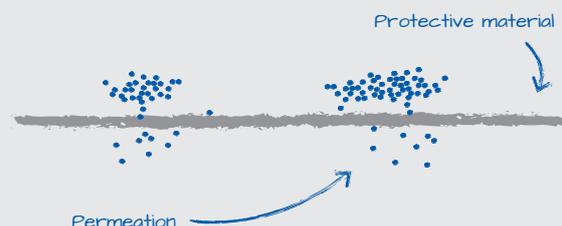
**Penetration is defined as the passage of material through micro-holes!**

These can be caused during manufacture, or incorrect packaging or storage.



**Permeation is the passage of substances on a molecular level in undamaged material!**

Depending on the protective barrier or chemical this process can take from a few seconds to many hours/days.



INFO

# Protective coverall & partial protection

Protective coveralls and partial body protection clothing for the laboratory in Europe, just like gloves, have to comply with the **PPE directive 89/686/EEC**. Depending on the individual risk assessment suitable protective clothing has to be selected. We would be pleased to advise you to determine the appropriate protective clothing suitable for your specific needs.

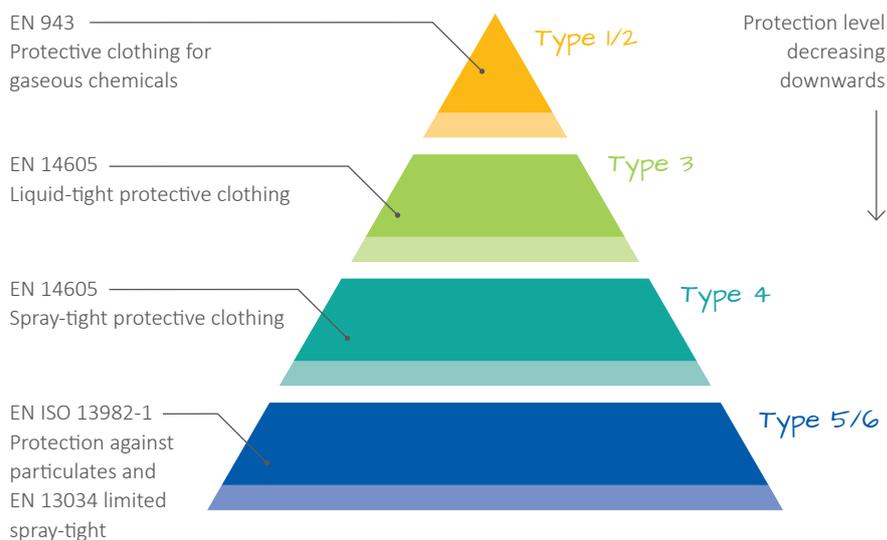
**It's all about your safety.**



You want to know more? Simply use your smartphone or tablet to access [www.berner-safety.de/ppe](http://www.berner-safety.de/ppe)

## PROTECTIVE CLOTHING PYRAMID

The safety pyramid gives an overview over the various protection levels. Within these protection levels different materials and seam finishes offer, in conjunction with the other PPE components, advantages for protective functions.



## CATEGORISATION & DIFFERENCES OF PPE IN ACCORDANCE TO EU-DIRECTIVE 89/86/EEC

Category	I	II	III
Protection	against minimal risks	against medium risks	against deadly hazards or serious irreversible damage to health
EC-quality assurance	–	–	✓
EC- type test	–	✓	✓
Marking	CE	CE	CE + Mark <sup>1</sup>

<sup>1</sup> Number of the certificated notified body: <http://europa.eu.int>

The necessary PPE category for each case is determined with the aid of a hazard analysis. For CMR pharmaceuticals, for example, it is the highest category III.



## Protective coverall Active Breath Z+B+®

Certified type PB4 breathable personal protection against chemicals and CMR-drugs

Category III protective coverall offers optimum protection against hazardous substances such as chemicals, CMR drugs (e.g. cytostatics) and biological agents. However, this is usually at the expense of breathability and wearing comfort. For this reason cleanroom overalls tend to be worn instead. These offer breathability and protection for the cleanroom, but they are not classed as certified personal protection equipment (in accordance to the PPE directive 89/686/EEC certified PPE must be worn when handling hazardous substances).

The protective coverall BERNER Active Breath Z+B+® unites personal protection and breathability in a unique way. In the vulnerable areas (at the front, shoulder and leg region) the protective coverall contains tested and certified personal protective material. The back part of the coverall is made from breathable material and guarantees a controlled air exchange for maximum comfort.

### To order Protective coverall Active Breath Z+B+®

Size	S	M	L	XL	XXL	XXXL
Chest girth (cm)	84-92	92-100	100-108	108-116	116-124	>124
Body height (cm)	164-170	170-176	176-182	182-188	188-194	>194
Order No. (non-sterile - 8 pieces)	125610	125615	125620	125625	125630	125635
Order No. (sterile - 6 pieces)	125611	125616	125621	125626	125631	125636

**Z+ B+**  
PLUS PLUS



## Protective coverall Tyvek® Classic Plus

Type 4/4-B protective coverall against cytostatics, chemicals and biological agents

The type 4 coverall DuPont™ Tyvek® Classic Plus offers good protection when handling cytostatic agents and against many chemicals and biological agents. The well-known Tyvek-material is very robust, extremely comfortable to wear and meets the requirements of EN 1149-1 being anti-statically treated. Suitable for use as a pandemic protective gown (e.g. bird flu, etc.), but not for Ebola or similar viruses.

### To order protective coverall Tyvek® Classic Plus

Size	M	L	XL	XXL
Chest girth (cm)	92-100	100-108	108-116	116-124
Body height (cm)	168-176	176-182	180-188	186-194
Order No. (non-sterile - 25 pieces)	125685	125686	125687	125688
Order No. (non-sterile - 100 pieces)	125672	125674	125676	125678
Order No. (sterile - 6 pieces)	125680	125681	125682	125683



## Protective coverall Tyvek® 800J

New light type 3/3-B coverall

The model Tyvek® 800J made by DuPont™ is the continuous development of the type 3 protective overall market. Just as light as a type-4 coverall, the 800J nevertheless meets the protective requirements of a type-3 coverall. Due to the new material the coverall is more breathable than other type 3-coveralls and offers good protection against inorganic chemicals at low concentrations as well as biological agents. Also suitable for use in pandemics (including Ebola and similar viruses).

