



Disposable
Protective Clothing

Disposable Protection Clothing

Guide to standards and products

PPE Regulation EU 2016/425

The conditions for the sale of personal protective equipment (PPE) and the fundamental safety requirements that this PPE must meet are regulated in the PPE Regulation EU 2016/425.

If the requirements set out in the directive are met, the product is eligible for CE marking and can be offered for sale on the European internal market.

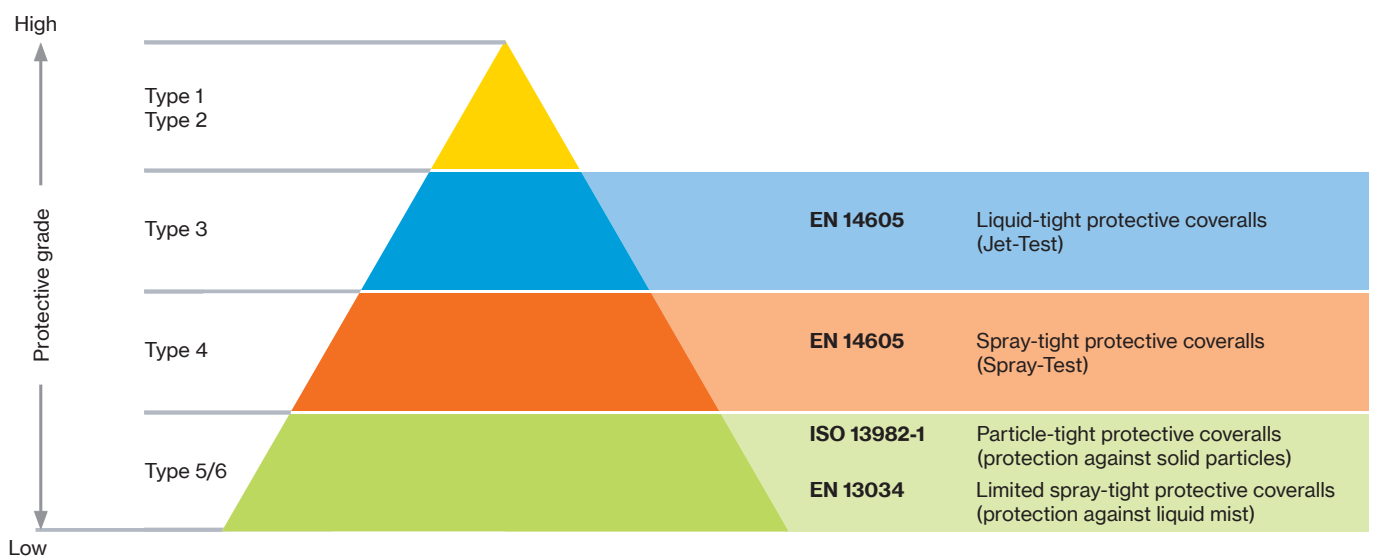
Depending on the level of risk that protective clothing is designed to protect against, PPE is assigned to one of three categories:

- Category I:** Simple protective equipment, low risk
- Category II:** Protective clothing that protects the wearer against hazards; PPE that does not fall into category 1 or category 3
- Category III:** Protective clothing that protects the wearer against potentially fatal hazards or serious and irreversible damage to health, high risk

DIN EN ISO 13688 Protective clothing – general requirements

DIN EN ISO 13688 defines the general requirements that apply to protective clothing in terms of ergonomics, innocuousness, ageing, size designation, compatibility and marking, as well as the information to be supplied by the manufacturer with the protective clothing. This European standard is a reference standard that is referred to in all other specific protective clothing standards. It can therefore only be applied in conjunction with a specific standard.

Detailed information on the standards can be found at uvex-safety.com.



Chemical protection is always classified as category III.

Disposable Protection Clothing

Guide to standards and products

		uvex 51/6 air	uvex 51/6 air	uvex 51/6 comfort	uvex 51/6 classic	uvex 4B	uvex 3B chem light	uvex 3B chem classic	uvex 3B chem classic
		98173	89976	98710	98449	98375	89843	89880	98757
EN 14605	Liquid-tight coveralls							■	■
EN 14605	Spray-tight coveralls					■	■	■	■
EN 13034	Limited spray-tight coveralls (protection against liquid mist)	■	■	■	■	■			
ISO 13982-1	Particle-tight coveralls (protection against solid particles)	■	■	■	■	■	■	■	■
EN 1149-5	Protective clothing with antistatic properties (antistatic function only guaranteed if air humidity > 25%)	■	■	■	■	■	■	■	■
EN 14126	Protective clothing against infective agents				■	■	■	■	■
EN 1073-2	Protective clothing against particulate radioactive contamination (no protection against radioactive rays)	■	■		■	■	■	■	■
DIN 32781	Protective clothing against pesticides					■			

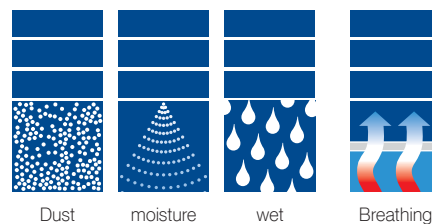
For more detailed information, please see the relevant certificates, technical data sheets or the endorsement on the product!

Defining environmental conditions

Are you exposed to dusty, damp or wet conditions during your work?

To make it easier for you to select the right clothing for the job, we've categorised our overalls depending on their suitability for these environments. The bars indicate how suitable the product is for each setting.

We also provide information on breathability so that you can take wearer comfort into account in your decision.



Identifying additional characteristics

In some work environments, there are additional requirements that you will need to take into account. These symbols indicate whether the items are free from silicone and paint wetting impairment substances.



uvex

uvex 3B chem classic



Areas of application:

- handling organic and inorganic chemicals
- cleaning and maintenance work
- chemical and pharmaceutical industries
- food industry
- remediation of soil contamination and dismantling
- industrial cleaning and maintenance
- tank cleaning
- work with paints and varnishes
- disposal of hazardous materials
- agricultural industry
- waste water treatment and drainage construction
- waste management
- disaster response and emergency services
- veterinary medicine and disease control
- oil and petrochemicals

uvex 3B chem classic

Disposable coverall chemical protection Type 3B



89880

98757

uvex 3B chem classic

General features:

- highly durable material combined with ultrasonically welded and taped seams ensure an barrier and maximum safety
- liquid-tight
- low-noise material
- free of silicone and paint wetting impairment substances

Protection features:

- offers protection against a wide range of chemicals
- middle finger loops prevent sleeves sliding up the arm
- optimal protection thanks to self-adhesive zipper flap
- antistatic properties
- protection against infectious diseases

Comfort features:

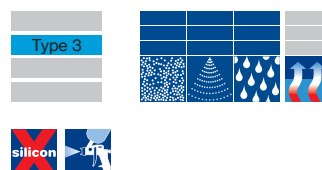
- extremely lightweight and durable material
- skin-friendly textile grip on inside
- elasticated waistband for a perfect fit
- secure and convenient closures thanks to elasticated bands on hood, arms and legs
- comfortable zip puller

