

# **Basics for your cleanroom!**



Cleanroom

Protective clothing

Cleaning

#### Cleanroom Classifications ISO 14644-1, max. particles / m<sup>3</sup>

ISO			Par	ticle size			C.T.	English Former
Classification Number	0.1 µm	0.2 μm	0.3 μm	0.5 μm	1.0 µm	5.0 µm	SI	FED-STD-209E
ISO Class 1	10	2						
ISO Class 2	100	24	10	4	8			
ISO Class 3	1,000	237	102	35	83		M 1.5	1
ISO Class 4	10,000	2,370	1,020	352	832	29	M 2.5	10
ISO Class 5	100,000	23,700	10,200	3,520	8,320	293	M 3.5	100
ISO Class 6	1,000,000	237,000	102,000	35,200	83,200	2,930	M 4.5	1,000
ISO Class 7				352,000	832,000	29,300	M 5.5	10,000
ISO Class 8				3,520,000	8,320,000	293,000	M 6.5	100,000
ISO Class 9				35,200,000	83,200,000	2,930,000		

Class	Maximum particles / m³					
GMP	At Rest ≥ 0.5 μm	At Rest ≥ 5 μm	In Operation ≥ 0.5 μm	In Operation ≥ 5 μm		
Grade A	3,520	20	3,520	20		
Grade B	3,520	29	352,000	2,930		
Grade C	352,000	2,930	3,500,000	29,300		
Grade D	3,520,000	29,000	Not defined	Not defined		



# Safety Eyeshields uvex super fit CR 9178

- Professional protection of products and humans
- First autoclavable protective spectacle with anti-fog effect
- Sterile eye protection in every situation
- Autoclavable at least 10 times, 121 °C, 20 minutes
- Innovative design for maximum functionality and wearer comfort
   Non-allergenic material which is free of harmful substances
- Ultra-thin wraparound lens
- Lightest safety spectacle in the world
- EN 166
- UV 400
- Weight 21 g

coating uvex supravision clean

Colour	Lens	Coating	PK	Cat. No.
white/light blue	UV 400, 2C-1,2 W 1 FTKN DIN CE	uvex supravision CR	1	7.982 028



### Overgoggles uvex super f OTG CR 9169

- Professional protection of products and humans
- First autoclavable protective overspec with anti-fog effect
- Sterile eye protection in every situation
- Autoclavable at least 10 times, 121 °C, 20 minutes
- Innovative design for maximum functionality and wearer comfort
- Overspecs with unrestricted lateral vision
- Also suitable for use over prescription spectacles
- Non-allergenic material which is free of harmful substances
- Ultra-modern lens technology
- Extremely flexible soft ear pieces
- EN 166
- UV 400
- Weight 37 g

Coating uvex supravision clean

Colour	Lens	Coating	PK	Cat. No.
white/light blue	clear, UV 400, 2C-1,2	uvex supravision clean	1	6.268 419





# **LLG-Safety Eyeshields basic**

- CE approved to EN 166 and EN 170
- Perfect for visitors as well as over goggles for spectacles wearers
- Integrated side lens with venting, 180° visual field
- Frame made of tested hypo-allergenic material
- 100 % UV protection (up to 380 nm)
- Weight: 43g



Colour	Lens	PK	Cat. No.
Clear	Clear, uncoated, 2-1.2 U 1 F CE	10	9.006 002



# Panoramic Eyeshield uvex ultrasonic CR 9302

- Professional protection of products and humans
- First autoclavable protective goggle with anti-fog effect
- Sterile eye protection in every situation
- Autoclavable at least 10 times, 121 °C, 20 minutes
- Innovative design, maximum functionality, wearer comfort
- Ultra-light goggle with panorama lens, duo component technology and adjustable silicone headband
- Indirect ventilation ensures a pleasant and comfortable interior environment
- Easy lens replacement
- Flexible soft components
- Wide panoramic field of vision
- Non-allergenic material which is free of harmful substances
- EN 166
- UV 400
- Weight 98 g

coating uvex supravision clean

Colour	Lens	Coating	РК	Cat. No.
white	clear /UV 2-1,2	uvex supravision clean	1	6.262 943





#### **Panoramic Eyeshield for cleanroom**

Cleanroom mask designed for use in rooms with controlled contaminations (sterile and clean rooms) or in aseptic conditions. Its soft structure supports multiple cycles of steam, gamma or beta sterilization without perceptible changes.