**To order** protective coverall Tyvek® 800J

Size	M	L	XL	XXL
Chest girth (cm)	92-100	100-108	108-116	116-124
Body height (cm)	170-176	176-182	182-188	188-194
Order No. (non-sterile- 20 pieces)	125661	125663	125665	125667



## Protective coverall Tychem® C

Type 3/3-B: Perfect protection against inorganic chemicals and biological agents

The well-known type-3 protective coverall Tychem® C acts as a very effective barrier against many inorganic chemicals. Stitched and overtaped seams, a special chinguard and the robust yellow surface material together with other PPE components (safety goggles, respiratory face mask, etc.) provide the perfect protection for the user. Also for a pandemic task force (e.g. Ebola, ...) the ideal choice.

**To order** Protective coverall Tychem® C

Size	M	L	XL	XXL
Chest girth (cm)	92-100	100-108	108-116	116-124
Body height (cm)	168-176	174-182	180-188	186-194
Order No. (non-sterile - 5 pieces)	125650	125652	125654	125656



## Protective coverall EasySafe

Light type 5/6 coverall for particles and light spray

The type 5/6-protective coverall from PE spun fleece offers protection against fibres, particles and light spray mist. It is optimally designed for cleaning and other auxiliary work in the laboratory, disposal of contaminated waste (e.g. asbestos) and inspection and overhaul work. The coverall is very comfortable to wear and is antistatically treated in accordance to EN 1149-5.

**To order** Protective coverall EasySafe

Size	M	L	XL	XXL
Chest girth (cm)	92-100	100-108	108-116	116-124
Body height (cm)	168-176	174-182	180-188	186-194
Order No. (non-sterile - 100 pcs)	125700	125702	125704	125706



## Protective overboots PB3-3PB

Type PB3 / PB3-B: The perfect addition for any coverall

The protective overboots type PB3 / PB3-B with a slip-resistant and a liquid tight sole offers you maximum protection against aggressive chemicals. The protective overboots have also been tested as infection protection clothing in accordance to EN 14126. The universal shape and elasticated seam at the top as well as the tie strap guarantee a comfortable fit and make them quick and easy to put on and take off.

**To order** Protective overboots PB-3 / PB-3B

Size	uni
Order No. (non-sterile - 15 pairs)	100044



## Protective overboots Active Breath Z+B+®

Cleanroom compliant chemical protection type PB4 for your feet

For optimum protection Berner International offers protective overboots which are a useful addition to the new coverall. The protective overboots Active Breath Z+ B+ are made from the same tested and certified protective material. Elasticated bands and additional ties ensure a good fit around the foot and a particle-tight connection to the overall. A slip-resistant sole makes walking easier and provides a safe grip.

**To order** Protective overboots Active Breath Z+B+®

Size	uni
Order No. (non-sterile - 20 pairs)	125550
Order No. (sterile - 25 pairs)	125551



## Protective overboots Tyvek® Isoclean®

Cleanroom overboots suitable for ISO-class 4 with slip-resistant sole

The overboots Tyvek® Isoclean® made by DuPont combine all the protective properties of Tyvek material with the requirements of controlled areas in cleanrooms. The Tyvek material has been specially cleaned and sterilised and is therefore suitable for cleanrooms up to ISO class 4.

**To order** Protective overboots Tyvek® Isoclean®

Size	M	L	XL
Order No. (non-sterile - 50 pairs)	125564	125565	–
Order No. (sterile - 50 pairs)	125566	–	125567



## Protective overboots Z+B+®

Cleanroom protection for your feet type PB4 / PB4-B

The Berner protective overshoes Z+B+® with a certified slip-retardant sole and liquid-tight coating offers maximum protection. The universal fit and the elasticated ankle guarantee a comfortable fit and are easy to put on and take off.

- + Personal protective equipment (PPE) category III
- + Very high barrier function: comprehensive permeation tests with various cytostatics
- + Low in particles

**To order** Protective overboots Z+B+®

Size	uni
Order No. (non-sterile - 40 pairs)	125501
Order No. (sterile - 30 pairs)	125502



## Safety boots S5

Puncture-resistant boots for use during pandemics

These safety boots of the highest safety level S5 with a slip-resistant sole offer maximum protection for pandemics. Due to the high stability and optimal shape the work safety boots are very comfortable to wear. Additionally, the boots are certified as infective protection clothing to EN ISO 20345. The protective boots have reinforced toe caps and a steel layer and are anti-statically treated.

**To order** Safety boots S5 - shaft height 35 cm

Size	38	39	40	41	42
Order No. (1 pair)	125571	125572	125573	125574	125575
Size	43	44	45	46	
Order No. (1 pair)	125576	125577	125578	125579	



## Hood Tyvek® Isoclean®

Additional particle protection in cleanrooms

The hood Tyvek® Isoclean® manufactured by DuPont combines the protective properties of the well-known Tyvek® material with the requirements of controlled areas in cleanrooms. The hood was specially cleaned and sterilised and is suitable for cleanrooms up to ISO-class 4.

**To order** Hood DuPont Tyvek® Isoclean®

Size	uni
Order No. (sterile - 100 pieces)	125750



## Protective gown Z+B+®

The proven partial protection against chemicals, cytostatic and biological agents type PB4 / PB4-B

Partial body protection with completely closed front, extra long cut and a raised collar.

- + Liquid impermeable coating front and sleeves
- + Sleeves have ultrasonically sealed seams for high penetration protection
- + Comprehensive permeation tests
- + Breathable back
- + Velcro fastener in the upper back area
- + With ties at the waist
- + Available with elasticated or knitted cuffs
- + Optimal for cleanrooms (gown worn over the cleanroom overall)

**To order** Protective gown Z+B+® with knitted cuffs

Size	S	M	L
Order No. (non-sterile - 15 pieces)	6700	6800	6900
Order No. (sterile - 10 pieces)	6701	6801	6901

**To order** Protective gown Z+B+® with elasticated cuffs

Size	M	L
Order No. (non-sterile - 15 pieces)	6500	6550
Order No. (sterile - 10 pieces)	6600	6650



## Apron Tyvek® Classic Plus

Additional protection as required

Partial protection version suitable, for example, with reusable clothing systems made from the well-known Tyvek® Classic Plus material. The apron has a neck loop and a tie at the waist.