Yellow version
available from January
2019

uvex 3B chem classic		
Art. no.	98757	89880
Material	polypropylene spunbond, with laminated polypropylene film	
Colour	green	yellow
Sizes	S to 3XL	
Retail unit	25	25

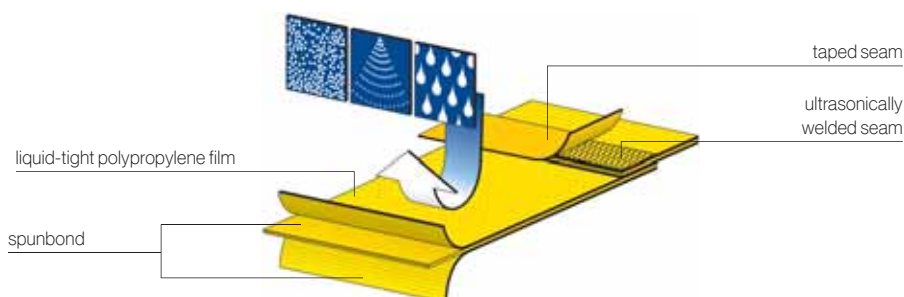
Conformity assessment not yet completed
(art. no. 89880)

Certified in acc. with



uvex 3B chem classic Material Composition

The extremely light and tight spunbond-polypropylene-laminate provides an effective barrier against many organic and inorganic liquid chemicals. The mechanical strength of the material and the sealed, taped seams allow the uvex 3B classic to provide protection against the highest strains without reducing comfort.



uvex-safety.com/overalls



Middle finger loops for firmly securing the sleeves.



Elasticated waistband for a customised fit.



Comfortable zipper puller and flap for increased protection.

uvex 3B chem light

Disposable coverall chemical protection Type 3B



89843

uvex 3B chem light

General features:

- light and highly flexible material for high wearer comfort
- liquid-tight
- low-noise material
- free from paint wetting impairment substances and silicone

Protection features:

- ideal for cleaning work
- middle finger loops for securing the sleeves
- optimal protection thanks to self-adhesive zipper flap
- antistatic properties
- protection against infectious diseases

Comfort features:

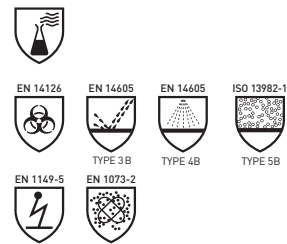
- lined with skin-friendly non-woven material
- elasticated waistband for optimal fit
- secure and comfortable closures thanks to elasticated bands on hood, arms and legs
- two-way zip

Areas of application:

- handling low-concentration chemicals
- industrial and building cleaning
- ship building and automobile manufacture
- chemical and pharmaceutical industries
- handling paints and varnishes
- electronics
- handling and dismantling of asbestos
- remediation of contaminated sites
- livestock breeding and veterinary medicine
- waste management

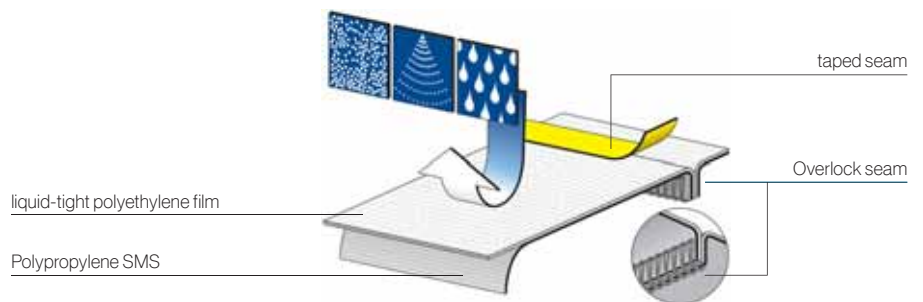
uvex 3B chem light	
Art. no.	89843
Material	polypropylene spunbond with laminated with polyethylene film
Colour	white, yellow
Sizes	S to 3XL
Retail unit	40

Certified in acc. with



uvex 3B chem light Material Composition

The incredibly light and flexible spunbond film laminate is ideal for cleaning work and tasks involving the handling of low-concentration chemicals. The welded and taped seams provide additional protection without sacrificing on comfort.



Available from January 2019



uvex-safety.com/overalls



Middle finger loops for firmly securing the sleeves.



Elasticated waistband for a customised fit.



Convenient zip puller and adhesive flap for secure protection.

Type 3B disposable protective clothing

Performance parameters

The chemicals included in this list are examples only.

For a full overview for each individual garment, please consult the technical datasheets.

You can also search our Chemical Expert System (see page 172).



Chemical	CAS no.	89843	89880	98757
		Class in acc. EN 14327	Class in acc. EN 14326	Class in acc. EN 14325
Acetone	67-64-1	6 of 6	1 of 6	1 of 6
Acetonitrile	75-05-8	6 of 6	0 of 6	-
Iron(III) chloride (aq., 45%)	7705-08-0	-	6 of 6	6 of 6
Hydrofluoric acid (aq., 49%)	7664-39-3	-	6 of 6	4 of 6
Hydrofluoric acid (aq., 71 to 75%)	7664-39-3	-	5 of 6	4 of 6
Hydrofluoric acid in urea (62 to 64%)	7664-39-3	-	2 of 6	2 of 6
Formaldehyde (aq., 10%)	50-00-0	-	6 of 6	6 of 6
Isopropanol	67-63-0	6 of 6	6 of 6	6 of 6
Methanol	67-56-1	6 of 6	6 of 6	6 of 6
Sodium hydroxide, 50%	1310-73-2	6 of 6	6 of 6	6 of 6
Nitric acid, 96.5%	7697-37-2	-	6 of 6	6 of 6
Hydrochloric acid (aq., 37%)	7647-01-0	-	6 of 6	6 of 6
Sulphuric acid, 96%	7664-93-9	-	6 of 6	6 of 6
Hydrogen peroxide	7722-84-1	-	6 of 6	6 of 6



The information provided in the table was obtained in tests conducted under laboratory conditions (at temperatures of 21 ± 2°C). As additional stresses, such as higher temperatures and mechanical influences, are often present in practice, these values serve as a guide only. The information is provided without obligation and is not intended to replace your own suitability tests.



uvex 4B

Protection against pesticides – DIN 32781

In farming and forestry applications, workers are repeatedly exposed to hazardous chemical and biological substances.

Depending on the type of application, the duration of the exposure and the specific effects of the hazardous substance, it may be necessary to wear personal protective equipment.

In addition to respiratory protection and gloves, appropriate chemical protection clothing is an important component of the wearer's protective equipment.

The performance requirements for chemical protection clothing worn when handling or applying diluted pesticide solutions are set out in DIN 32781. As part of the certification process, the garments are tested for their resistance to specific substances; physical material properties and wearer comfort are also important considerations.

When uvex 4B garments were spray-tested with the five pesticides listed in the standard, the clothing showed no signs of penetration by the substances.



