

PROTECTIVE EQUIPMENT CO.,LTD

South 500M, West of Intersection of Weian and Nanayuan Road, Anqiu, Shandong China.

KONZER 2000

FEATURES

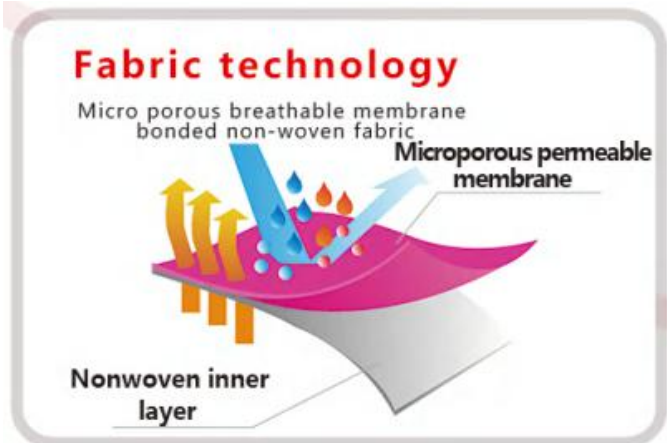
- High permeability, reduce the generation of thermal stress.
- Fully elastic cap, ankle and cuff, maximizes comfort and protection.
- EN14126 biological hazard and infectious agent test was conducted.
- EN 10732, EN-1149-5 passed. **Type 5/Type 6**

VERSION

Three-piece cap, butterfly sleeves, elastic waist, crotch triangle, four-thread sewing.

APPLICATIONS

Biopharmaceutical, agriculture spraying, automotive industry, chemical treatment, Dust-free room, electronic processing, hazardous substances, painting, printing.



FABRIC

The outer layer is a high-quality multi-pore membrane, and the inner layer is anti-adhesive polypropylene non-woven cloth, which can provide excellent penetration protection of dust, liquid, blood-borne pathogens.

SIZE

SIZE	CHEST (CM)	HEIGHT (CM)
S	61±2	163±3
M	62±2	169±3
L	64.5±2	175±3
XL	67±2	182±3
XXL	70±2	190±3
XXXL	73±2	190±3

TECHNICAL DATA SHEET



SPECIFICATIONS OF PROTECTIVE COVERALLS					
S/N	Description				
1	Supply Requirements				
	i. Protective coveralls to have a minimum shelf life of at least 36 months from the date of delivery.				
	ii. Protective coveralls to be supplied with accompanying safety data sheets (or equivalent) for the items offered upon Authority's request.				
2	Design Requirements (refer to example in Annex C)				
	i. Approximate size range (in cm):				
	Size	Body Length	Chest (Circumference)	Sleeve Length	Width
	S	155-165	85-95	82-88	24-26
	M	160-170	95-105	86-90	25-27
	L	165-175	105-115	90-94	26-28
	XL	170-180	115-125	94-98	27-29
	2XL	175-185	125-135	98-102	28-30
	3XL	180-190	135-145	102-106	29-31
	ii. To be full-bodied with hood, long sleeves, and long pants.				
	iii. To have elastic garter (or equivalent) at hood, cuffs, and leg openings.				
	iv. Body front zipper.				
	v. Colour: White or equivalent shade.				
	vi. Weight: Approximately 50 grams to 65 grams.				
	vii. Bounded seams or equivalent.				

