MicroMax® NS Nuclear

Download Certificate | Download Declaration of Conformity

Serged (stitched) overlocked seams

TYPE 5 | TYPE 6 | EN 1073-2 | EN 1149-5 | EN 14126

MicroMax® NS version with a sealed window in the left breast to allow viewing of dosimeter or other monitoring device worn inside the coverall.

- High quality microporous film laminate fabric provides superior liquid resistance against liquids, light oils and light sprays of liquid chemicals.
- Chest window is fully sealed using a heat sealed tape - no stitch holes where penetration could occur.
- Developed especially for the nuclear power industry for wearing of radiation dosimeters. - Fully certified and meets EN 1073-2 for non-ventilated protection against radiation-contaminated dusts.
- Soft and flexible high quality microporous film laminate offers excellent combination of protection and comfort.
- Double-sided tape to zipper cover to allow safe and secure seal over the zip.
- Fabric passes all tests in EN 14126 infectious agent standard in the highest class *(However, we recommend only garments featuring sealed seams such as MicroMax® TS should be used for biological hazards).*
- Lakeland "Super-B" ergonomic styling – unique combination of three design elements to optimise fit, durability and freedom of movement:-
  - Three piece hood for rounder head shape and greater comfort.
  - Inset sleeves – torso shaped to body to maximise freedom of movement and negate the need for thumb loops.
  - Two piece crotch gusset – enhances freedom of movement and reduced crotch splitting.

Physical Properties

		MicroMax® NS /TS	MicroMax®	SafeGard® GP	SafeGard® 76	Flashspun PE
Property	**EN Std**	**CE Class**	**CE Class**	**CE Class**	**CE Class**	**CE Class**
Abrasion Resistance	EN 530	2	1	2	2	2
Flex Cracking	ISO 7854	4	5	5	5	6
Trapezoidal Tear	ISO 9073	2	3	3	3	1
Tensile Strength	EN 13934	1	1	1	1	1
Puncture Resistance	EN 863	1	2	1	1	2
Anti-static (Surface Resistance)	EN 1149-1	Pass* (<2.5 x $10^9\Omega$)	Pass* (<2.5 x $10^9\Omega$)	Pass* (<2.5 x $10^9\Omega$)	Pass* (<2.5 x $10^9\Omega$)	Pass* (<2.5 x $10^9\Omega$)
Seam Strength	EN 13935-2	3	3	3	3	3

* According to EN 1149-5

Chemical Repellency and Penetration EN 6530

	MicroMax® NS/TS		MicroMax®		SafeGard® GP		SafeGard® 76		Flashspun PE	
Chemical	**R**	**P**	**R**	**P**	**R**	**P**	**R**	**P**	**R**	**P**
Sulphuric Acid 30% CAS No. 67-64-1	3	3	3	3	3	3	3	3	3	3
Sodium Hydroxide CAS No. 1310-73-2	3	3	3	3	3	3	3	3	3	3
O-Xylene CAS No. 75-15-0	3	2	3	3	NT	NT	NT	NT	1	1
Butanol CAS No. 75-09-2	3	2	3	3	NT	NT	NT	NT	2	1

Breathability - measured by air permeability and moisture vapour transmission rate (MVTR)

	MicroMax® NS/TS	MicroMax®	SafeGard® GP	SafeGard® 76	Flashspun PE	Cotton T-shirt
Air permeability cubic feet/minute (cfm)	<0.5	<0.5	40	40	~3.3	180
MVTR	119.3	NT	NT	NT	111.2	NT

Infectious Agent / Biological Hazard Protection

Tested according to EN 14126. This consists of four different tests to assess protection against different forms of classification. Note these tests are on fabric only. We would always recommend a garment with sealed seams such as MicroMax® TS for protection against infectious agent hazards.