Typical applications that may require chemical protection clothing include:

- the mixing and filling of undiluted concentrates
- spraying heavily diluted mixtures
- exposure due to drift during fine particle aerosol application
- exposure due to intensive contact with treated foliage

uvex 4B

Disposable coverall chemical protection type 4B



98375

uvex 4B

General features:

- breathable, lightweight and flexible material for exceptional wearer comfort
- particle-tight and spray-tight
- free of paint wetting impairment substances and silicone

Protection features:

- orange taped seams for optimal protection and good visibility
- middle finger loops prevent sleeves sliding up the arm
- self-adhesive zipper flap for optimal protection
- anti-static properties
- protection against infectious diseases

Comfort features:

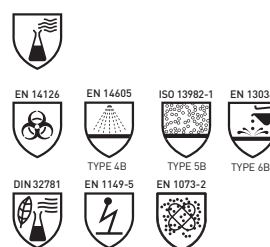
- skin-friendly nonwoven material inside
- elasticated waistband for optimal fit
- secure and convenient closures thanks to elasticated bands on hood, arms and legs
- two-way zipper

Areas of application:

- low-pressure industrial cleaning and building cleaning
- ship building and automobile manufacture
- chemical and pharmaceutical industries
- handling paints and varnishes
- agriculture and horticulture
- pest control
- electronics and cleanroom environments
- work with asbestos and dismantling
- remediation of contaminated sites
- pharmaceutical industry and laboratories
- sampling
- livestock breeding and veterinary medicine
- waste management

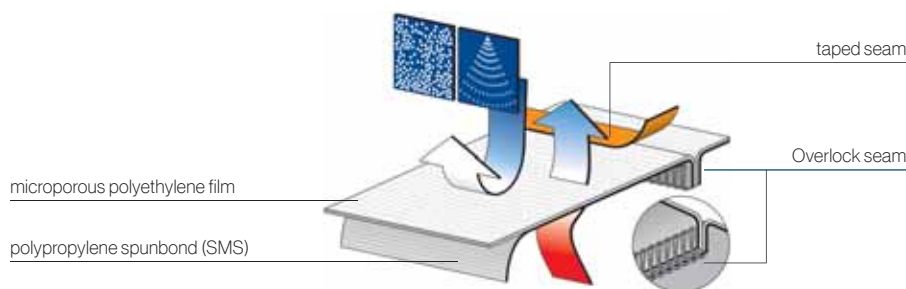
uvex 4B	
Art. no.	98375
Material	polypropylene spunbond, polyethylene film laminate
Colour	white, orange
Sizes	S to 3XL
Retail unit	40

Certified in acc. with



uvex 4B Material Composition

The microporous spray-tight spunbond-polyethylene-laminate enables the uvex 4B to provide both protection and breathability. The taped seams provide outstanding protection against liquid aerosols and solid particles while the spunbond material inside makes it comfortable to wear.



uvex-safety.com/overall



Stitched and taped seams. Optimum protection against penetration by liquid aerosols and solid particles.



Middle finger loops for firmly securing the sleeves.



Three-part hood for optimum fit.



uvex 5/6 classic

Disposable coverall chemical protection Type 5/6



98449



uvex 5/6 classic

General features:

- extremely lightweight and breathable material guarantees an excellent combination of comfort and safety
- particle-tight and spray-tight to a limited extent
- free of paint wetting impairment substances

Protection features:

- middle finger loops prevent sleeves sliding up the arm
- self-adhesive zipper flap for optimal protection
- antistatic properties
- protection against infectious diseases

Comfort features:

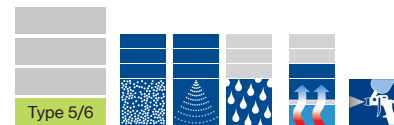
- skin-friendly and soft non-woven material on the inside
- elasticated waistband for a perfect fit
- secure and convenient closures thanks to elasticated bands on hood, arms and legs
- two-way zipper

Areas of application:

- handling chemicals in dust and powder form
- varnishing and protection against paint splashes
- fibreglass production and processing
- industrial cleaning and maintenance
- automotive industry
- grinding and polishing
- cement manufacture
- mining and quarrying
- demolition and refurbishment
- working with asbestos
- wood and metal processing
- construction industry
- pharmaceutical industry

uvex 5/6 classic	
Art. no.	98449
Material	polypropylene spunbond, polyethylene film laminate UV protection factor UPF 50+
Colour	white
Sizes	S to 3XL
Retail unit	50

Certified in acc. with



uvex 5/6 classic Material Composition

The uvex 5/6 classic is made of an extremely light, microporous spunbond polyethylene laminate. Wearers are comfortable due to the soft, skin friendly material and combined with durable seams, providing a high level of protection against particles and liquid mist.



uvex-safety.com/overalls



Three-part hood for optimum fit and unhindered vision.



Two-way zipper with adhesive placket for added safety.



Elasticated waistband for a perfect fit.

uvex 5/6 comfort

Disposable coverall chemical protection Type 5/6



98710

uvex 5/6 comfort

General features:

- the combination of polyethylene laminate and an SMS back section provides a high level of moisture management, without reducing protection
- particle-tight and spray-tight to a limited extent
- suitable for cleanroom environments Class 8 in accordance with ISO 14644-1
- free of silicone and paint wetting impairment substances

Protection features:

- bound seams in contrasting colour for optimal protection and good visibility
- middle finger loops prevent sleeves sliding up the arm
- self-adhesive zipper flap for optimal protection
- antistatic properties

Comfort features:

- breathable laminate
- breathable SMS back section
- optimal fit with elasticated waistband
- safe and convenient closures thanks to elasticated bands on the hood, arms and legs
- two-way zipper

Areas of application:

- handling chemicals in dust and powder form
- varnishing and protection against paint splashes
- fibreglass production and processing
- industrial cleaning and maintenance
- automotive industry
- grinding and polishing
- cement manufacture
- mining and quarrying
- demolition and refurbishment
- working with asbestos
- wood and metal processing
- construction industry
- cleanroom applications
- pharmaceutical industry

uvex 5/6 comfort	
Art. no.	98710
Material	Main material: polypropylene spunbond, polypropylene film laminate UV protection factor UPF 50+ back: SMS spunbond UV protection factor UPF 5
Colour	white, lime
Sizes	M to 3XL
Retail unit	40

Certified in acc. with



uvex 5/6 comfort Material Composition

The uvex 5/6 is a very light, microporous spunbond-polyethylene-laminate that, combined with spunbond (SMS) back section, ensures high breathability. Together with the bound seams it guarantees a high level of protection against liquid mist and solid particles.

Spunbond non-woven material

Meltblown non-woven material

Spunbond non-woven material

bound seam

microporous polyethylene film

polypropylene spunbond (SMS)



Bound seams, exterior in contrasting colour. Increased protection against penetration by solid particles and liquid splashes.



Middle finger loops for firmly securing the sleeves.