- + Partial protection for the front part of the body
- + With neck loop and waist tie
- + Comprehensive documentation
- + Certified-material - apron not tested separately as PPE (type 4PB)

**To order** Apron DuPont Tyvek® Classic Plus

Size	uni
Order No. (non-sterile - 25 pieces)	6950



## Protective oversleeves Z+B+®

Suitable protection for sleeves in cleanrooms against chemicals, cytostatics and biological agents type PB4 / PB4-B.

The low particle oversleeves can be used wherever all over body protection is not required. Due to the liquid-impermeable coating safety protection of the arms is always guaranteed. The cone-shaped cut makes donning easy, universal shape and wearing comfort.

- + Comprehensive permeation tests
- + Ultrasonic sealed seams for high penetration protection
- + Available with knitted or elasticated cuffs

**To order** Protective oversleeves Z+B+®

	Knitted cuffs	Elasticated
Order No. (non-sterile - 50 pairs)	6000	6200
Order No. (sterile - 40 / 30 pairs)	6001	6300



## Protective oversleeves Tychem® C

Protective oversleeves type PB3 / PB3-B: Protection of the arms against chemicals and biological agents

The Tychem® C protective oversleeves offer protection against concentrated inorganic acids and biological agents in accordance with EN 14126.

- + Category III personal protective equipment (PPE)
- + Type-tested and certified
- + Chemical protective clothing type ePB3 to EN 14605
- + Infectious protective clothing type PB3-B to EN 14126
- + Coating impermeable to liquids
- + Seams liquid-tight over-taped

**Order No.** Protective oversleeves Tychem® C

Size	uni
Order No. (non-sterile - 25 pairs)	6455



## Isolator protective oversleeves Z+B+®

Protection of the isolator oversleeves permeation type PB4

When working with CMR drugs (e.g. cytostatics) all exposed protective materials are subject to potential contamination by a particular substance. The protective oversleeves which are connected to the isolator also lie within the exposed area. However, to maintain a changing rhythm here is very difficult. For this reason Berner International offers a patented oversleeves system, which can be pulled over the existing isolator oversleeve system. The oversleeve system consists of tested and certified PPE and is to be replaced daily. In this way permeation in the fixed part of the isolator oversleeves can be avoided.

**To order** Isolator sleevecover Z+B+®

Size	uni
Order No. (sterile - 15 pairs)	6451

# Respiratory masks

Respiratory masks can be divided into particle filtering half masks (also called FFP masks) and respiratory face masks as partial or full face mask with replaceable filter elements for the filtration of gases and particles. For work areas with insufficient oxygen concentration the use of additional self-contained breathing apparatus is necessary.

**It's all about your safety.**



You would like to know more? Simply use your smartphone or tablet to access [www.berner-safety.de/masks](http://www.berner-safety.de/masks)

## CERTIFIED RESPIRATORY FACE MASKS

Certified, particle-filtrating respiratory face masks in accordance to EN 149 of levels FFP-2 and FFP-3 for use in the laboratory. According to the application area masks can be used for protection against particles and aerosols when handling cytostatics, working with biological agents and viruses or other hazardous substances. All masks are type-tested and certified in accordance to EU directive 89/686/EEC.

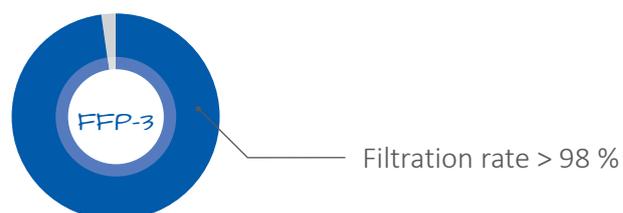
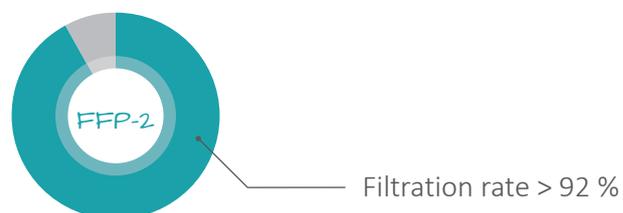
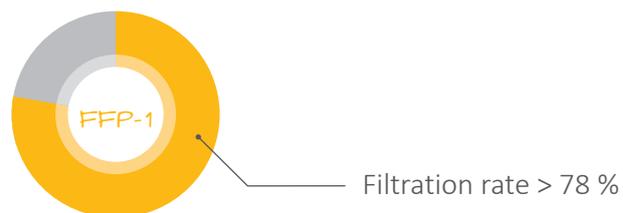
Attention - FFP-masks are unsuitable for gases!

For protection against gaseous substances use a reusable partial or full face mask with an appropriate filter.

## OVERVIEW OF FFP-FILTRATION RATES\*

Example: For a filtration rate of 92 %, 8 % of particles go through the mask (if worn correctly).

\* FFP Classification in accordance to EN 149





## FFP-3 Respiratory mask

Protection against particles, aerosols and viruses

The pre-shaped FFP-3 respiratory mask with integrated valve and fixed mask body made by Uvex Safety. The new, optimised design of this FFP-3 moulded mask in connection with the soft sealing lip makes it very comfortable to wear while optimising the protective function. This respiratory face mask is suitable for handling with CMR drugs (e.g. cytostatics, virostatics, etc.), biological agents and viruses.

**To order** Uvex respiratory pre-shaped mask FFP-3 D

Size	uni
Order No. (1 piece)	121287



## FFP-3 Respiratory mask

Pre-shaped mask with high wearing comfort

The FFP-3 respiratory mask made by Moldex has an integrated valve and pre-shaped mask body. A sealing lip with elastic straps ensures maximum comfort. Donning and removing of the mask is easy due to the moulded shape and ensures a perfect fit. This face mask is suitable for handling CMR drugs (e.g. cytostatic substances, virostatics, etc.) biological agents as well as viruses.

**To order** Moldex respiratory pre-shaped mask FFP-3 D

Size	uni
Order No. (1 piece)	121262



## FFP-3 respiratory folding mask

Folding mask for all face shapes

The FFP-3 respiratory folded face mask with integrated valve manufactured by Uvex Safety. Due to the special design this FFP-3 mask the correct fit (and thereby ensuring the protective function) can be easily checked. The elasticated straps at the sides ensure a tight and proper fit of the mask. Also available as a sterile version. The latex-free folding mask is also very space-saving to store.

