

cleanroom stock

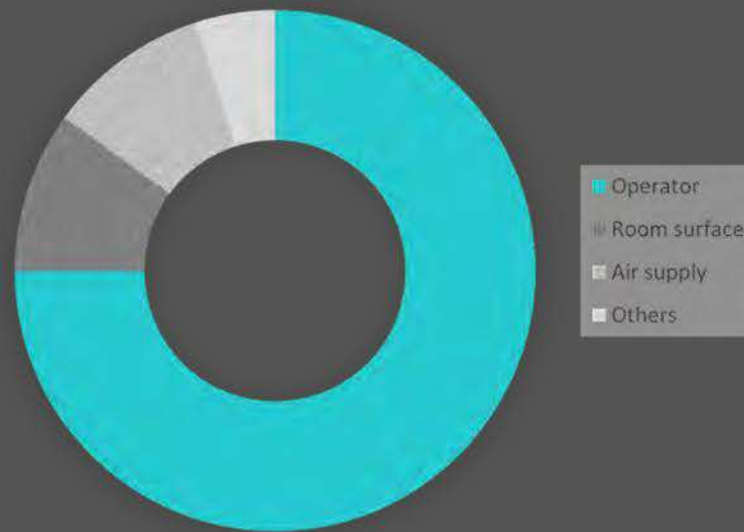
2022



Why cleanroom garments matter ?

The operator in the cleanroom is highly trained, yet because of an inadequate garment system he is responsible for 75% of cross contamination issues. This is a result of skin flakes, hair loss, sweat, ... being released in the cleanroom air through inferior cleanroom clothing leading to unwanted shutdowns and product rejections.

Source of cross-contamination



Your garment solution is the only protection barrier between your product and the highest source of contamination risk inside the controlled environment. The garment system you select will have a direct impact on the quality and efficiency of your production.





How to select your cleanroom garment ?

Cleanrooms are classified according to the number and size of particles permitted per volume of air. The smaller the number of particles permitted, the cleaner the air in the room. The required garment performance and design will vary along with the required cleanliness of the air.

The standard ISO 14644-5 and GMP Annex 1, rank cleanrooms rated on the number and size of airborne particles per m³.

Cleanroom grade	Maximum permitted number of particles ≥ 0.5 μm/m ³		ISO class (at rest)	ISO class (in operation)
	at rest	in operation		
A	3 520	3 520	5	5
B	3 520	352 000	5	7
C	352 000	3 520 000	7	8
D	3 520 000	-	8	-

GMP Annex 1 draft maximum permitted airborne particle concentration.

The recommended practice (RP), IEST-RP-CC003.4, provides guidance for the selection and testing of garments for use in aseptic and non-aseptic environments. One important criteria of this RP is the particle emission rate (particle release) of cleanroom garments. Based on this result they are divided in three categories. While our everyday clothing releases millions of particles, a category 1 garment emits less than 1 200 (0.5μm) particles and is therefore, recommended for use in a grade A/B cleanroom class.

	Garment type	0.3 μm	0.5 μm
Category 1	1 coverall	< 2 000	< 1200
Category 2	1 coverall	2 000 to 20 000	1200 to 12 000
Category 3	1 coverall	20 000 to 200 000	12 000 to 120 000

IEST-RP-CC003.4 Helmke Drum test for particle emission rate.





Cleanroom Overgarments

/ according to IEST-RP-CC003.4

/ superior durability

/ high filtration efficiency

/ high comfort

/ stock available on selected models

/ all garments are validated for autoclaving
(please contact us when Gamma-, Beta-, X-ray or ETO
sterilization is needed)



Hood

- / eye-opening adjusted for all types of glasses
- / stainless steel snaps at the back of the hood for adjustment
- / double fabric layer around mouth and nose area
- / antistatic

Ref. 21HU22222-B3



Coverall

- / stand-up collar with stainless steel snaps
- / concealed front zipper
- / raglan sleeves with elasticated cuffs
- / 3 stainless steel snaps on each side of the legs to attach the boots
- / elastic in the back for a better fit
- / antistatic