● Physical Performance (EN 14325)		
● Test	● Test method	● Result
● Abrasion resistance	● EN ISO 12947-2:2016	● Class 1
● Puncture resistance	● EN 863:1995	● Class 1
● Flex cracking resistance	● EN ISO7854:1997, Method B	● Class 6
● Flex cracking resistance at -30°C	● EN ISO7854:1997, Method B	● Class 6
● Tensile strength	● EN ISO 13934-1:2013	● Class 1
● Tear resistance (trapezoidal)	● EN ISO 9073-4:1997	● Class 2
● Seam strength	● EN ISO 13935-2:2014	● Class 3
<ul style="list-style-type: none"> ● Classification of abrasion resistance: Class 1 >10rubs; Class 2 >40rubs; Class 3 >100rubs; Class 4 >400rubs; Class 5 >1000rubs; Class 6 >2000rubs. Hydrostatic head method is used for leak tightness assessment after abrasion. ● Classification of puncture resistance: Class 1 >5N; Class 2 >10N; Class 3 >50N; Class 4 >100N; Class 5 >150N; Class 6 >250N. ● Classification of leak tightness after compression-folding (Schildknecht) flex cracking resistance: Class 1 >500cycles; Class 2 >1250cycles; Class 3 >3000cycles; Class 4 >8000cycles; Class 5 >20000cycles; Class 6 >50000cycles. Hydrostatic head method is used for leak tightness assessment after compression-folding (Schildknecht) flex cracking. ● Classification of leak tightness after compression-folding(Schildknecht) flex cracking resistance at -30°C: Class 1 >100cycles; Class 2 >200cycles; Class 3 >500cycles; Class 4 >1000cycles; Class 5 >2000cycles; Class 6 >4000cycles. Hydrostatic head method is used for leak tightness assessment after compression-folding(Schildknecht) flex cracking resistance at -30°C. ● Classification of tensile strength: Class 1 >30N; Class 2 >60N; Class 3 >100N; Class 4 >250N; Class 5 >500N; Class 6 >1000N. ● Classification of trapezoidal tear resistance: Class 1 >10N; Class 2 >20N; Class 3 >40N; Class 4 >60N; Class 5 >100N; Class 6 >150N. ● Classification of seam strength: Class 1 >30N; Class 2 >50N; Class 3 >75N; Class 4 >125N; Class 5 >300N; Class 6 >500N. 		
● Physical Performance (EN 1073-2)		
● Test	● Test method	● Result
● 1. Abrasion resistance	● EN 530, Method 2	● Class 1
● 2. Puncture resistance	● EN 863:1995	● No classification
● 3. Resistance to blocking	● EN 25978	● Class 2
● 4. Tear resistance	● EN ISO 9073-4:1997	● Class 3
● 5. Seam strength	● EN ISO 13935-2:2014	● Class 3
<ul style="list-style-type: none"> ● 1. Classification of abrasion resistance: Class 1 >10rubs; Class 2 >100rubs; Class 3 >500rubs; Class 4 >1000rubs; Class 5 >1500rubs; Class 6 >2000rubs. Visual inspection method is used for leak tightness assessment after abrasion ● 2. Classification of puncture resistance: Class 2 >10N; Class 3 >50N; Class 4 >100N. ● Remark: puncture force is 9N. ● 3. Classification of blocking resistance: Class 1 blocking; Class 2 no blocking. ● 4. Classification of tear resistance: Class 1 >2N; Class 2 >10N; Class 3 >20N; Class 4 >40N; Class 5 >80N; Class 6 >150N. ● 5. Classification of seam strength: Class 1 >30N; Class 2 >50N; Class 3 >75N; Class 4 >125N; Class 5 >300N. 		
● Repellency By Chemical Results (Type 6)		
● Chemical	● Test method	● Result
● 30%Sulphuric Acid	● EN ISO 6530:2005	● Class 3
● 10%Sodium Hydroxide	● EN ISO 6530:2005	● Class 3
● o-Xylene	● EN ISO 6530:2005	● Class 3
● Butan-1-ol	● EN ISO 6530:2005	● Class 3
● Classification of repellency to liquids: Class 1 >70%; Class 2 >80%; Class 3 >90%.		