- Sterilizable through autoclave with steam and with gamma and beta radiations at 25 kGy
- New elastic strap in antistatic silicone
- Innovative quick elastic band adjustment system
- Available with direct and indirect ventilation

Colour	Description	Lens	PK	Cat. No.
blue	directly ventilation	clear / 2C-1.2 U 1 B CE	1	6.286 799
blue	indirectly ventilation	clear / 2C-1.2 U 1 B CE	1	6.286 800





# Gloves KIMTECH PURE\*G3, latex, powder free, sterile

- Recommended for ISO Class 3 or higher cleanroom environments
- Natural rubber latex for tactile sensitivity and comfort
- Beaded cuff, for added strength and ease in donning
- Textured palms and fingers
- Powder free-minimising contamination and the drying effects of powder on skin
- · Hand specific
- Low protein and low endotoxin levels
- Walleted & pouched in polyethylene for cleanroom use
- This product is classified by EC Council Directive 89/686/EWG. It is tested in accordance with the EN Norms EN 420:2003 Cat. III Low Chemical resistant.
- Meets AQL of 1.5
- Manufactured in accordance with Quality System ISO 9001
- Box of 10 x 20 pairs. Individually packed per pair.

Size	Length	PK	Cat. No.
	cm		
6	30	200	4.652 643
6,5	30	200	6.267 248
7	30	200	6.267 249
7,5	30	200	6.267 250
8	30	200	6.267 251
8,5	30	200	6.237 698
9	30	200	6.267 252
10	30	200	6.267 253



Sterile validated and clean processed, with lot testing for low levels of particles. PPE Category III certified under CE directive 89/686/EEC for Personal Protective Equipment. Tested for permeation resistance to cytotoxic drugs. Ideal for use in sterile pharmaceutical manufacturing EU GMP ISO 5 CLASS A areas. Providing protection against

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EN 374

EN 374

chemical splash and micro-organism hazards acc. to EN 374-1:2003, EN 374-3:2003, ASTM 6978-05. AQL 1.5/EN 374-2.

- $\bullet\,$  ISO 16604 virus resistant. Sterile Validated to SAL  $10^{\text{-}6}$
- Available as one pair of hand specific gloves; 30 cm long, with beaded cuff for added strength and fully textured palm and fingertips, combining enhanced grip with easy double donning.
- Comfortable fit, with silicone free formulation
- Individually packed in sterile wallets

Length	PK	Cat. No.
cm		
30	200	6.257 260
30	200	6.240 584
30	200	6.265 204
30	200	6.240 077
30	200	6.230 011
30	200	6.252 634
30	200	6.235 083
30	200	6.265 205
	cm 30 30 30 30 30 30 30 30 30	cm     200       30     200       30     200       30     200       30     200       30     200       30     200       30     200       30     200       30     200       30     200       30     200       30     200



#### Gloves Niprotect 529, nitrile

Reinforced mechanical resistance for short-term operations. Manufacturing process guarantees a very low level of contaminants: rates of particles, non-volatile residue, extractables; compatible with ISO 5 class (Class M3.5 for International system). 100 % nitrile formula enables anti-static properties. Protection against accidental chemical splashes. Recommended for people who are sensitive to the proteins in natural latex.





FN 374

FN 374

 Cat. III • Packaging: 100 gloves/bag

• Thickness: 0.1 mm

Size	Length	PK	Cat. No.
	cm		
6	30	100	6.270 501
7	30	100	6.270 502
8	30	100	6.270 503
9	30	100	6.270 504
10	30	100	6.270 505



#### Gloves, Nitrilite® Silky

Produced in a controlled powder-free environment, they feature exceptionally low levels of extractable and particles for excellent product protection. The 100 % nitrile polymer prevents the risk of allergies related to latex proteins for the wearer. It also provides exceptional chemical and puncture resistance for further safety. All this, added to optimal electrical properties, makes Nitrilite® gloves ideal for a wide range of industrial



Packaging: 50 gloves vacuumsealed in an unprinted polybag, two bags of 50 gloves per master polybag.

All packaging and labeling is printed with IPA-resistant ink. The gloves are doublebagged for superior contamination control. Packed in a ISO Class 5 cleanroom.

Size	Length	PK	Cat. No.
	cm		
S	30	100	6.253 290
М	30	100	6.253 291
L	30	100	6.253 292
XL	30	100	6.253 293
XXL	30	100	6.262 160



#### **Gloves Trionic 517, Tri-Polymer**

A tripolymer exclusive that offers 100 % comfort for optimal mechanical and chemical resistance. Excellent resistance and strong chemical protection against a great number of chemical products: exclusive Trionic formula made from a mix of natural latex, neoprene and nitrile. Manufacturing process guarantees

EN 374 EN 374

a very low level of contaminants: rates of particles, non-volatile residue, extractables. Compatible with ISO 5 class (Class M3.5 for International system). Wide cuff for double-gloving.