Ref. 21CO11A52-A4





Coverall with integrated hood

- / integrated hood with stainless steel snaps
- / stainless steel snaps at the back of the hood for adjustment
- / concealed front zipper
- / raglan sleeves with elasticated cuffs
- / 3 stainless steel snaps on each side of the legs to attach the boots
- / elastic in the back for a better fit
- / antistatic

Ref. 21CI41A32-A5



Top down coverall

- / integrated hood with eye-opening adjusted for all types of glasses
- / integrated face mask in the hood
- / stainless steel snaps at the back of the hood for adjustment
- / zipper closure between the legs / raglan sleeves with elasticated cuffs
- / 3 stainless steel snaps on each side of the legs to attach the boots
- / elastic in the back for a better fit
- / antistatic

Ref. 21CU45A13-A4





Side-wall sole boots

- / double strap with buckle and stainless steel snaps for fit adjustment
- / antistatic sole with side wall
- / anti-slip properties and design
- / reinforcement tape around the outside of the sole
- / strap and stainless steel snaps at the top of the boot for adjustment
- / stainless steel snaps to attach the boot to the coverall
- / suitable for sterilization
- / antistatic

Ref. 21SC32232-C3

Flat sole boots

- / triple elastic design for easy gowning
- / flat antistatic sole
- / anti-slip properties and design
- / reinforcement tape around the inside of the sole
- / elasticated top of the boot with stainless steel snaps for adjustment
- / stainless steel snaps to attach the boot to the coverall
- / suitable for sterilization
- / antistatic

Ref. 21SC92132-A5



Soft sole boots

- / strap with puller for fast adjustment
- / soft Hypalon sole with antistatic finish
- / anti-slip properties
- / elasticated top of the boot with stainless steel snaps for adjustment
- / stainless steel snaps to attach the boot to the coverall
- / suitable for sterilization
- / antistatic

Ref. 21SC52832-B1



Cleanroom Inner garments

/ temperature control (light & cool fabric)

/ superior durability

/ soft and comfortable feel

/ guaranteed freedom of movement

/ low particle emission rate



Hair cover

/ free size
/ elasticated with stainless steel snaps for adjustment
/ antistatic

Ref. 21HC22412-K1

Coverall (innerwear)

/ stand-up collar with stainless steel snaps
/ concealed zip front fastening
/ raglan sleeves with knitted cuffs
/ antistatic

Ref. 21CO11D14-C4





Tunic

- / mandarin collar with stainless steel snaps
- / long raglan sleeves
- / knitted cuffs at wrists
- / anti-static

Ref. 21JK12D50-C5



Pants

- / waistband with elastic and drawstring
- / knitted cuffs at the bottom of the legs
- / antistatic

Ref. 21PI00044-D4



Reusable garment bag

/ dimensions 35cm by 40cm
/ zipper front fastening
/ available in both cleanroom and clean area
body fabric
/ antistatic

Ref. 87226 (Alsistrong®)
Ref. 87225 (Alisandwash®)



Cleanroom Socks

/ The new GMP Annex 1 section 4.13 requires the cleanroom operator to wear suitable pre-washed and low linting socks.