Breathable polyethylene laminate combined with an air permeable SMS back section to provide a high level of moisture management and breathability.



uvex-safety.com/overalls

uvex 5/6 air

Disposable coverall chemical protection Type 5/6



uvex 5/6 air

General features:

- exceptional wearer comfort guaranteed by breathable and lightweight SMS material
- particle-tight and spray-tight to a limited extent
- ideal for warm working environments and extended periods of wear
- free of silicone and paint wetting impairment substances

Protection features:

- middle finger loops prevent sleeves sliding up the arm
- self-adhesive zipper flap for optimal protection
- optimal protection in dusty environments
- antistatic properties

Comfort features:

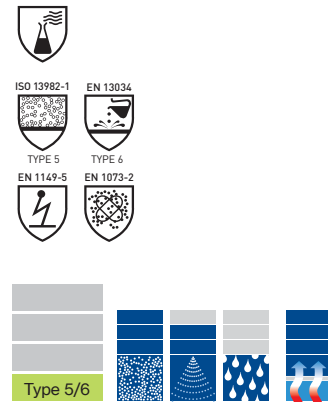
- excellent moisture management
- optimal fit with elasticated waistband
- gusset section in crotch area for increased freedom of movement
- three-part hood for a good fit and unrestricted vision
- secure and convenient closures thanks to elasticated bands on hood, arms and legs

Areas of application:

- handling chemicals in dust and powder form
- working with asbestos
- fibreglass, ceramic fibre and synthetic resin production and processing
- wood and metal processing
- construction industry
- automotive industry
- grinding and polishing
- cement manufacture
- mining and quarrying
- refurbishment and renovation
- pharmaceutical industry
- repair work

uvex 5/6 air		
Art. no.	98173	89976
Material	polypropylene spunbond (SMMS)	
	UV protection factor UPF 5	
Colour	white	blue
Sizes	S to 3XL	S to 3XL
Retail unit	50	50

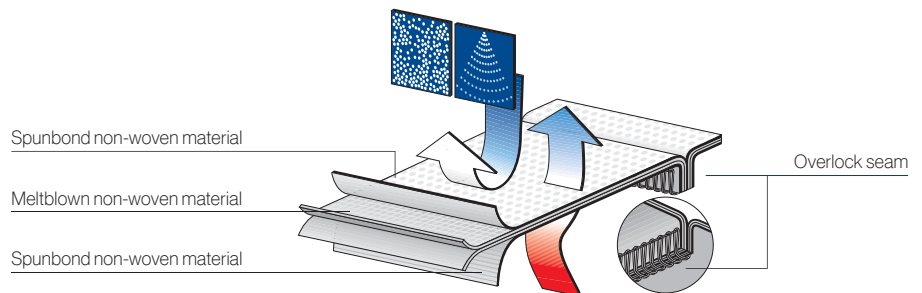
Certified in acc. with



uvex-safety.com/overalls

uvex 5/6 air Material Composition

The uvex 5/6 air is made of a very light, porous and highly breathable SMS material which ensures excellent wearer comfort through optimum climate management. It also provides a strong barrier against dust exposure and liquid mist, providing reliable wearer protection.



Elasticated waistband for a perfect fit.



Middle finger loops for firmly securing the sleeves.



Added gusset section in the crotch area for increased freedom of movement



Zipper with adhesive placket for added safety.

Disposable chemical protection

Accessories



Hood · Gauntlets · Overshoes · Overboots

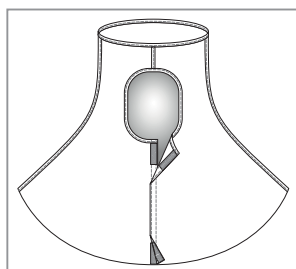
Hood	
Art. no.	9875200
Sizes	one size fits all
Version	with velcro fastening
Material	polypropylene spunbond, polyethylene film laminate
Colour	white
Retail unit	50 units

Gauntlets	
Art. no.	9875300
Sizes	one size fits all
Version	elasticated band on both ends
Material	polypropylene spunbond, polyethylene film laminate
Colour	white
Retail unit	50 pairs

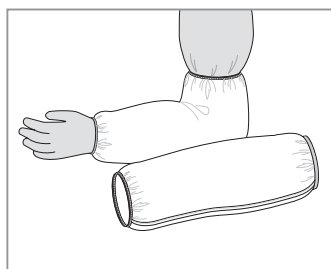
Overshoes		
Art. no.	9874946	9874948
Sizes	42 to 46	46 to 48
Version	opening with elasticated band	
Material	polypropylene spunbond, polyethylene film laminate	
Colour	white	
Retail unit	100 pairs	

Overboot	
Art. no.	9875046
Sizes	42 to 46
Version	opening with elasticated band and tie
Material	polypropylene spunbond, polyethylene film laminate
Colour	white
Retail unit	50 pairs

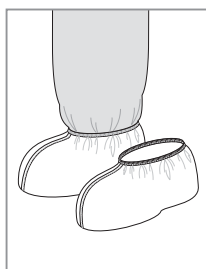
Overboot		
Art. no.	8935301	8935346
Sizes	42 to 46	42 to 46
Version	opening with elasticated band and tie	
Material	polypropylene spunbond, polypropylene film laminate	
Colour	green	yellow
Retail unit	30 pairs	30 pairs



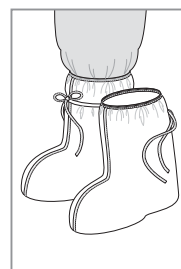
9875200



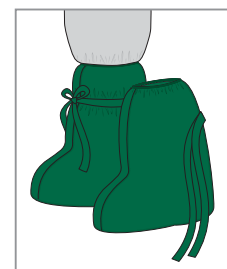
9875300



9874946
9874948



9875046



8935301

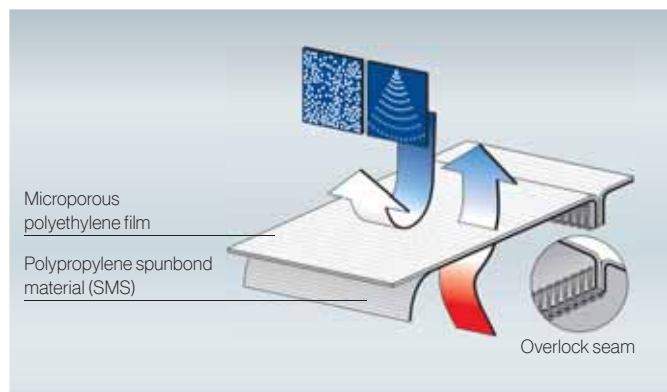
Disposable chemical protection type 5/6

Material and seam technology

The optimal material for every application

What level of barrier and protective effect do you require? What kind of environmental conditions are you exposed to? With overalls providing a wide range of protection levels and made from various material combinations, uvex offers the perfect solution for every situation – for maximum safety and wearer comfort.