• Cat. III

Packed per pair

• Thickness: 0.5 mm

Size	Length cm	PK	Cat. No.
6	36	1	6.304 079
7	36	Í	6.303 886
8	36	1	6.303 887
9	36	Ī	6.281 467
10	36	1	6.281 468







The undergloves made of 100 % polyester or nylon are highly breathable and have an excellent fit due to their high flexibility. The cuff at the wrist is processed in such a way as to prevent fraying and thus the generation of lint, making it ideal for use in cleanrooms. Furthermore, the gloves can be used not only as undergloves, but also for precision work to prevent impurities such as fingerprints. In order to be able to recognize the different sizes more easily, the gloves differ in the colors of the cuffs. Carton with 30 x 10 pairs.

Size	Material	Colour	PK	Cat. No.
S	polyester	white	300	4.659 021
M	polyester	green	300	4.659 020
L	polyester	gray	300	4.659 019
XL	polyester	brown	300	4.659 018
S	nylon	white	300	4.659 025
M	nylon	green	300	4.659 024
L	nylon	gray	300	4.659 023
XL	nylon	brown	300	4.659 022



#### Finger cots natural rubber

The finger cots made of antistatic natural rubber, with a thickness of min. 0.09 mm, are ideal for applications where the highest precision and fingertip sensation is required. Due to microtexturing, they are also especially handy.

Surface resistance:  $10E10 \sim 120\Omega$ 

Size	Material	PK	Cat. No.
S	rolled edge	1440	4.659 035
М	rolled edge	1440	4.659 036
L	rolled edge	1440	4.659 037
S	cut edge	1440	4.659 038
М	cut edge	1440	4.659 039



### Sleeve guard Tyvek® IsoClean®, sterile

DuPont™ Tyvek® IsoClean® sleeve, model IC 501 B WH OS. Sterile sleeve available in white and in one size. Tunnelled elastication at wrist and upper arm. Tyvek® garments are composed of flash spun high density polyethylene, providing an ideal balance of protection, durability and comfort. Tyvek® is permeable to both air and water vapour, yet repels water-based liquids and aerosols. It offers an excellent barrier against fine particles and fibres (down to 1 micron in size) and is ultra-low-linting. Silicon non-added. Garments and accessories made of Tyvek® IsoClean® are used in the biotech, pharmaceutical, medical device manufacturing and electronics industries, as well as in other critical or controlled environments.

- · This accessory is not CE certified as chemical protective clothing
- Gamma-sterilised
- Suitable for use in cleanroom class ISO 6 and higher
- Sterility assurance level (SAL) of 10-6
- Bound seams: tightly sewn seam is covered with garment fabric to reinforce seam protection and reduce potential for liquid and particle penetration
- Full traceability on all sterilized apparel with certificates of sterility available

Description	PK	Cat. No.
Sleeve guard Tyvek® IsoClean®	100	9.390 072



### Hood Tyvek® IsoClean®, sterile

DuPont™ Tyvek® IsoClean® hood with ties, model IC 668 B WH CS. Sterile hood available in white and in one size. Full face opening with loops and ties. Tyvek® garments are composed of flash spun high density polyethylene, providing an ideal balance of protection, durability and comfort. Tyvek® is permeable to both air and water vapour, yet repels water-based liquids and aerosols. It offers an excellent barrier against fine particles and fibres (down to 1 micron in size) and is ultra-low-linting. Silicon non-added. Garments and accessories made of Tyvek® IsoClean® are used in the biotech, pharmaceutical, medical device manufacturing and electronics industries, as well as in other critical or controlled environments.

- This accessory is not CE certified as chemical protective clothing
- · Clean laundered and gamma-sterilised
- Suitable for use in cleanroom class ISO 5 and higher
- Sterility assurance level (SAL) of 10-6
- Bound seams: tightly sewn seam is covered with garment fabric to reinforce seam protection and reduce potential for liquid and particle penetration
- Full traceability on all sterilized apparel with certificates of sterility available
- Box of 100 p., single packed

Colour	PK	Cat. No.
white	100	9.390 071



#### Disposable mask for Cleanroom, polypropylene

Disposable polypropylene mask for cleanroom. Size: 180 x 95 mm. Ear strap is made of low particle material (Urethane), Nose clip made of polyethylene. High collection efficiency because of its 3 layer structure.

