

## A. Performance of coverall:

Test on whole suits	Result	Performance Level
Resistance to penetration by liquids, jet test, type 3 (EN ISO 17491-3, EN 14605)	Pass	-
Resistance to penetration by liquids, spray test, type 4 (EN ISO 17491-4 met. B, EN 14605)	Pass	-
Resistance to aerosol penetration - In-ward leakage of aerosols of solid particles, type 5 (EN ISO 13982-2, EN ISO 13982-1, EN 1073-2)	Pass	Ljmn, 82/90 ≤ 30% Ls 8/10 ≤ 15%
Resistance to penetration by liquids, spray test, type 6 (EN ISO 17491-4 met. B, EN 13034)	Pass	-
Nominal protection factor (EN ISO 13982-2, EN 1073-2)		Class 2
Practical performance test (EN 1073-2)	Pass	-
Seams: Strength (EN ISO 13935-2, EN 13034, EN 14325)	>75 < 125 N	Class 3
Resistance to permeation by chemicals (EN ISO 6529 met. A, EN 14605, EN 14325)	≥ 480 min	H2SO4 30%: Klasse 6 NaOH 10%: Klasse 6
Test on fabric	Result	Performance Level
Abrasion resistance (EN 530 Met. 2, EN 14325, EN 14605)	> 1.500 cycles	Class 5
Flex cracking resistance (EN 7854 met. B, EN ISO 13982-1, EN 14325)	> 100 000 cycles	Class 6
Trapezoidal tear resistance (EN ISO 9073-4, EN 13034, EN 14325)	> 20 N < 40 N	Class 2
Tensile strength (EN ISO 13934-1, EN 13034, EN 14325)	> 60 N < 100 N	Class 2
Puncture resistance (EN 863, EN 13034, EN 14325)	> 10 N < 50 N	Class 2
Resistance to permeation by chemicals (EN ISO 6529 Met. A, EN 14605, EN 14325)	≥ 480 min	H2SO4 30%: class 6 NaOH 10%: class 6
Resistance to penetration by liquid-repellency index (EN ISO 6530, EN 13034, EN 14325)	class 3: > 95% class 2: > 90% class 1: > 80%	H2SO4 30%: class 3 NaOH 10%: class 3 o-xilene: class 3
Resistance to penetration by liquid-penetration index (EN ISO 6530, EN 13034, EN 14325)	class 3: < 1% class 2: < 5% class 1: < 10%	H2SO4 30%: class 3 NaOH 10%: class 3 o-xilene: class 3 Butan-1-ol: class 3
Resistance to ignition (EN 13274-4, EN 13034)	Pass	-
Electric surface resistance (fabric) (EN 1149-1, EN 1149-5)	≤ 2,5*10 <sup>9</sup> Ω	Pass
Charge decay (knitted cuffs) (EN 1149-3, EN 1149-5)	t <sub>50</sub> < 4s, oder S > 0,2	Pass
Resistance to blocking (EN 25978, EN 1073-2)	Pass	-
Bursting strength and bursting distension (EN ISO 13938-2, EN 14126)	≥ 295 kPa	Pass
Penetration by blood and body fluids; resistance to penetration by bloodborne pathogens (Met. phi-x174 bacteriophage test (EN 14126, ISO 16603, ISO 16604)	20 kPa	Class 6
Resistance to penetration by infective agents due to mechanical contact with substances containing contaminated liquids (test microorganism: staphylococcus aureus) (EN 14126, EN ISO 22610)	t > 75 min	Class 6
Resistance to penetration by contaminated liquid aerosols (test microorganism: staphylococcus aureus) (EN 14126, ISO 22611)	log > 5	Class 3
Resistance to penetration by contaminated solid particles (test microorganism: spores of Bacillus subtilis) (EN 14126, ISO 22612)	Log cfu ≤ 1	Class 3
pH of aqueous extract (EN ISO 13688, EN ISO 3071)	3.5 < pH < 9.5	Pass
Aromatic amines (EN 14362-1)	Pass	-
Requirements for protective clothing EN ISO 13688	Pass	-

This coverall has been tested as a complete suit unit and passed the requirement of following standards: EN 14605:2005+A1:2009 (type 3B 4B), EN ISO 13982-1:2004+A1: 2010 (type 5B), EN 13034:2005+A1:2009 (type 6B), EN 1073-2:2002, EN 14126:2004, EN 1149-5:2018, EN ISO 6529:2001, EN ISO 13688:2013 and EN 14325:2018. These are harmonized standards of the directive (EU) VO 2016/425 for personal protective equipment.

## B. Marking:

Each coverall is identified with an inside label. This indicates the type of protection offered and other details of information.