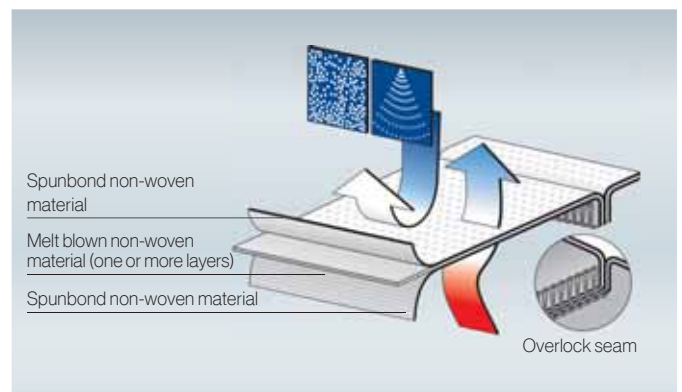
uvex 5/6 laminate



- soft touch
- “water-repellent” outer
- low breathability
- ideal for working in damp environments
- very good protection

- Used in:**
- uvex 5/6 classic
 - primary material in uvex 5/6 comfort

uvex 5/6 SMS/SMMS



- exceptionally soft touch
- slightly “water-repellent” outer
- high breathability
- ideal for high-temperature environments
- good protection

- Used in:**
- uvex 5/6 air
 - back of uvex 5/6 comfort

Exceptionally hard-wearing seams

Testing



In seam strength tests performed in accordance with EN ISO 13935-2, mechanical pulling force is applied to the material to determine the level of force required to rip the seam.

Bound seam



To maintain a perfect seal over the garment, the quilted seam is covered with a contrasting strip. This design is used in uvex 5/6 comfort disposable overalls. Covering the seam with the cover strip produces a more secure seal.

Overlock seam



The internal overlock seam is up to 50% more resistant to stress and up to 50% more elastic than quilted seams. This design is used in uvex 5/6 classic and uvex 5/6 air garments.

Disposable chemical protection

Individual climate comfort

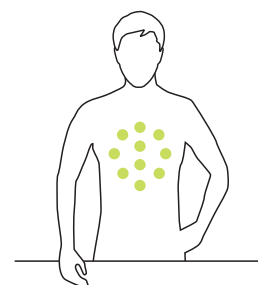
Climate testing of uvex coveralls

Alongside the traditional selection criterion of standard requirements, wearer comfort is playing an increasingly significant role in the decision-making process, with climate control becoming an important performance characteristic.

To determine the climate control of the coveralls, the thermoregulation process was tested – the crucial factor here is the accruing moisture, as this forms the basis for transpiration. The ambient temperatures in the climate test remain constant; only body temperature increases – depending on the breathability of the material.

Measuring the microclimate

In the test, the microclimate was measured in the layer structure of the coveralls and wearer according to the SWEATOR® test conditions: 21°C ambient temperature and 60% air humidity.

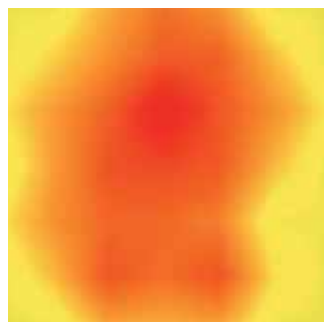


Measurement taken via 10 sensors on the chest and 14 on the back.



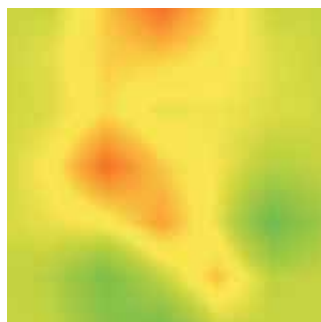
Accumulation of transpiration after 55 minutes = perceived heat build-up

How do the different materials influence wearer comfort?



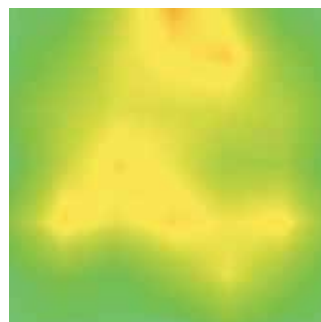
uvex 5/6 classic

The completely laminated coverall uvex 5/6 classic permits less evaporation and therefore leads to somewhat higher moisture levels. Compared to other coveralls, the uvex 5/6 classic exhibits the lowest level of breathability.



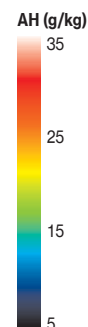
uvex 5/6 comfort

The material combination of SMS and laminate places the uvex 5/6 comfort coverall middle of the field in terms of climate control.



uvex 5/6 air

The uvex 5/6 air coverall made from highly breathable SMS material offers the best climate control properties. It is extremely breathable and impresses in the test thanks to lower temperatures and less moisture.

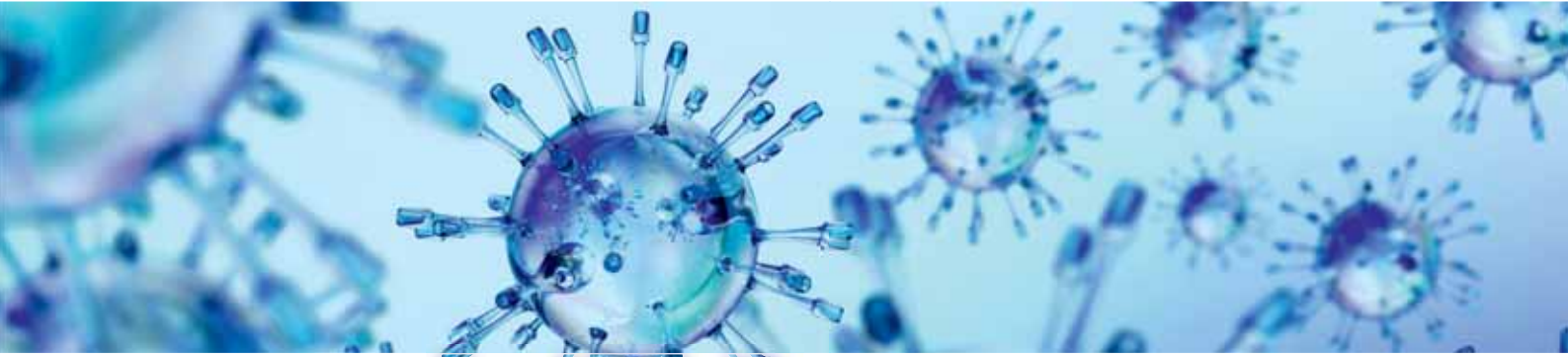


Which coverall suits which application?

The uvex 5/6 air or uvex 5/6 comfort are recommended for work at high temperatures or for tasks involving heavy physical exertion. The proven uvex 5/6 classic is well-suited to all applications involving lighter activities in normal climate conditions.

Disposable chemical protection

Protection against infectious diseases



Workers may come into contact with biological substances in a wide range of situations. Appropriate personal protective equipment must be used to prevent potential infection.

Clothing designed to provide protection against infectious diseases establishes a physical barrier between the wearer's skin and the source of the infection, and prevents the disease from spreading to other people or environments.

Generally, micro-organisms such as bacteria, fungi and viruses are classed as biological substances. A detailed definition is provided in EU Directive 2000/54/EC. The crucial common denominator between all of these materials is that they can cause infections, trigger allergies, or produce a toxic effect.

Biological substances are placed in one of four categories depending on the infection risk they present:

Risk group 1:
Biological substances that are unlikely to cause disease in humans.

Risk group 2:
Biological substances that can cause human disease and might be a hazard to workers, but are unlikely to spread to the community; there is usually effective prophylaxis or treatment available.

Risk group 3:
Biological substances that can cause severe human disease and present a serious hazard to workers; they may present a risk of spreading to the community, but there is usually effective prophylaxis or treatment available.