- Packed in cleanroom
- · Suitable for Cleanroom class ISO 5.

Packing: 40 x 50 pieces

Туре	PK	Cat. No.
Disnosable mask	2000	4 659 068

#### Laboratory coat KIMTECH Science\*A7 P+®

- Certified PPE Cat III directive 89/686/EEC
- Type 6 limited chemical splash protection
- Micro-organism protection tested
- EN1149-1:1995 Antistatic clothing
- High performance chemical resistant fabric
- Low lint fabric, Helmke Drum Category II
- 99 % particle and bacterial filtration efficiency
- Individually packed, 15 p. in an outer package for ISO 7 Grade C areas
- Silicon-Free
- Abrasion-resistant film-coated polypropylene
- Mandarin collar
- Elastic cuff, thumb-loops and extra-length arms
- High strength triple stitched seams

Size	PK	Cat. No.
S	15	4.653 906
M	15	4.653 907
L	15	4.653 908
XL	15	4.653 909
XXL	15	4.653 910









#### **Protection Coverall KIMTECH PURE\*A6/A8**

Innovative coverall offering chemical splash protection combined with a breathable back panel to improve the comfort. Front panel, hood, arms and legs made with laminated SMS fabric. Back panel made of lightweight 45 gsm SMS fabric. Origami proprietary folding method to ensure not touching the outer surface of the coverall when opening the packaging. Legs telescope folded with built-in snaps and wide foot opening. Arms telescope folded with built-in thumb loops. Compatible for use in ISO 7 & 8/Grade C & D cleanrooms. Certified against the European regulation as Cat III protective garment, Type 5 (Particle protection) and Type 6 (Limited Splash Protection), antistatic treated to meet EN 1149-5 requirement and EN 14126 infective agent protection. 25 garments per case, individually packed. Available in size S to 4 XL.

#### A6 with hood. A8 with high neck collar.

Size	Туре	PK	Cat. No.
S	A6	25	6.272 170
M	A6	25	6.272 171
L	A6	25	6.272 172
XL	A6	25	6.272 173
2XL	A6	25	6.272 174
3XL	A6	25	6.272 175
4XL	A6	25	6.272 176
S	A8	25	6.272 177
М	A8	25	6.272 178
L	A8	25	6.272 179
2XL	A8	25	6.272 181
3XL	A8	25	6.272 182

#### **Disposable Chemical Protection Coverall 4B**

Material: polyethylene-laminate

- colour white/orange
- excellent wearer comfort due to the breathable, light and flexible material
- self-adhesive zipper flap and taped seams ensure optimum protection against w penetration by liquid aerosols and solid particles
- the hood is easily compatible with filtering face masks
- middle finger loops prevent sleeves from sliding up
- · silicone free
- suitable for cleanroom environment (Class 7, ISO 14644-1)
- chemical protection: personal protective equipment category 3, EN 14605(Type 4), EN ISO 13982-1(Type 5), EN 13034(Type 6), EN 1149-5, EN 14126





# Disposable coverall Tyvek® IsoClean®, with collar/hood, sterile

DuPont™ Tyvek® IsoClean® coverall with collar, model IC 182 B WH CS. Clean-processed and gamma-sterilised. Coverall with collar, available in white in sizes M to XXXL. Front zipper closure. Raglan sleeves with tunnelled elastic wrists. Tunnelled elastics at ankles. Tyvek® garments are composed of flash spun high density polyethylene, providing an ideal balance of protection, durability and comfort. Tyvek® is permeable to both air and water vapour, yet repels water-based liquids and aerosols. It offers an excellent barrier against fine particles and fibres (down to 1 micron in size) and is ultra-low-linting. Silicon non-added. Garments made of Tyvek® IsoClean® are used in the biotech, pharmaceutical, medical device manufacturing and electronics industries, as well as in other critical or controlled environments.