**To order** Uvex respiratory folding mask FFP-3 D

Size	uni
Order No. (non-sterile - 1 piece)	121285
Order No. (sterile - 4 pieces)	121286



## FFP-3 Respiratory folding mask

Respiratory folding mask without exhalation valve

Developed for working in cleanrooms, in areas where potential particle emissions in the form of respiratory air are to be avoided. The very high protective functions and a perfect fit are the distinguishing features of this mask. The CoolSAFE+™ filter material offers optimum protection.

**To order** Dräger X-plore 1730 respiratory folding mask FFP-3 D

Size	uni
Order No. (1 piece)	121289



## \*FFP-2 Respiratory folding mask

Latex-free folding mask with reduced breathing resistance

FFP-2 folding mask made by Uvex for protection against dust, aerosols, and aerosol mist. The mask has passed the dolomite dust test for intense dust generation and is completely latex-free. Suitable for all applications, where FFP-2 filtration is sufficient (see risk analysis).

**To order** Uvex respiratory folding mask FFP-2 D

Size	uni
Order No. (1 piece)	121272

**NEW**



## \*Respiratory full face mask

For professional applications for the highest demands

The Dräger X-plore® 6530 full face respiratory mask has been designed for professional applications. In combination with the appropriate X-plore respiratory filter (Rd40 thread to EN 148-1) the mask provides the perfect protection for various applications, eg. in the chemical or pharmaceutical industry but is also suitable for use in infection protection sets and for use in pathology. Filters exist for virtually all fields of application: We recommend the combi-filter type: 1140 - A2B2E2K2 Hg CO NO-P3 R D. This filter is suitable for many different applications areas and thereby reducing the sources of error as well as storage costs for many filters.

**To order** Dräger X-plore® 6530 respiratory full face mask & Respiratory combi-filter for full face mask X-plore 6000-series

Mask: Order No. (1 piece)	121290
Kombi-filter: Order No. (1 piece)	121291

\*Not available in all countries.

# Safety glasses



Eye protection is a of major importance in the laboratory. According to the application area and risk assessment different models of eyewear are suitable. From simple laboratory glasses to safety glasses with frames to gas-tight or autoclavable safety goggles.

**Your safety is at stake.**



You would like to know more? Simply use your smartphone or tablet to access [www.berner-safety.de/glasses](http://www.berner-safety.de/glasses)

## SAFETY GLASSES

Safety glasses are subject to, like the other parts of personal protective equipment (PPE) in Europe, the EU directive 89/686/EEC. Only when the requirements of the directive and the particular relevant standards are fulfilled, a manufacturer is allowed to bring this PPE to the market.

As part of the risk analysis (the key element of health and safety at work) the employer has to assess the hazard potential of individual tasks / activities and provide suitable and tested protective equipment. The employee is then required to wear this equipment for these particular tasks.

The main standard for safety goggles is EN 166 (Personal eye protection- requirements). Depending on the particular field of application which are safety glasses additional EN standards may also be relevant (EN 167 – EN 175, EN 379 and several EN ISO standards on eye optics). Further details and ordering information on the standards can be obtained from your national standards organisation.

## AUTOCLAVABLE SAFETY GLASSES FOR THE GMP-COMPLIANT PRODUCTION

Specially for sterile applications autoclavable safety glasses are now available with an anti-fog coating.



## Safety glasses Super fit CR

First autoclavable safety glasses with "Antifog"-Effect

Professional work safety in laboratories, clinics, cleanrooms etc. For special demands Uvex has developed the first autoclavable safety goggles with anti-fog coating. The glasses are extremely light, flexible soft side arms fits all face shapes well, is very comfortable to wear with a wide field of vision and can be easily combined with further personal protective equipment (PPE). The glasses can be autoclaved repeatedly at a maximum of 121° C.

### Product highlights

- + Large field of vision
- + Autoclavable at 121° C
- + Optimum fit
- + Anti-fog
- + Extremely light

### To order Uvex Super fit CR

Size	uni
Order No. (1 piece)	121706



## Safety glasses Super f OTG CR

Safety glasses with side protection

The glasses fit perfectly, have a wide field of vision and lateral spray protection. The special XST-templates make these safety goggles comfortable to wear and can be optimally combined with further personal protective equipment (PPE). The safety goggles is also suitable for spectacle wearers. The super f OTG CR glasses can be autoclaved several times at 121° C.

### Product highlights

- + Very large field of vision
- + Autoclavable at 121°C
- + optimum fit due to XST-arms
- + Anti-fog
- + Can be worn over spectacles

### To order Uvex Super f OTG CR

Size	uni
Order No. (1 piece)	121711



## Cleanroom glasses Ultrasonic CR

Autoclavable full vision safety goggles

The full vision safety goggles Ultrasonic CR with indirect ventilation ensures comfortable and irritation-free conditions. Due to the wide field of vision everything at the workplace is always visible at a glance.

The shape of the safety glasses can be easily adjusted using the soft silicone headband and can be optimally adjusted to individual requirements and can be optimally combined with personal protective equipment (PPE).

These glasses is also suitable for spectacle wearers.

### Product highlights

- + At 121° C autoclavable
- + Anti-fog coating
- + Suitable for cleanrooms to ISO class 5 (to ISO 14644-1)
- + Or class B in accordance to GMP-guidelines annexe 1
- + For spectacle wearers

### To order Uvex Ultrasonic CR

Size	uni
Order No. (1 piece)	121716



## Laboratory glasses x-trend 9177 HC-AF

Ultra-light laboratory glasses with optimum fit

The laboratory glasses x-trend with an HC-AF-coating manufactured by Uvex has a large, anatomically shaped "wrap-around" screen. The optidur NHC-coatings are extremely scratch-resistant and offer an excellent resistance against chemicals.

### Product highlights

- + Laboratory glasses with large field of vision
- + Anti-fog coating
- + Easy to clean due to nano-coating

### To order Uvex x.trend 9177 HC-AF

Size	uni
Order No. (1 piece)	121721



## Safety goggles 9405

Full vision safety goggles with "anti-fog" in sterile and non-sterile

The completely enclosed full vision safety goggles made by Uvex Safety guarantees optimum protection against mechanical risks, liquids and coarse dust. The flexible soft shape and the adjustable strap offers exceptional comfort, even when worn over spectacles. Even when worn together with respiratory masks these goggles always guarantee a clear vision.