Ref. H9902005







Fabrics

Our selected fabric for cleanroom overgarments

Alsistrong®

Fabric:
 98% Polyester
 2% Carbon
 118 g/m²
 Twill 3/2

Colors on stock:
 white
 light blue

Colors on demand:
 deep green

Our selected fabric for clean area undergarments

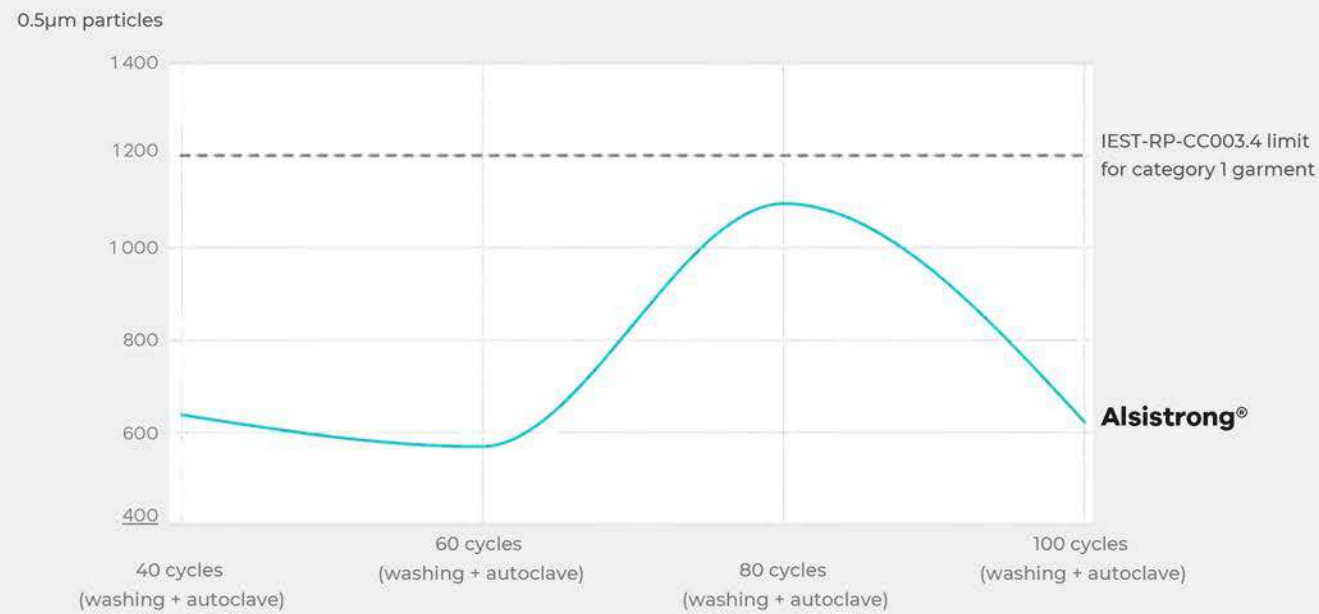
Alsisandwash®

Fabric:
 98% Polyester
 2% Carbon
 93g/m²
 Plain 1/1

Colors on stock:
 navy
 light blue

Colors on demand:
 white

Feel free to contact us for full specification sheets and certificate of analysis (COA).



The new GMP annex 1 emphasizes on selecting a garment system that is tested and validated over its entire life cycle. Garments washed once or multiple times will deliver very different results.

We manufacture in our dedicated cleanroom production units located globally, using a large selection of fabrics we have developed over the years. This combination of unique materials and high tech manufacturing enable us to deliver a product that meets the most critical standards and norms over its entire life cycle.