- This garment is not CE certified as chemical protective clothing
- Clean laundered and gamma-sterilised
- Suitable for use in cleanroom class ISO 5 and higher
- Sterility assurance level (SAL) of 10<sup>-6</sup>
- Bound seams: tightly sewn seam is covered with garment fabric to reinforce seam protection and reduce potential for liquid and particle penetration
- Full traceability on all sterilized apparel with certificates of sterility available
- single packed

Description	Size	РК	Cat. No.
with collar	М	1	9.390 066
with collar	L	1	9.390 067
with collar	XL	1	9.390 068
with collar	XXL	1	9.390 069
with collar	XXXL	1	9.390 070
with hood and slip-retardant overshoes	М	1	9.390 061
with hood and slip-retardant overshoes	L	1	9.390 062
with hood and slip-retardant overshoes	XL	1	9.390 063
with hood and slip-retardant overshoes	XXL	1	9.390 064
with hood and slip-retardant overshoes	XXXL	1	9.390 065



#### Disposable Overshoes Tyvek® IsoClean®

DuPont™ Tyvek® IsoClean® overshoe model, IC 451 S WH OB. Overshoe available in white and in sizes M and L. Fixation ties. Elastics at ankles and gripper slip-retardant full sole. Tyvek® garments and accessories are composed of flash spun high density polyethylene, providing an ideal balance of protection, durability and comfort. Tyvek® is permeable to both air and water vapour, yet repels water-based liquids and aerosols. It offers an excellent barrier against fine particles and fibres (down to 1 micron in size) and is ultra-low-linting. Silicon non-added.

Garments and accessories made of Tyvek® IsoClean® are used in the biotech, pharmaceutical, medical device manufacturing and electronics industries, as well as in industrial applications.

- This accessory is not CE certified as chemical protective clothing
- Not clean laundered, not sterilised
- Suitable for use in cleanroom class ISO 6 and higher
- Box of 100 p.

Description	Colour	PK	Cat. No.
М	white	100	9.390 078
L	white	100	9.390 079







Fixation ties. Tunnelled elastics at ankles and gripper slip-retardant full sole. Tyvek® garments are composed of flash spun high density polyethylene, providing an ideal balance of protection, durability and comfort. Tyvek® is permeable to both air and water vapour, yet repels water-based liquids and aerosols. It offers an excellent barrier against fine particles and fibres (down to 1 micron in size) and is ultra-low-linting. Silicon non-added.

Garments and accessories made of Tyvek® IsoClean® are used in the biotech, pharmaceutical, medical device manufacturing and electronics industries, as well as in other critical or controlled environments.

#### Overboot, model IC 458 B WH CS

Sterile overboot in white.

- This accessory is not CE certified as chemical protective clothing.
- Clean laundered and gamma-sterilised
- Suitable for use in cleanroom class ISO 5 and higher
- Sterility assurance level (SAL) of 10<sup>-6</sup>
- Bound seams: tightly sewn seam is covered with garment fabric to reinforce seam
  protection and reduce potential for liquid and particle penetration
- Full traceability on all sterilized apparel with certificates of sterility available
- Box of 100 x 2 p., single packed per pair

Description	Colour	PK	Cat. No.
S	white	200	9.390 073
М	white	200	9.390 074
XL	white	100	9.390 075

#### Overboot, model IC 458 B WH OB

Overboot available in white and in sizes M and L.

- This accessory is not CE certified as chemical protective clothing
- Not clean laundered, not sterilised
- Suitable for use in cleanroom class ISO 6 and higher
- Bound seams: tightly sewn seam is covered with garment fabric to reinforce seam protection and reduce potential for liquid and particle penetration
- Box of 100 p.

Description	Colour	PK	Cat. No.
М	white	100	9.390 076
L	white	100	9.390 077

#### Overshoe dispenser HYGOMAT COMFORT/CLEANROOM

- no electrical power needed
- · easy to use, no need for bending over
- · easy and quick handling
- with handrail for extra comfort
- capacity: two packs of overshoes
- with window for easy control of rest capacity
- · refilled with overshoes within seconds
- weight: 21 kg

Description	PK	Cat. No.
Overshoes dispenser HYGOMAT COMFORT, 740 x 300 x 730 mm	1	6.257 283
Overshoes dispenser HYGOMAT CLEANROOM, stainless steel, $740 \times 730 \times 730 \text{ mm}$	1	6.269 779
Overshoes, fleece with CPE-coating, 440 mm, white, for HYGOMAT	80	6.257 285
Overshoes with strong CPE sole 440 mm, white-blue, for HYGOMAT	70	6.257 286
Overshoes, CPE, 470 mm, blue, for HYGOMAT	110	6.257 287
Overshoes with slip resistant sole, PP, 460 mm, light blue, for HYGOMAT	100	6.257 288







#### **Cleanroom mats Sticky Mat**

The Sticky Mat provides a fast, convenient, reliable way to clean shoe soles or other items before entering a clean and sanitary area. Sticky Mats significantly reduce traffic-borne contaminants.