### Product highlights

- + Anti fog coating
- + Indirect ventilation
- + Can be worn over glasses

### To order Uvex 9405

Size	uni
Order No. (sterile - 1 pc.)	121405
Order No. (non-sterile - 1 pc.)	121406



## Gas-tight safety goggles Ultravision

When handling gases and airborne viruses

These full vision safety goggles made by Uvex Safety are fundamentally different from other safety goggles. While standard safety goggles have indirect ventilation, the Ultravision model is gas-tight. These goggles are ideal for working with chemical substances, which turn into the gaseous state at room temperature, but they are also suitable for working with hazardous biological agents. These safety glasses meet the specifications of the German Robert-Koch-Institute (RKI) for infection protection sets (type 1) to safeguard against epidemics such as the Ebola outbreak.

### Product highlights

- + Gas-tight
- + Anti-fog coating
- + Good protection and comfortable fit

### To order Uvex Ultravision

Size	uni
Order No. (1 piece)	121726



## Gas-tight safety goggles Fahrenheit SA

For handling gases and airborne viruses

The 3M full vision safety goggles Fahrenheit SA is comfortable to wear and is suitable for wearing over spectacles and in combination with respiratory masks. The acetate lens gives a good field of vision, high chemical resistance and impact resistant up to 120m/s. Naturally the safety goggles are equipped with an "anti-fog"-coating and 100% UV-filtration. The "SA" version of these safety goggles is gas-tight. The application range of these safety glasses extend from working with chemical substances, which change into the gaseous phase at room temperature to working with dangerous biological agents. For example, these safety goggles correspond to the recommendations made by the German Robert-Koch-Institute (RKI) for infection protection sets (type 1) for the protection of current epidemics such as Ebola.

### To order 3M Fahrenheit SA

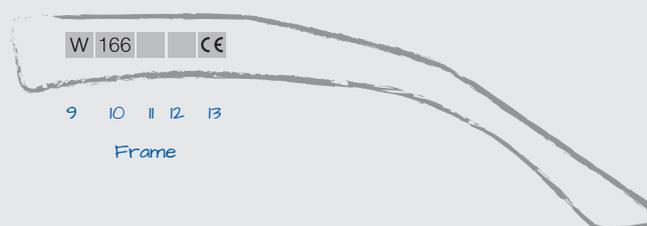
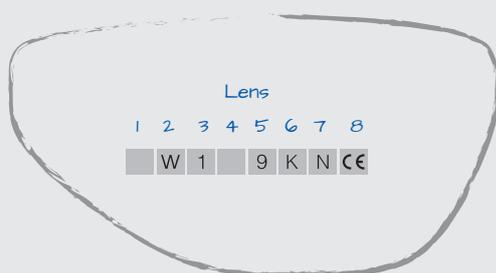
Size	uni
Order No. (1 piece)	121730

## Know-how: Safety glasses

### MARKINGS FOR SAFETY GLASSES

INFO

1. Protection level (filter only)
2. Manufacturer's identification code
3. Optical class
4. Symbol for mechanical strength
5. Mark for non-adherence of molten metal and resistance to penetration of hot solids
6. Mark for abrasion resistance
7. Mark for anti-fog resistance
8. Certification mark
9. Manufacturer's identification code
10. Number of EN standard
11. Field(s) of use (optional)
12. Symbol of resistance to high speed particles
13. Certification mark



# Pandemic Sets

In today's globalised world as a result of the ever increasing mobility, diseases are also transmitted significantly faster from country to country. Infectious diseases, which used to be limited to individual regions or countries, now spread across several continents. The best known examples from the recent past are Ebola, the MERS-CoV coronavirus, bird flu, Mexico flu, but also EHEC, the norovirus and measles.



You would like further details? To access more information using your smartphone or tablet  
[www.berner-safety.de/pandemic\\_sets](http://www.berner-safety.de/pandemic_sets)

## PROTECTION FOR HEALTH CARE WORKERS IN EPIDEMICS AND PANDEMICS

In general, one talks of an outbreak of a disease, if the number of people affected by a certain infectious disease in a specific region or over a specific time period exceeds the expected number of illnesses.

If the disease continues to spread across national borders and continents it is known as a pandemic, in the field of veterinary medicine it is called of panzootics.

For the protection of health care workers, who enter these hazardous areas, Berner International offers complete pandemic sets of different configurations. Each of these sets comprise a complete set of personal protective equipment (PPE) for one person and are in line with the recommendations of the German Robert-Koch-Institute (RKI).

On request we are also able to put individual sets together to suit any special requirements.



## \*Pandemic protection set - type 1

### Version A

The BERNER pandemic protection set has been developed for health care workers, who remain within the infectious area for a limited period of time (max. 8 hours). The set meets the recommendations of the German Robert-Koch-Institute (RKI) for infectious protection sets, version 1.

In line with the guidelines of the RKI, for this type of infection protection set, due to the absence of a gas filtered mask, only a limited decontamination is possible.

The set consists of :

- + 1 Type 3 liquid-tight chemical protective coverall:  
**DuPont Tychem® C protective coverall** of the highest category III, pressure-tight up to max. 2 bar, additionally tested as protective clothing against infective agents to EN 14126 (type 3-B)
- + 1 Pair of **protective overboots type 3-B**, tested as protective clothing against infective agents to EN 14126 (type 3-B)
- + 1 particle filtering **Uvex - FFP3 respiratory mask** as per EN 149, retention capacity at least. 99%
- + 1 gas-tight **Uvex - safety goggles**
- + 1 pair **BERNER Nitrile chemical safety gloves** with Manu N with additional virus test to ASTM F1671.
- + 1 pair **BERNER Latex chemical safety gloves** Manu L- extra thick material with additional with virus test as per ASTM F1671.
- + 1 roll **water proof duct tape** for sealing the joints
- + 1 **waste bag**
- + 1 **cable tie**
- + 1 picture **guide how to don PPE** in D/GB
- + Comprehensive **PPE documentation**

#### To order Pandemic protection set - type 1 - version A

	Size M	Size L	Size XXL
Order No. (1 set)	4178	4180	4182

## \*Pandemic protection set - type 1

### Version B

The BERNER pandemic protection set has been developed for health care workers, who remain within the infectious area for a limited period of time (max. 8 hours). The set meets the recommendations of the German Robert-Koch-Institute (RKI) for infectious protection sets, version 1. This version contains a set of safety boots.