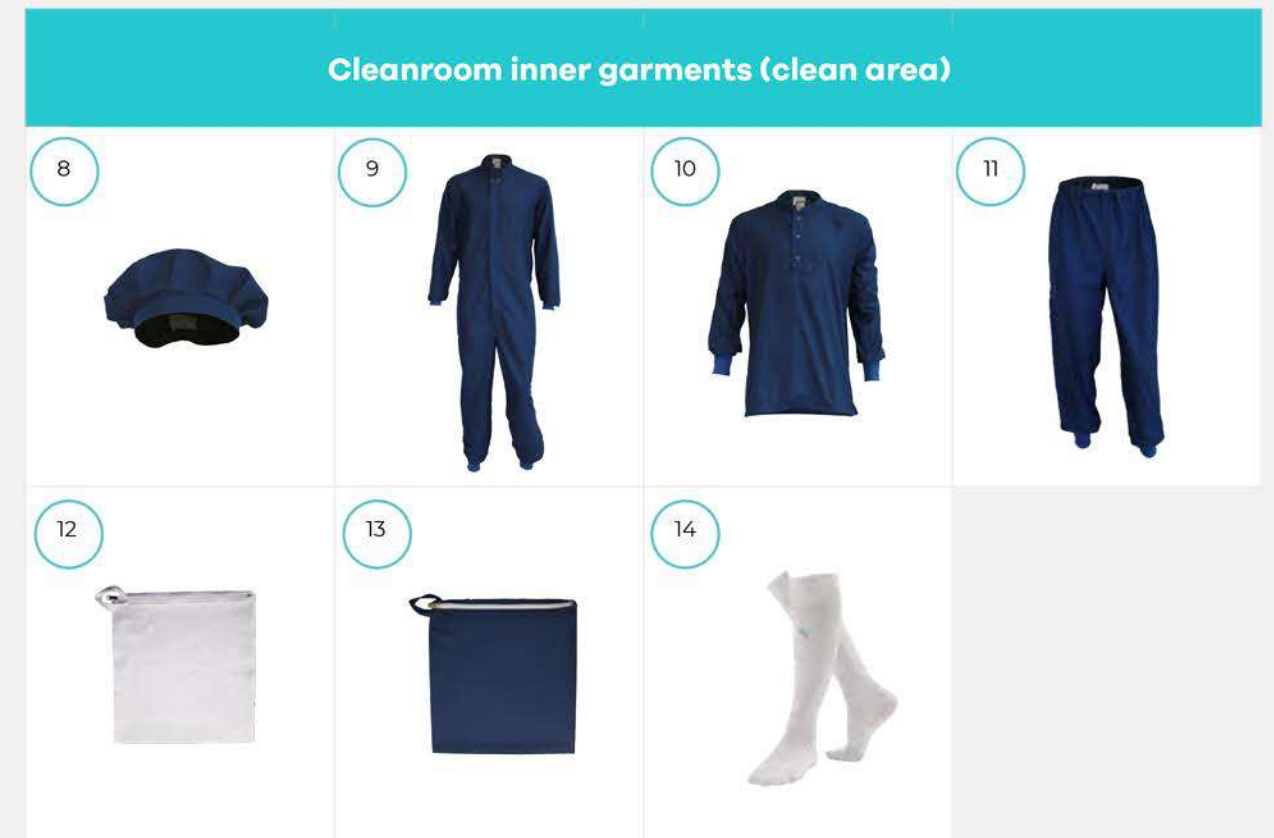
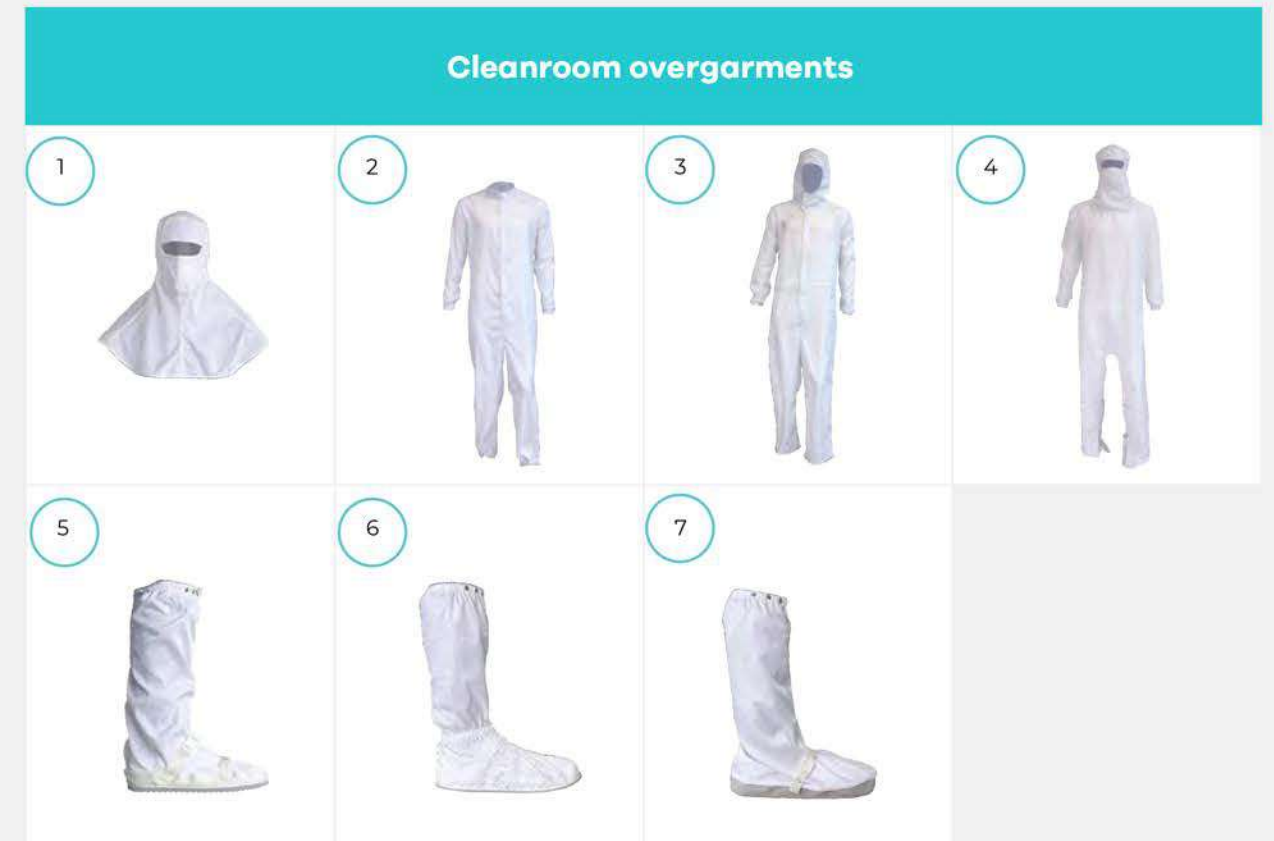