Each Sticky Mat consists of a stack of tear-off adhesive polyethylene sheets, effectively capturing dirt and dust from foot-traffic and equipment wheels before they enter controlled environments. A clear release sheet protects the top sheet of the sticky mat until it is ready to use. The corner tabs are consecutively numbered to show the number of remaining sheets, thereby helping you to keep track of the number of sheets remaining and preventing multiple sheets being removed at once.

Ergomat White Sticky Mats are produced in an  $46 \times 114$  cm sheet, sold in pads of 30 sheets, with 10 pads per box (300 sheets total.)

Description	Colour	LC	PK	Cat. No.
Frame for Cleanroom mats Sticky Mat	grey	L9A	1	6.272 245
Pack of 10 mats of 30 sheets	white	L9A	10	6.272 241
Pack of 10 mats of 30 sheets	blue	L9A	10	6.272 242
Set of 10 mats of 30 sheets + 1 frame	white	L9A	1	6.272 243
Set of 10 mats of 30 sheets + 1 frame	blue	L9A	1	6.272 244





#### **LLG Trolleys, Stainless Steel**

Made of CNS 18/10, material no. 1.4301, with micro-polished surface. All shelves are produced with an all round raised profile edge. This prevents anything from slipping over the edge. The shelves are welded to the car. The load capacity per shelf is 80 kg. A noise-insulation mat is mounted on the bottom side of each shelf. The round tubes at the front edges are used as handgrips.

The trolleys are equipped with galvanized steel castors (4 swivel castors, 2 with brakes, castor diam. 125 mm) which are inserted in the tubular frame. Wall bumpers made of plastic (polyamide) on all four corners protect against damage.

Description	Width	Depth	Height	PK	Cat. No
	mm	mm	mm		
2 shelves, vertical spacing 585 mm	900	600	950	1	9.148 10
3 Shelves, vertical spacing 275 mm	900	600	950	1	9.148 104



#### **Adhesive tape**

Adhesive PVC-tape with water-soluble adhesive. Available in different widths and colors.

Size	Colour	Rollers	РК	Cat. No.
12 mm x 33 m	red	10	10	4.659 106
12 mm x 33 m	blue	10	10	4.659 107
12 mm x 33 m	yellow	10	10	4.659 108
12 mm x 33 m	green	10	10	4.659 109
12 mm x 33 m	white	10	10	4.659 110
25 mm x 33 m	red	10	10	4.659 111
25 mm x 33 m	blue	10	10	4.659 112
25 mm x 33 m	yellow	10	10	4.659 113
25 mm x 33 m	green	10	10	4.659 114
25 mm x 33 m	white	10	10	4.659 115
25 mm x 33 m	black/yellow	10	10	4.659 116
50 mm x 33 m	red	5	5	4.659 117
50 mm x 33 m	blue	5	5	4.659 118
50 mm x 33 m	yellow	5	5	4.659 119
50 mm x 33 m	green	5	5	4.659 120
50 mm x 33 m	white	5	5	4.659 121
50 mm x 33 m	black/yellow	5	5	4.659 122





#### **Precision-Swabs**

Precision-swabs are engineered for use in a variety of environments and applications. They are ideal for use with cleaner degreasers, head cleaners, flux removers and other solvents for fast, precision cleaning.

#### Wrapped foam swabs

- Durable wrapped foam swabs designed for precise applications.
- Good particle entrapment and work well as solvent applicators
- Small tips allow use in very tight tolerance areas
- Wrapped foam delivers superior abrasion resistance for removal of tough contaminants
- Pointed end works especially well as a pick.

#### Sealed polyester swabs

- Very clean and durable all-purpose swabs
- Featuring either knit or nonwoven fabric heads, these swabs are acid and solvent resistant
- Sealed edges build in high strength with no loose fibers or particulates
- Ideal for tough scrubbing around raised shapes
- Cleanroom process gives the lowest ionic, non-volatile residue and particle contaminants.