In line with the guidelines of the RKI, for this type of infection protection set, due to the absence of a gas filtered mask, only a limited decontamination is possible.

The set consists of :

- + 1 Type 3 liquid-tight chemical protective coverall:  
**DuPont Tyvek® 800J C protective coverall** of the highest category III, additionally tested as protective clothing against infective agents to EN 14126 (type 3-B)
- + 1 Pair of **S5 work safety boots** with a puncture-resistant sole (EN ISO 20345) and steel toe cap
- + 1 particle filtering **Uvex - FFP3 respiratory mask** as per EN 149, retention capacity at least 99%
- + 1 gas-tight **3M safety goggles**
- + 1 pair **BERNER Nitrile chemical safety gloves** with Manu N with additional virus test to ASTM F1671.
- + 1 pair **BERNER Latex chemical safety gloves** Manu L- extra thick material with additional with virus test as per ASTM F1671.
- + 1 roll **water proof duct tape** for sealing the joints
- + 1 **waste bag**
- + 1 **cable tie**
- + 1 picture **guide how to don PPE** in D/GB
- + Comprehensive **PPE documentation**

#### To order Pandemic protection set - type 1 - version B

	Size M Shoe size 40	Size L Shoe size 42	Size XL Shoe size 44	Size XXL Shoe size 46
Order No. (1 set)	4185	4186	4187	4188

Further shoe sizes available on request!



Foto: EU Humanitarian Aid and Civil Protection

## \*Pandemic protection set - type 2

The BERNER pandemic protection set has been developed for health care workers, who remain within the infectious area for a limited period of time (max. 8 hours). The set meets the recommendations of the German Robert-Koch-Institute (RKI) for infectious protection sets, version 2. The full face mask with the corresponding filter makes it particularly easy to breathe, and offers protection against biological pathogens and also absorbs gases which are created during decontamination.

For this type of infection set a standardised decontamination can be carried out in accordance with the RKI guidelines.

The set consists of :

- + 1 Type 3 liquid-tight chemical protective coverall:  
**DuPont Tychem® C coverall** of the highest category III, additionally tested as protective clothing against infective agents to EN 14126 (type 3-B)
- + 1 Pair of **S5 work safety boots** with a puncture-resistant sole (EN ISO 20345) and steel toe cap
- + 1 **respiratory full face mask Dräger X-plore** with suitable respiratory combination filter
- + 1 gas-tight **3M safety goggles**
- + 1 pair **BERNER Nitrile chemical safety gloves** with Manu N with additional virus test to ASTM F1671.
- + 1 pair **BERNER Latex chemical safety gloves** Manu L- extra thick material with additional with virus test as per ASTM F1671.
- + 1 roll **water proof duct tape** for sealing the joints
- + 1 **waste bag**
- + 1 **cable tie**
- + 1 picture **guide how to don PPE** in D/GB
- + Comprehensive **PPE documentation**

**To order** Pandemic protection set - type 2

	Size L Shoe size 41	Size XXL Shoe size 44
Order No. (1 set)	4195	4197

Further shoe sizes available on request!

## \*Pandemic protection set - type 3

The BERNER pandemic protection set has been developed for health care workers, who work in areas where a type 4 overall (spray-tight) is sufficient. This set is suitable for the already known variations of the bird flu, livestock diseases without transmission to humans, etc. Naturally the protective equipment has been tested to EN 14126. In line with the guidelines of the RKI, for this type of infection protection set, due to the absence of a gas filtered mask, only a limited decontamination is possible.

The set consists of :

- + 1 Type 4 spray-tight chemical protective coverall:  
**DuPont Tyvek® Classic Plus protective coverall** of the highest category III, additionally tested as protective clothing against infective agents to EN 14126 (type 4-B)
- + 1 Pair of **protective overboots type PB-3-B**
- + 1 particle filtering **FFP3 respiratory mask** tested to EN 149, retention capacity at least 99%
- + 1 gas-tight **3M safety goggles**
- + 1 pair **BERNER Nitrile chemical safety gloves** with Manu N with additional virus test to ASTM F1671.
- + 1 pair **BERNER Latex chemical safety gloves** Manu L- extra thick material with additional with virus test as per ASTM F1671.
- + 1 roll **water proof duct tape** for sealing the joints
- + 1 **waste bag**
- + 1 **cable tie**
- + 1 picture **guide how to don PPE** in D/GB
- + Comprehensive **PPE documentation**

**To order** Pandemic protection set - type 3

	Size M	Size L	Size L	Size XXL
Order No. (1 set)	available on request			

\*Not available in all countries.

# Consumables

Auxiliary material for the laboratory makes working easier or safer. Products for this area, which are intended for single use are known as disposables or consumables.



You would like further details? To access more information using your smartphone or tablet  
[www.berner-safety.de/consumables](http://www.berner-safety.de/consumables)

## CONSUMABLES FOR THE LABORATORY

In a laboratory various tasks require the use of different tools. For example, prep mats offer good protection against the contamination of surfaces, withdrawal cannula make multiple extraction of liquids from vials much easier and Spillkits contain the complete set of personal protective equipment for the elimination of spills.



### EXPERT OPINION

Know-how Spikes  
Dr. Jürgen Barth

Pharmacist StIL-Studienzentrale  
Justus-Liebig-University, D-Gießen

#### Spikes without particle filter? - An opinion

„...There are further problems with **spikes containing filters** in the liquid channel. Cytostatics with particulate properties (liposomal formulations, nanoparticles or albumin-bound substances) and suspensions (azacitidine), but also mono-clonal antibodies should not be drawn up using these types of spikes. A suspension remains in the vial. A solution without any active ingredient is drawn up. The same applies to liposomal preparations or the liposomes are destroyed. Also, when drawing up, the (strong) shearing forces may cause the antibodies to be physically altered, damaged or depending on the filter material- absorbed.“

The full text of this expert opinion is available on the web site of Berner International under the following address:  
[www.berner-safety.de/spikes\\_without\\_filter](http://www.berner-safety.de/spikes_without_filter)

NEW



## Withdrawal cannula UltraSpike II

The UltraSpike II was developed for the drip-proof and **complete emptying** of vials. Due to the special side fixing clips the spike is positioned close to the plug of the vial. This means that the vial can be emptied leaving virtually no residual volume without retracting the withdrawal cannula (which would disable the ventilation).