● Classification is according to EN 14325:2018			
● Resistance To Penetration Of Chemical Results (Type 6)			
● Chemical	● Test method	● Result	
● 30%Sulphuric Acid	● EN ISO 6530:2005	● Class 3	
● 10%Sodium Hydroxide	● EN ISO 6530:2005	● Class 3	
● o-Xylene	● EN ISO 6530:2005	● Class 3	
● Butan-1-ol	● EN ISO 6530:2005	● Class 3	
● Classification of resistance to penetration by liquids: Class 1 <10%; Class 2 <5%; Class 3<1%			
● Classification is according to EN 14325:2018			
● Product Whole Suit Test Performance Levels			
● Standard		● Result	
● Type 5: EN ISO 13982-1:2004/A1:2010		● Pass	
● Protective clothing against solid particulates			
Type 5 chemical protective clothing shall meet at least the following requirements: - $L_{jmn,82/90} \leq 30\%$; - $L_{S,8/10} \leq 15\%$			
● Whole suit test methods for type 5			
● Particle inward leakage EN ISO 13982-2:2004			
● Type 6: EN 13034:2005+A1:2009		● Pass	
● Protective clothing against light spray/splash proof			
"All suits shall pass the test, i.e. the total stain area on any one undergarment of each suit shall be less than or equal to three times the total calibrated stain area."			
● For this suit type, no leakage staining was observed on the dosimeter suit for any of the three suits tested.			
● Whole suit test methods for type 6			
● Low level spray test ISO 17491-4:2008 method A			
● EN 1073-2:2002		● Class 1	
Requirement: Total Inward Leakage			
Class	Mean value of inward leakage at the three sampling positions inside the suit during exercise of		Nominal protection factor
	one activity (TIL _E) %	all activity (TIL _A) %	
3	0.3	0.2	500
2	3	2	50
1	30	20	5
● Whole suit test methods for EN 1073-2:2002			
● Particle inward leakage EN ISO 13982-2:2004			
● Resistance To Penetration Of Infective Agents			
● Test	● Test method	● Result	
● Resistance to Penetration by Blood-Borne Pathogens- Test method using Phi-X174 Bacteriophage	● EN 14126:2003/AC:2004 ● ISO 16604(2004) procedure D	● Class 6	
● Resistance to Wet Microbial Penetration	● EN 14126:2003/AC:2004 ● ISO 22610(2006)	● Class 6	
● Resistance to Liquid Aerosol Penetration	● EN 14126:2003/AC:2004 ● ISO/DIS 22611(2003)	● Class 3	
● Resistance to Dry Microbial Penetration	● EN 14126:2003/AC:2004 ● ISO 22612(2005)	● Class 3	
● Classification of Resistance to Penetration by Blood-Borne Pathogens (Hydrostatic pressure at which the material passes the test): Class 1 --- 0kPa; Class 2 --- 1.75kPa; Class 3 --- 3.5kPa; Class 4 --- 7kPa; Class 5 --- 14kPa; Class 6 --- 20kPa.			
● Classification of Resistance to Wet Microbial Penetration(Breakthrough time, t): Class 1---t≤ 15min; Class 2--- 15min<t≤			

30min; Class 3---30min<t≤45min; Class 4--- 45min<t≤60min; Class 5--- 60min <t≤75min; Class 6--- t>75min. ● Classification of Resistance to Liquid Aerosol Penetration(Penetration ratio (log)): Class 1--- 1<log≤3; Class 2--- 3<log≤5; Class 3--- log>5. ● Classification of Resistance to Dry Microbial Penetration (Penetration (log cfu)): Class 1--- 2<log cfu≤3; Class 2--- 1<log cfu≤2; Class 3---log cfu≤1. ● Testing & Classification is based on EN 14126: 2003/AC:2004. ● The testing has been performed on the garment material. Seams have not been tested.		
● Electrostatic properties (EN 1149-5: 2018)		
● Test	● Test method	● Result
● Surface resistance	● EN 1149-1: 2006	● Pass
● EN 1149-5: 2018: Max.2.5×10 ⁹ Ω on at least one surface		

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Supply Requirements

- i. Protective coveralls to have a minimum shelf life of at least 36 months from the date of delivery..
- ii. Protective coveralls to be supplied with **accompanying safety data sheets** (or equivalent) for the items offered upon Authority's request.

To be full-bodied with hood, long sleeves, and long pants.

To have elastic garter (or equivalent) at hood, cuffs, and leg openings.

Body front zipper.

Colour: White or equivalent shade.

Weight: Approximately 50 grams to 65 grams.

Bounded seams or equivalent.

Material Requirements

- i. To be made from **microporous non-woven fabric of polypropylene and polyethylene mix** or equivalent which are **suitable for more than one hour wear**
- ii. To be compliant with all the following protection standards or equivalent:

Packaging Requirements

Each protective coverall shall be adequately protected and individually packed

Designated size of protective coverall to be indicated on individual packaging