#### Sealed foam swabs

- Economical general purpose swabs
- Best solvent retention
- Excellent particle entrapment
- The open cell structure gives the best solvent holding ability of any style of swab
- Free of adhesives or binders that could contaminate your process
- Fiberless construction does not generate particles.
- Suitable for ISO Class 4 Cleanrooms and higher

Length mm	Head size	Head	Material Head	Material shaft	PK	Cat. No.
150	4,7 x 5,4	rounded	Polyester/Nylon	PP	125	4.655 171
70	3,7 x 3,7	wrapped, pointed	PU-foam	Nylon	125	6.266 882
70	2,4 x 3,0	rounded	Polyester	PP	125	6.266 884
70	1,6 x 3,0	rounded	Polyester	PP	125	6.266 885
70	1,0 x 3,0	rounded	Polyester	PP	125	6.266 886
70	3,3 x 3,5	rounded	PU-foam	PP	125	6.266 887
80	2,7 x 3,3	pointed	PU-foam	PP	125	6.266 888
68	2,5 x 3,0	rounded	PU-foam	PP	125	6.266 889

#### **Sticky Swabs**

Sticky Swabs - ESD safe cleaning stems:

Dustfree sticky swabs are specially used and designed for a high degree dust-free environment (class 10-100). Anti-static treatment can safely dissipate electrostatic charge. Sticky swabs are applicable for manufacturing and assembling static sensitive products.

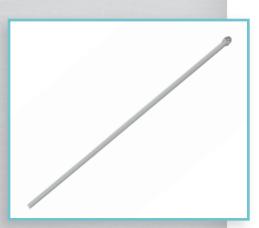
Property: ESD safe, good absorption, soft and good tenacity, excellent agility, non-volatile, environment-friendly, no thrill odor

#### **Material**

Tip: PVAC (Polyvinyl acetate), Ethyl acetate - Isopentyl acetate

Handle: PVC

Description	PK	Cat. No.
1 mm Ø	25	6.272 061
2 mm Ø	25	6.272 062
3 mm Ø	25	6.272 063
Kit, box of 75 swabs mixed (25 x 1 mm, 25 x 2 mm, 25 x 3 mm)	1	6.272 064



### Cleanroom wipes, polyester/nylon

Cleanroom wipes made of 87 % polyester and 13 % nylon. 229 x 229 mm, lasercut, washed with pure water. Excellent dust suppression and wiping efficiency due to split fiber. Suitable for Cleanroom class ISO 5.

Туре	PK	Cat. No.
Cleanroom wipes	150	4.659 072



#### Cleanroom wipes, polyester

Cleanroom wipes made of 100 % polyester, 229 x 229 mm, lasercut. Particle number and evaporation residues are kept to a minimum. The formation of dust and lint from the cutting surface are kept to a minimum due to the use of laser cutting technique. The use of polyester long fibers prevents the generation of lint. Suitable for cleanroom class ISO 5.

Туре	PK	Cat. No.
Cleanroom wipes	150	4.659 070



# Cleanroom wipes, polyester/nylon

Cleanroom wipes made of 80 % polyester and 20 % nylon, 229 x 229 mm, heat cut, thickness: 410±30  $\mu$ m, Water Absorbency: 412.32 g/m², Weight: 210±10 g/m². Used split fiber results in excellent wiping effects. Suitable for cleanroom class ISO 5.

Туре	PK	Cat. No.
Cleanroom wipes	100	4.659 071



#### Cleanroom wipes, polyester/rayon

Cleanroom wipes made of nonwoven fabric with 30 % polyester and 70 % rayon,  $250 \times 250$  mm, quattro folded, Suitable for Cleanroom class ISO 6.

Туре	PK	Cat. No.
Cleanroom wipes	3000	4.659 073







Sontara® MicroPure nonwoven styles (woodpulp/polyester) are engineered for cleanroom use and combine absorbency of a natural fibre with the cleanliness and strength of a synthetic fibre in the same fabric. No binders or chemical treatments are used to manufacture them. The high cleanliness and purity are ensured by low extractable level and ion content as well as extremely low particle generation by the material itself. The fabric styles offer high particle and liquid absorbency due to their cellulose content.

Туре	Dimensions mm	Cleanroom Class	PK	Cat. No.
Sontara® MicroPure 100	305 x 305	ISO 5 + 6	150	9.390 185
Sontara® MicroPure 100	224 x 224	ISO 5 + 6	300	9.390 186
Sontara® MicroPure AP	305 x 305	ISO 6 - 9	150	9.390 187
Sontara® MicroPure AP	224 x 224	ISO 6 - 9	300	9.390 188
Sontara® MicroPure SV	305 x 305	ISO 7 - 9	250	9.390 189
Sontara® MicroPure SV	224 x 224	ISO 7 -9	500	9.390 190



# Cleanroom notebook

Notebook suitable for use in Cleanrooms. 64 pages of white paper, horizontally lined.