Risk group 4:
Biological substances that cause severe human disease and are a serious hazard to workers; they may present a high risk of spreading to the community, and there is usually no effective prophylaxis or treatment available.

The risk groups of each biological substance are described in detail in the annex to EU Directive 2000/54/EC.

Typical applications in which workers may be exposed to infectious substances include:

- Waste water treatment and drainage work
- Waste disposal
- Agriculture
- Food industry
- Work that involves contact with animals and/or products of animal origin
- Healthcare, hospitals, emergency services

A detailed list of all biological substances that you may be exposed to in various applications, and the potential diseases associated with these substances, can be found in a number of publications, including the BGIA Report 1/2013.



Protective clothing in accordance with EN 14126:2003

The EN 14126 standard defines the performance requirements for clothing designed to protect against infectious diseases. The defined test procedures focus on the medium that contains the micro-organisms, such as fluids, aerosols or solid dust particles. Due to the heterogeneous nature of the micro-organisms, it is not possible to define performance criteria for them.

The tests stipulated by the standard relate only to the material; seam technologies are not taken into account. Taped seams provide a higher level of protection, as the micro-organisms are small enough to penetrate through the tiny needle holes along the seam.

The entire protective suit must also be certified as chemical protection clothing (see page 152).

Wearing appropriate protective clothing does not provide complete, guaranteed protection against all chemical risks. It is also essential that you put on and remove the PPE correctly to ensure safety (see page 168). Any person who assists in the removal of the clothing is also exposed to the risk of contamination.

Model	uvex 3B chem classic	uvex 3B chem classic	uvex 4B	uvex 5/6 classic
Art. no.	98757	89880	98711	98449
ISO/FDIS 16604/16603 Resistance to contaminated liquids	6 of 6	6 of 6	6 of 6	3 of 6
EN 14126 appendix A Resistance due to mechanical contact with substances containing contaminated liquids	6 of 6	6 of 6	6 of 6	6 of 6
ISO/DIS 22611 Resistance to contaminated liquid aerosols	3 of 3	3 of 3	3 of 3	3 of 3
ISO/DIS 22612 Resistance to contaminated solid particles	3 of 3	3 of 3	3 of 3	3 of 3

Disposable chemical protection

Permeation

Your team's safety at the forefront

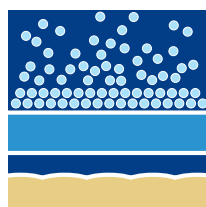
From light liquid splashes to hazardous chemicals and radioactive material – employees face various hazards in the course of their daily work.

For optimum protection of your team at all times, the breakthrough times of permeation must be taken into account for protective coveralls.

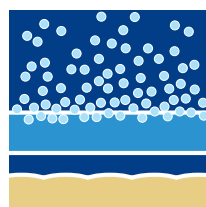
What is permeation?

Permeation is the process by which a chemical moves through an “impervious” material on a molecular level. The chemicals that accumulate on the outside penetrate the material in various chemical phases and in this way permeate into the inside.

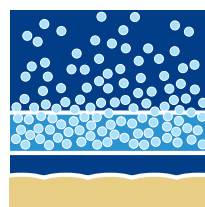
● Chemical ■ Material ■ Skin



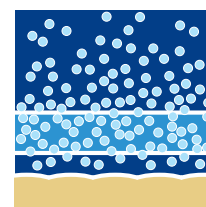
1. Adsorption
Accumulation of the liquid chemicals on the surface of the material.



2. Absorption
Penetration of the molecules into the material.



3. Diffusion
Penetration of the material on a molecular level based on the concentration gradient of the outside of the material into the inside.



4. Desorption
Leakage of molecules on the inside of the material following penetration.



Note individual factors

uvex protection clothing has undergone the required permeation tests according to ISO6529/EN 374-3.

Should the coveralls become contaminated, certain chemicals could penetrate the material – danger to the wearer cannot be ruled out.

More information on the breakthrough times of specific chemicals can be found in the technical datasheets or in the uvex Chemical Expert System (see page 172).

The breakthrough times were determined under laboratory conditions.

EN class	Normalised breakthrough time (in min.)
0	immediate (no class)
1	≥ 10
2	≥ 30
3	≥ 60
4	≥ 120
5	≥ 240
6	≥ 480

As additional stresses, such as higher temperatures and mechanical influences, are often present in practice, this information serves as a guide only. Seams and zip pullers may have shorter breakthrough times particularly in the event of damage or previous wear.

Following contamination, wear or damage, the coverall is to be removed immediately and properly disposed of.

For further information on the test procedure used or for questions regarding individual permeation tests, please visit uvex-safety.com or contact uvex customer services directly at **0800-66 44 893** or **+49 (0) 911-97 36-0** from abroad. In the case of queries, please always provide the CAS number and concentration.

Disposable chemical protection

Guidelines for use

How to undress

In accordance with the ruling of the German Committee for Biological Agents (ABAS), the PPE should be put on and taken off as follows:

► Putting the PPE on:

- before putting the PPE on, check all parts to ensure none are missing or damaged
- remove jewellery and watches
- put on the suit and zip it up to the hips
- put on the boots
- put on the filtering face mask and check its tight fit
- put on the safety glasses
- pull the hood of the suit over your head and zip the suit until it is completely closed. To cover the chin and the zip, press the front flap into place
- put on the safety gloves and pull them over the cuff of the sleeves

► Taking the PPE off:

- disinfect the safety gloves but do not remove
- pull down the hood and pull the suit over the shoulders, turning it inside out down to the hips. At the same time, pull your arms out of the sleeves (a second person with safety gloves and a filtering face mask can help)
- take the suit completely off, removing the boots at the same time
- remove the safety gloves by pulling them inside out
- remove the glasses by drawing them forward from the back and place them in the designated place
- remove the filtering face mask in the same way
- disinfect your hands and finish off by thoroughly washing your hands, face and any other contaminated areas of skin with water and a disinfectant lotion



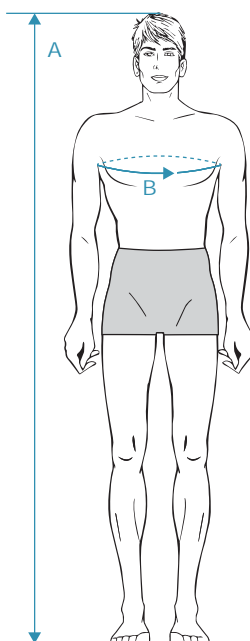
Disposable chemical protection

Instructions for use

How to make the right choice

To ensure a perfect fit and to guarantee maximum safety when working with hazardous substances, the uvex coveralls are available in a wide range of sizes. The table shows the body measurements and the corresponding uvex sizes. These size definitions are based on actual body measurements taken while wearing underwear but without wearing shoes.

These sizes differ from standard clothes sizes, so please always select uvex coveralls according to your actual body measurements and not your usual clothes sizes!