Like all UltraSpikes the UltraSpike II also has a Halkey-Roberts-valve. The special valve at the Luer-Lock adapter opens automatically and closes again when disconnecting the syringe. It is non-drip, easy to sterilise and offers increased contamination protection. To provide additional safety for the user, the chemo spikes contain a large 0.1 µm PTFE Paclitaxel-resistant ventilation filter.

**To order** UltraSpike II – with plastic spike, without liquid filter

Order No. (50 pieces)

126217

NEW



## Withdrawal cannula Spike II

The UltraSpike II was developed for the drip-proof and **complete emptying** of vials. Due to the special side fixing clips the spike is positioned close to the plug of the vial. This means that the vial can be emptied leaving virtually no residual volume without retracting the withdrawal cannula (which would disable the ventilation).

To protect the user the ChemoSpike contains a large 0.1 µm PTFE Paclitaxel-resistant ventilation filter.

Model without liquid filter for drawing up viscous substances and monoclonal antibodies.

**To order** Spike II – with plastic spike, without liquid filter

Order No. (50 pieces)

126216

## Withdrawal cannula MicroSpike Z+®

The MicroSpike Z+ has been specially developed for the work with CMR-drugs such as cytostatics, virostatics and monoclonal antibodies and offers maximum protection whilst being easy to handle.

Due to the extra long cannula vials with a narrow neck can also be drained completely and safely (handling similar to a cannula).

The MicroSpike has a particularly small residual "dead-volume" of only 0.17 ml.

**To order** MicroSpike Z+® – with extra long cannula, without liquid filter

Order No. (50 pieces)

126215





## Withdrawal cannula UltraSpike Z+®

The UltraSpike Z+® are state of the art withdrawal cannula. The special valve at the Luer-Lock-adapter opens and closes automatically and locks automatically when disconnecting the syringe. It is non-drip, easy to disinfect and offers increased contamination protection.

**To order** UltraSpike Z+® – with plastic cannula and 5 µm liquid filter

Item No. (50 pieces)	126211
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**To order** UltraSpike Z+® SK – with metall cannula and 5 µm liquid filter

Item No. (50 pieces)	126212
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**To order** UltraSpike Z+® SKoF – with metal cannula but without liquid filter

Item No. (50 pieces)	126213
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## Withdrawal cannula Spike Z+®

ChemoSpike for the multiple extraction and injection when handling CMR-substances.

Version with stainless steel cannula, 0.1 µm ventilation filter and 5µm liquid filter.

**To order** Spike Z+® – With stainless cannula and liquid filter

Artikel-Nr. (50 pieces)	126214
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## \*Extra-Spike® Air SK Chemo

Multiple withdrawal cannula suitable for chemotherapy with a stainless steel cannula, integrated ventilation and hydrophobic, fibre-free 0.2 µm filter.

Compact form with large external ventilation filter.

**To order** Extra-Spike® Air SK Chemo, without liquid filter

Order No. (50 pieces)	112902872
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\*Not available in all countries.



## SpillKit XP Z+®

Certified emergency and cleaning set for cytostatics

The **BERNER SpillKit XP** provides all necessary tools for eliminating cytostatic contaminations easily and safely. The SpillKit XP has a type test certificate issued by an external notified body and is recommended by the DGOP and the ESOP.

- + Type-tested and certified
- + Personal protective equipment (PPE) of the highest category III
- + Optimised for all types of cytostatic spills
- + Contains a tested coverall and overboots (please note the size)
- + Also available as latex-free
- + Recommended by DGOP und ESOP



### To order SpillKit XP Z+®

Order No. for size M	4104
Order No. for size L	4112
Order No. for size XXL	4115

### To order SpillKit XP Z+® - Latex-free version

Order No. for size M	4124
Order No. for size L	4133
Order No. for size XXL	4135

## SpillKit Z+®

Standard emergency and cleaning set for cytostatics

Unser bewährtes **BERNER SpillKit Z+®** enthält Zytostatika-Schutzkleidung, Hilfsmittel, ein Formular zur Unfallanzeige und vieles mehr – damit Sie bei Unfallsituationen mit CMR-Arzneimitteln (z.B. Zytostatika) gut gerüstet sind.

- + Geprüfte und zertifizierte PSA der höchsten Kategorie III
- + Variante mit Schutzkittel, Größe: uni
- + Enthält alle notwendigen Hilfsmittel z.B. ChemoSorb-Pad, Reinigungstücher, ...
- + Umfangreiche Dokumentation

### Bestellinfo SpillKit Z+®

Größe	uni
Artikel-Nr.	4004

**AVAILABLE AS  
DOWNLOAD OR FREE  
WITH YOUR NEXT  
ORDER!**

Suitable for cleanrooms  
Poster SpillKit-  
instructions

[www.berner-safety.de/  
spillkit\\_poster](http://www.berner-safety.de/spillkit_poster)



## Cytotoxic wipe wampling set

Easy and quick

When handling CMR drugs (e.g. cytostatics), unintentional cross-contamination from contaminated gloves, vials, protective clothing, shoes or wheels from transport trolleys, etc. can easily occur. Accidents or disturbances in airflow of safety cabinets can also lead to the release of cytostatic drugs. In the German MEWIP study (Monitoring-Effect Study for Wipe Sampling in Pharmacies) cytostatic drugs were found in 61% of all samples.

In cooperation with the Institute of Energy and Environmental Technology (IUTA e. V.) in Germany, Berner International has developed a wipe sample set, with which contaminations from CMR drugs can be detected quickly and safely. Through regular monitoring weaknesses in the production, handling and cleaning processes are easily detected and corrected.