- Surface resistance:  $<10^{11}\,\Omega$
- 72 g/m²
- Packed in Cleanroom

Туре	PK	Cat. No.
Cleanroom notebook	10	4.659 105

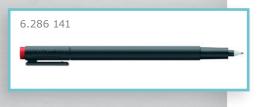


#### **Cleanroom paper**

Clean paper available in white and blue.

- Suitable for Cleanroom class ISO 5
- Surface resistance:  $<10^{11}\,\Omega$
- 72 g/m<sup>2</sup>
- Packed in Cleanroom

Size	Colour	PK	Cat. No.
A4	blue	2500	4.659 102
A4	white	2500	4.659 103
A3	white	1250	4.659 104



# environments. Smudge-proof and waterproof. • eady to use

• Stroke width: Approx. 0.6 mm

cleanroom marker, edding 8011

• Nib: Bullet nib

Colour	PK	Cat. No.
black	10	6.284 876
red	10	6.286 141
blue	10	6.286 142

For permanent marking of special cleanroom and laminated papers in dust-free

6.286 142

#### **Laboratory Chair Labsit**

Labsit is the new chair for all kinds of laboratories. Its intelligent Flex function offers comfort and laboratory ergonomics with minimal adjustments required. Labsit has all the properties required for laboratory work and, at the same time, it is light and universally applicable. Labsit is therefore a laboratory specialist and all-rounder all in one.



- Minimal joints: Hygienic design for easy cleaning and disinfection.
- Resistant to disinfectants and chemicals: Resistant to all of the usual disinfectants and chemicals.
- Seat upholstery made of artificial leather (soft and comfortable, washable and antibacterial) or soft-touch PU foam (extremly robust, washable and antibacterial) in black.
- Suitable for cleanrooms: Certified for the use in cleanrooms category 3 in accordance with ISO 14644-1.
- Adheres to biosafety level BSL1, BSL2 and BSL3 of the Directive for Biological Agents, GMP-conform.
- The backrest made of plastic with its 3D-Flex function automatically adapts to the movements of the user and therefore follows the upper body when leaning back or turning sidewards.
- The Flex function on the front edge of the seat supports the forward-angled working which is typical for laboratory work.
- Its low weight and integrated handle provide maximum mobility and easy handling in the laboratory.
- Seat height adjustment by gas spring.
- Solid polished aluminium star base, flat design.
- The chrome-plated foot ring for the high chairs provides support through the wide tread area and can be easily and quickly adjusted in height.

Туре	Material	Description	Seat height adjustment mm	Colour	PK	Cat. No.
Lab Chair	Artificial Leather	Castors	450-650	Blue	1	6.287 729
Lab Chair	Artificial Leather	Castors	450-650	Anthracite	1	6.287 730
Lab Chair	Artificial Leather	Castors	450-650	Orange	1	6.287 731
Lab Chair	PU Foam	Castors	450-650	Blue	1	6.287 732
Lab Chair	PU Foam	Castors	450-650	Anthracite	1	6.287 733
Lab Chair	PU Foam	Castors	450-650	Orange	1	6.287 734
Lab Chair	Artificial Leather	Glides, Foot Ring	520-770	Blue	1	6.287 735
Lab Chair	Artificial Leather	Glides, Foot Ring	520-770	Anthracite	1	6.287 736
Lab Chair	Artificial Leather	Glides, Foot Ring	520-770	Orange	1	6.287 737
Lab Chair	PU Foam	Glides, Foot Ring	520-770	Blue	1	6.287 738
Lab Chair	PU Foam	Glides, Foot Ring	520-770	Anthracite	1	6.287 739
Lab Chair	PU Foam	Glides, Foot Ring	520-770	Orange	1	6.287 740
Lab Chair	Artificial Leather	Stop and Go Gastors, Foot Ring	560-810	Blue	1	6.287 741
Lab Chair	Artificial Leather	Stop and Go Gastors, Foot Ring	560-810	Anthracite	1	6.287 742
Lab Chair	Artificial Leather	Stop and Go Gastors, Foot Ring	560-810	Orange	1	6.287 743
Lab Chair	PU Foam	Stop and Go Gastors, Foot Ring	560-810	Blue	1	6.287 744
Lab Chair	PU Foam	Stop and Go Gastors, Foot Ring	560-810	Anthracite	1	6.287 745
Lab Chair	PU Foam	Stop and Go Gastors, Foot Ring	560-810	Orange	1	6.287 746
Lab Stool	PU Foam	Castors	450-650	-	1	6.287 747
Multifunctional Armrests					1	6.287 748
Clip, writable					1	6.287 749













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