- ← Brand, manufacturer address
- ← model identification
- ← material description
- ← Size designation as defined in EN ISO 13688:2013
- ← CE marking signifying compliance with PPE of CAT III according to European legislation
- ← single use only
- ← EN ISO 13688:2013 defines general requirements for protective clothing
- ← symbol informs the wearer to study the instructions for use
- ← EN standard icon definition see below
- ← International care symbols

## Size designation:

Size	Chest circumference	Body height
M	94-102	166-174
L	102-110	174-182
XL	110-118	182-190
XXL	118-129	190-198
XXXL	129-141	198-206

## EN standard icon definition:

- indicates standard EN 14605:2005+A1:2009 for protective performance against spray and infective agents type 3B and 4B, EN 13982-1:2004+A1:2010 for fine, dry particles type 5B and standard EN 13034:2005+A1:2009 for reduced spray, limited splash type 6B.
- EN 14126:2003+AC:2004 for protective clothing against infective agents.
- EN 1149-5:2018 for antistatic performance of protective clothing.
- EN 1073-2:2002 for protective clothing for total inward leakage.

## International care symbols:

- Do not iron
- Do not tumble dry
- Do not bleach
- Do not dry clean
- Do not wash
- Flammable fabric

## C. Application and limitations of use

The coverall is antistatic and is used as protection cloth against certain chemicals, liquid aerosols and airborne solid particulates. For details please refer to the performance table. This product is meant to protect the head and body. Always check for holes, tears, breach at material or incomplete seams to ensure protection. Do not don the coverall if the zipper is faulty, or if the elastic bands are loose. In order to ensure the spray-tight connections between the different parts of the clothing, the knitted wrist cuffs, ankle cuffs and hoods must be taped with solvent-resistant adhesive strips, as specified by EN 14605. The same adhesive strip has to be used on the outside along the whole zip cover. Make sure that the adhesive strip reaches beyond the lower edge of the flap. In use, a face mask has to be taped with the hood. Protection of uncovered parts of the body is only ensured by further protective equipment that provides the same level of protection and is attached to the coverall. The full text of the EU declaration of conformity is available at the following internet address: [www.franz-mensch.de](http://www.franz-mensch.de)

## D. The expected shelf life of the garment

The user or supervisor are the ones who can most accurately determine how long a coverall can be worn. The expected shelf life of the garment can be more than 5 years if the coveralls are kept in its original packing in a cool and dry place.

## E. Instructions for fitting and removal

Care must be taken to ensure that the size of the coverall matches the user. **To don the coverall:** Firstly unzip the coverall and then slip into the trousers. Pull the coverall over the whole body, slip in the sleeves, before finally pulling the hood to cover the head. **To remove the coverall:** Firstly unzip, follow by taking off the hood and sleeves, and finally take off the trousers.

## F. Usage restrictions

The coverall shall not be used in areas where there is a risk to certain hazardous not tested chemicals. The user is the one who defines the suitability of the coverall for the required protection level and the correct combination of coverall and additional equipment. The coverall should be kept away from open flames. The coverall is for single use. Do not wash for reuse. The coverall is made of breathable material in which heat stress should not occur, but the possibility and consequences of heat stress must be considered in very warm conditions. Heat stress and discomfort can be reduced or prevented with appropriate undergarments or suitable ventilation equipment.

## G. Warnings

Choose products compatible with area of work. The disposable item must be replaced after every use. If any breaking, punctures etc. occur, leave the working area and wear new coverall. The person wearing the electrostatic dissipative protective clothing shall be properly earthed. The resistance between the person and the earth shall be less than 10Ω e.g. by wearing adequate footwear. Electrostatic dissipative protective clothing shall not be open or removed whilst in presence of flammable or explosive atmospheres or while handling flammable or explosive substances. Electrostatic dissipative protective clothing shall not be used in oxygen enriched atmospheres or in zone 0 (EN 60079-10-1) without prior approval of the responsible safety engineer. Electrostatic dissipative protective clothing is suitable for use in zones 1-2 and 20-22 (EN 60079-10-1, EN 60079-10-2) in which the minimum ignition energy of the explosive atmosphere is not less than 0.016mJ. The electrostatic dissipative performance of the electrostatic dissipative protective clothing can be affected by wear and tear, laundering and possible contamination. Electrostatic dissipative protective clothing shall permanently cover all non-complying materials during normal use (including bending and movements). This coverall meets the requirement Ljmn, 82/90 ≤ 30% Ls 8/10 ≤ 15%. The method provides a measure of the inward leakage into protective clothing by dry aerosol particles (generated from a sodium chloride solution) having a mass-median aerodynamic diameter of 0,6 μm. These garments are flammable - Keep away from fire. Abandon the place of work immediately in case of damage of the product. The user shall not take off the garment when he is still in the risk area.

## H. Transport, conservation, storage and discarding

The item should be transported and conserved in a cool, dry place away from sources of light and heat. Do not store the coverall under direct sunlight or close to UV source. Restrictions of disposal depend entirely on any contamination which may have accrued during use. If not contaminated the product can be treated as a common textile waist. If contaminated it should be treated as harmful garbage and discarded according to country laws.

## This product has been certified by the notified body

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