- + Validation of cleaning processes
- + Detecting sources of contamination
- + Control and optimisation of work processes
- + Proof of the optimum work procedure for your customers
- + Cost-effective analysis tool
- + Suitable for use by own staff
- + Analysis of 27 single substances or as a group using different multi-methods
- + Fast and detailed report
- + Can be performed at any time
- + Improved protection for your employees

**To order** Cytostatic wipe sampling set

Order No. Type 1	4155
Order No. Type 2	4156

### Detectable Substances

5-Fluorouracil  
6-Mercaptopurine  
Acemetacine  
Azathioprine  
Busulfane  
Capecitabine  
Carboplatin  
Carmustine  
Chlorambucil  
Cisplatin  
Clomiphene  
Cyclophosphamide  
Cytarabine  
Doxorubicin  
Docetaxel  
Etoposide  
Flutamide  
Gemcitabin  
Gesamt-Platin  
Ifosfamide  
Methotrexate  
Mitomycine  
Oxaliplatin  
Paclitaxel  
Sulfamethoxazol  
Tamoxifen  
Thalidomide

The cost-effective multi-method (as in MEWIP) for the simultaneous analysis of various substances.

TIP

#### Multi-method 1

5-Fluorouracil, Cyclophosphamide, Ifosfamide, Gemcitabine, Etoposide, Methotrexate, Paclitaxel, Docetaxel.

#### Multi-method 2

5-Fluorouracil, Cyclophosphamide, Ifosfamide, Gemcitabin, Etoposide, Methotrexate, Paclitaxel, Docetaxel, total-platinum.

#### Multi-method 3

5-Fluorouracil, Cyclophosphamide, Ifosfamide, Gemcitabine, Etoposide, Methotrexate, Paclitaxel, Docetaxel as well as Cisplatin, Carboplatin, Oxaliplatin and total-platinum.

#### Platinum analysis

Cisplatin, Carboplatin, Oxaliplatin and total platinum.



## Prep mats for cytostatics and biological agents

Avoiding surface contamination

Extremely absorbent prep mats with with an impermeable lower layer for use in the laboratory. Minimizes time spent on cleaning.

- + Safe absorption of liquids
- + Available sterile and non-sterile

**To order** Prep mats Z+B+®

Order No. (56x41 cm - non-sterile- 50 pieces)	8100
Order No. (56x41 cm - sterile- 40 pieces)	8101
Order No. (42x26 cm - non-sterile - 50 pieces)	8000
Order No. (42x26 cm - sterile- 50 pieces)	8001
Order No. (61x44 cm - non-sterile - 50 pieces)	8700
Order No. (61x44 cm - sterile - 50 pieces)	8800



## ChemoSorb-Pad

For the absorption of large amount of liquids in hospitals, pharmacies and laboratories

The ChemoSorb-pad reliably absorbs and binds many chemicals. The liquids (e.g. cytostatics) are turned into a gel-like mass (similar to a babies' nappy) and thereby guarantees safe and effective elimination.

- + Binds liquids without drips
- + Liquid absorption up to 3 l
- + Suitable for CMR-drugs (e.g. cytostatics)
- + High absorption and easy handling
- + Ideal for emergencies (spill emergencies)

**To order** ChemoSorb-Pad - Latex-free

Item No. (packaging with 10 pieces)	120016
Item No. (packaging with 50 pieces)	120014



## Cleanroom cloths ISYSOFT, ISYSOFT II and Cleanroom 100

Highest cleaning efficiency and optimal surface cleaning

ISYSOFT, Isysoft II (latex-free) and Cleanroom 100 cleaning wipes are optimised for cleaning in the cytotoxic field and for working with biological agents. The material is due its special structure extremely tear-resistant and absorbent.

**To order** Cleaning cloths

Order No. (Cleanroom 100 - non-sterile - 150 wipes)	121740
Order No. (Cleanroom 100 - sterile - 6 x 25 wipes)	121741
Order No. (ISYSOFT - non-sterile - 4 soft bags each incl. 25 pieces)	121500
Order No. (ISYSOFT - sterile - 50x2 wipes in special sterile packaging)	121501
Order No. (ISYSOFT-II - non-sterile - 4 soft bags each incl. 25 pieces)	121507
Order No. (ISYSOFT-II - sterile - 50 x 2 wipes in special sterile packaging)	121508



## Tubular foil for the SealSafe®

Liquid and aerosol-tight sealing of waste

Tubular foil for the waste disposal unit BERNER SealSafe®, BERNER SealSafe Sensor+® and the older version BERNER PactoSafe®. Developed for the easy disposal of waste when dealing with waste of SMR drugs and biological agents. Comprehensive permeation tests prove the cytostatic barrier function. Sealed waste can remain in the waste disposal container up to a week. The yellow coloured version of the tubular film is recommended for handling biological agents.

### To order Tubular foil SealSafe®

Order No. (sterile, colourless, for cytotoxics, 3x tubular foil)	1001
Order No. (non-sterile, colourless, for cytotoxics, 5x tubular foil)	1000
Order No. (non-sterile, yellow, for microbiological applications, 5x tubular foil)	1002



## \*Tubular film for the PolyStar®

Tubular film for the drug sealing device PolyStar®

The colourless, highly transparent polyethylene film (special mixture) is extremely tear resistant and waterproof. Roll with a plastic core.

### To order PE-tubular film

Order No. (ca. 200 x 0.05 mm, 200 m)	048003
Order No. (ca. 220 x 0.05 mm, 200 m)	048005
Order No. (ca. 320 x 0.05 mm, 200 m)	048015
Order No. (ca. 200 x 0.10 mm, 100 m)	048004
Order No. (ca. 280 x 0.10 mm, 100 m)	048014
Order No. (ca. 320 x 0.10 mm, 100 m)	048016
Order No. (ca. 400 x 0.10 mm, 100 m)	048018
Order No. (ca. 200 x 0.20 mm, 100 m)	048007



## UV light protection bag

For the safe storage and transport of light sensitive substances - with UV protection

The opaque brown coloured UV light protection bags protects for example, cytostatics reliably against UV radiation and guarantees storage and transport. The resealable zip lock bags facilitate the handling. The material thickness is 50 µm.

### To order UV bags

Order No. (ca. 150x200x0.05 mm, 300 pieces)	120150
Order No. (ca. 150x200x0.05 mm, 1.000 pieces)	12150200
Order No. (ca. 230x300x0.05 mm, 300 pieces)	120230
Order No. (ca. 230x300x0.05mm, 1.000 pieces)	12230300

\*Not available in all countries.



Berner International GmbH  
Mühlenkamp 6  
25337 Elmshorn  
Germany

Tel +49 4121 4356 - 0  
Fax +49 4121 4356 - 20  
Email [info@berner-safety.de](mailto:info@berner-safety.de)

[www.berner-safety.de](http://www.berner-safety.de)