Sizes	Body height in cm (A)	Chest measurement in cm (B)
S	164–170 cm	84–92 cm
M	170–176 cm	92–100 cm
L	176–182 cm	100–108 cm
XL	182–188 cm	108–116 cm
XXL	188–194 cm	116–124 cm
XXXL	194–200 cm	124–132 cm

Using uvex disposable protective clothing

Prior to use it is essential to check the protective coverall for any damage e.g. broken seams, defective zipper closure or other visible defects which may impair its protection levels.

Storage

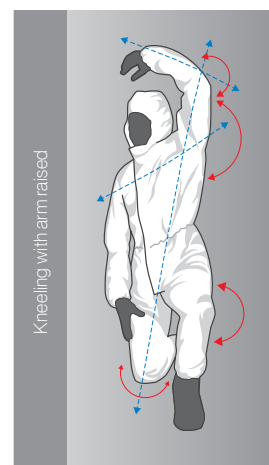
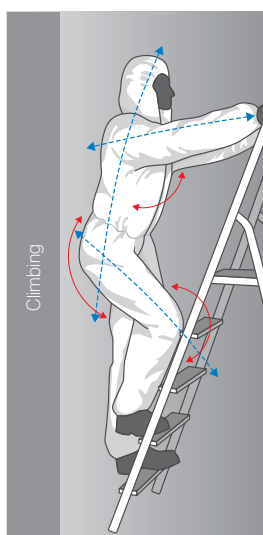
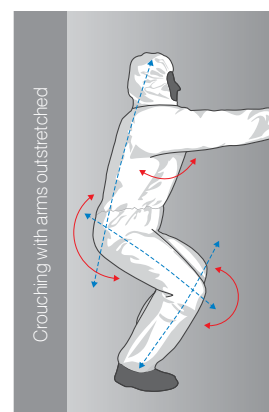
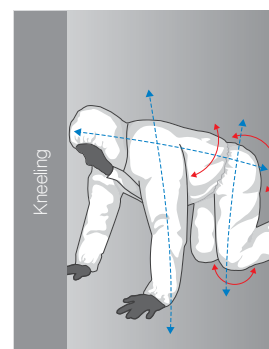
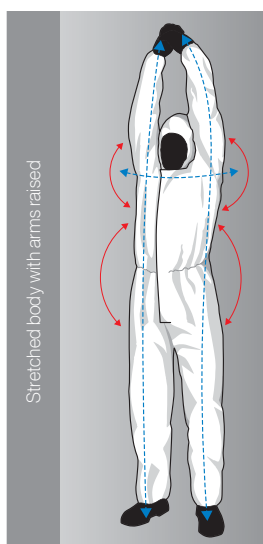
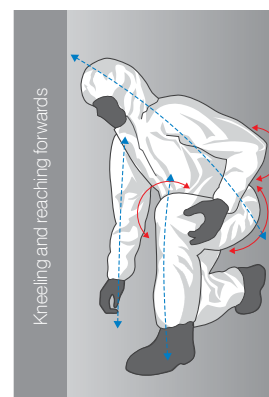
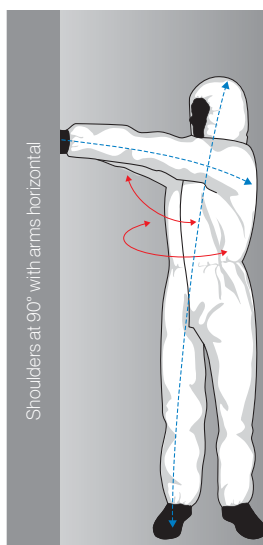
uvex disposable protective clothing must be stored in its original packaging in a dry place away from sunlight.

Disposal

The products must be disposed after use in accordance with respective rules and regulations. The products are only suitable for a single use.

Washing disposable suits

The disposable suits are only suitable for a single use and must not be washed.



Disposable chemical protection

Selecting the right chemical protection clothing

In order to select appropriate chemical protection clothing for a specific application within your business, it is important to have your overalls tested by a trained safety officer.

Many chemicals can cause serious or irreversible injury to workers if they are not adequately protected. For this reason, chemical protection clothing must be chosen with the greatest care.

	uvex 5/6 air	uvex 5/6 air	uvex 5/6 comfort	uvex 5/6 classic	uvex 4B	uvex 3B chem light	uvex 3B chem classic	uvex 3B chem classic
	98173	89976	98710	98449	98375	89843	89880	98757
Working with chemicals in dust or powdered form	■	■	■	■	□			
Working with liquid chemicals at low concentrations						■		
Working with organic and inorganic substances							■	■
Oil and petrochemicals							■	■
Fuel distribution								
Tank cleaning							■	■
Waste water treatment and drainage work							■	■
Waste management					■	■	■	■
Disposal of hazardous substances							■	■
Food industry							■	■
Agriculture			□	□	■			
Pest control					■			
Livestock breeding and veterinary medicine					■	■		
Clean room applications			■		■			
Handling paints and varnishes						■	■	■
Pharmaceutical industry and laboratory work	□	□	■	■	■	■	■	■
Industrial and building cleaning						■	□	□
Cleaning and maintenance work (dry)	■	■	■	■				
Low-pressure industrial cleaning and building cleaning					■			
Demolition and refurbishment	■	■	■	■	■	■		
Working with asbestos	■	■	■	■	□	□		
Fibreglass production and processing	■	■	■	■				
Quarrying and mining	■	■	■	■				
Cement manufacture	■	■	■	■				
Wood and metal processing	■	■	■	■				
Grinding and polishing	■	■	■	■				
Varnishing and protection against paint splashes	■	■	■	■				