Overview

Reference	ISO	Description	Sizes
1	4-9	Hood Ref. 21HU22222-B3	Free size
2	4-9	Coverall Ref. 21COT1A52-A4	S - 4XL
3	4-9	Coverall with integrated hood Ref. 21C141A32-A5	S - 4XL
4	4-9	Top down coverall Ref. 21CU45A13-A4	S - 4XL
5	4-9	Side-wall sole boots Ref. 21SC32232-C3	XS - 2XL
6	4-9	Flat sole boots Ref. 21SC92132-A5	XS - 2XL
7	4-9	Soft sole boots Ref. 21SC52832-B1	XS - 2XL
8	7-9	Hair cover Ref. 21HC22412-K1	Free size
9	7-9	Coverall (innerwear) Ref. 21COT1D14-C4	S - 4XL
10	7-9	Tunic Ref. 21JK12D50-C5	S - 4XL
11	7-9	Pants Ref. 21PI00044-D4	S - 4XL
12 13	n/a	Reusable garment bag Ref. 87226 (Alsistrong®) Ref. 87225 (Alsibandwash®)	Free size
14	4-9	Cleanroom Socks Ref. H9902005	Free size

Sizes XS and 5XL to 8XL are available on request.



Size guide

Cleanroom overgarments & inner garments

	S	M	L	XL	2XL	3XL	4XL
Height	160 - 165	166 - 171	172 - 177	178 - 182	183 - 187	188 - 192	193 - 197
Chest	99	105	111	117	123	129	135
Hips	104	110	116	121	127	133	139

centimeters (cm)

Cleanroom boots

	XS	S	M	L	XL	2XL
Sole length	26	28	30	32.5	34	36

centimeters (cm)



Size guide information

Advised height refers to the height of the wearer.

Chest circumference instructions

Place the measuring tape horizontally under the armpits and across the fullest part of the chest.

Hip circumference instructions

Place the measuring tape around your hips and measure across the fullest part of your buttocks.





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