Disposable chemical protection

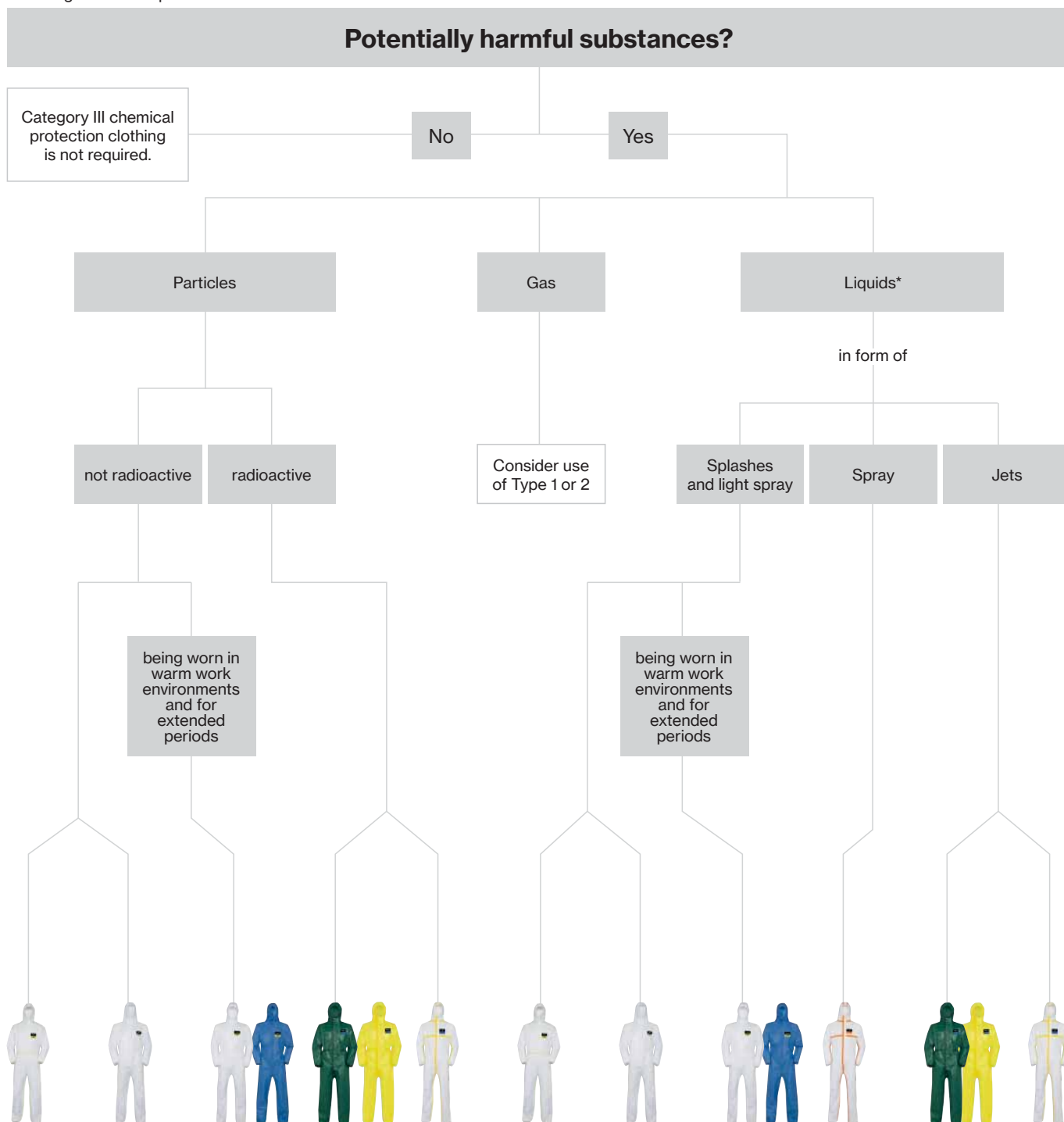
Selection guide – applications

► **Please note**

It is the responsibility of the user to decide which product is most suitable for the intended application. Under no circumstances can uvex accept responsibility for the incorrect application and use of these products.

For enquiries or additional information, please visit **uvex-safety.de** or contact our customer service department directly on **0800 6644893** (for calls from within Germany) or **+49 (0) 911 97360** (for calls from outside Germany). We will be happy to help.

This diagram is a simplification.



* Please note the permeation data (definition page 167).

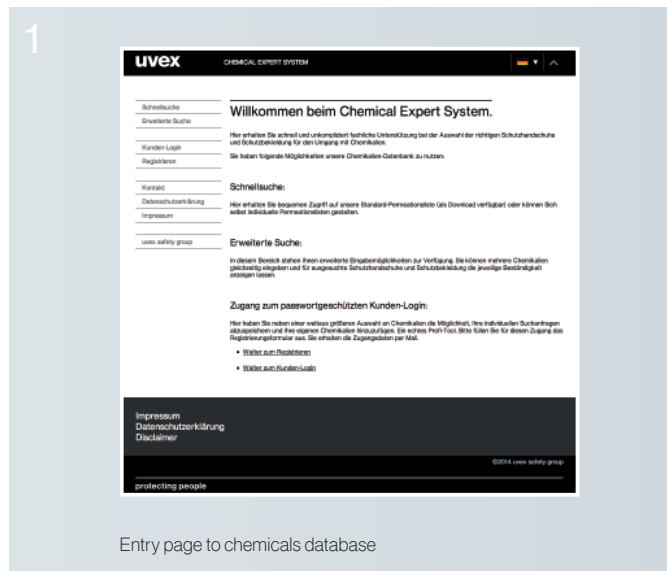
uvex Chemical Expert System

Chemicals database online

As a leader of innovation, we place the highest demands on the products and services which we offer our customers. The uvex Chemical Expert System (CES) has been developed by experts for experts. It can be accessed anytime and anywhere in the world. This web-based tool helps you select the appropriate disposable safety clothing.

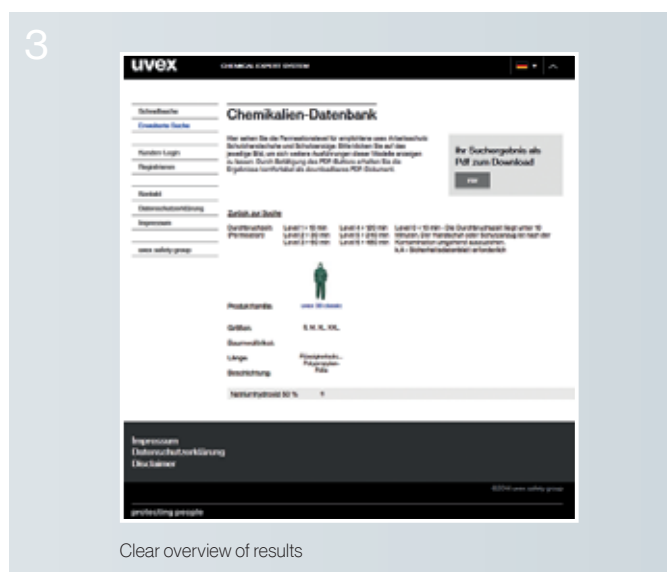
Online chemicals database

The uvex Chemical Expert System (CES) offers an extensive chemicals database for choosing the appropriate safety gloves for working with hazardous substances. As a user, you can create a personal permeation list or receive advice from our specialists. It only takes a few clicks of the mouse to find the right disposable safety clothing and chemical safety gloves to match your specific requirements.

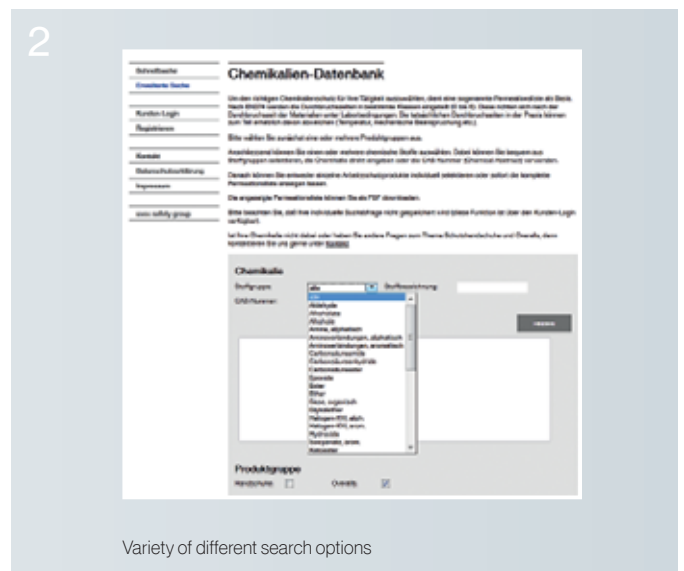


Entry page to chemicals database

<https://ces.uvex.de>



Clear overview of results



Variety of different search options