Test Description	Test No.	MicroMax® NS/TS	SafeGard® GP/76	Flashspun PE
Protection against blood and body fluids	ISO 16604:2004	6 (max is 6)	Not recommended	<1
Protection against biologically contaminated aerosols	ISO 22611:2003	3 (max is 3)	Not recommended	1
Protection against dry microbial contact	ISO 22612:2005	3 (max is 3)	Not recommended	1
Protection against mechanical contact with substances containing contaminated liquids	EN 14126:2003 Annex A	6 (max is 6)	Not recommended	1

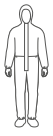
MicroMax® NS Styles

SUPER B-STYLE by Lakeland

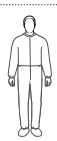
Style code 428
Coverall with elasticated hood, cuffs, waist & ankles.
Sizes: SM - 3X

Style code L428
Coverall with elasticated hood, cuffs with thumb loops, waist & ankles.
Sizes: SM - 3X

Style code 414
Coverall with elasticated hood, cuffs, waist and attached socks.
Sizes: SM - 3X

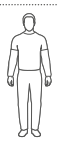


Style code L414
Coverall with elasticated hood, cuffs with thumb loops, waist, ankles and attached socks.
SSizes: SM - 3X

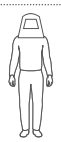


Style code 412
Coverall with collar, elasticated cuffs, thumb loops, waist & ankles.
Size: MD - XL

Style code 101
Lab coat with two hip pockets. 4 stud fastening.
Size: MD - XL



Style code 024
50cm sleeves with elasticated ends.
Size: One size



Style code 020
Cape hood with elasticated face opening.
Size: One size

Available in: White

Not all styles are available from European stock in this fabric. Please contact our sales office for information on stock items.

017-UK-1121

Clothing For Protection against Type 5 and 6 Hazards

Essential Guide to Garment Selection

There are many different brands of Type 5 & 6 coveralls in the market - yet there are only three essential types of fabrics used to make them. So which fabric is the best choice? That depends on the application and the balance to be achieved between protection, comfort and durability.

Type 5
EN 13982
protection against hazardous dry particles

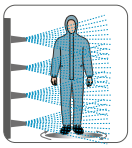
EN 1073-2
protection against dust contaminated with radiation

Type 6
EN 13034
protection against reduced/light liquid sprays and splashes

Type 5- Hazardous Dry Particles
- Spray cabin filled with dust
- Subject performs exercise on treadmill
- 3 particle counters ***inside*** the suit
- Particle "Inward leakage" calculated
- Recorded as % of inward leakage (TIL)

EN 1073-2
testing is a variation of the standard Type 5 test.

Type 6 - Reduced Liquid (aerosol) Spray
- Four nozzles - aerosol spray of liquid
- Subject rotates on turntable
- Inside absorbent suit checked for penetration
- Pass or Fail according to test criteria



Three types of fabric are used to make all Type 5 & 6 garments on the market.

Flashspun Polyethylene (FSPE)

SMS/SMMS - Spunbond-Meltblown-Spunbond **Lakeland SafeGard™**

Microporous Film Laminate (MPFL) **Lakeland MicroMax®**

All Type 5 & 6 garments on the market are one of these or variations of these.

How do these fabrics compare? Three important factors can be considered:

1. Liquid Protection

Type 6 CE testing includes liquid repellency and penetration tests against four chemicals.

In two of the four chemicals, Lakeland MicroMax® options achieve superior results than the closest alternative.

CE testing for Infectious Agents to EN 14126 includes tests against four types of contamination. In all four tests MicroMax® options achieve superior results and the highest class compared to the FSPE alternative, which is unclassified in the critical ISO 16604 test.

2. Physical Properties

Testing as part of CE certification allows comparison of strength properties: abrasion - tensile strength - trapezoidal tear etc.

In comparisons of the three fabric types Lakeland SafeGard™ or MicroMax® options offer a superior choice compared to the alternative FSPE option in most cases.

3. Comfort and Breathability

Comfort is primarily a result of air permeability.

Independent testing indicates the difference between MicroMax® and FSPE is minimal and close to zero. Both have very low air permeability. The Lakeland SafeGard™ option has an air permeability over 10 times that of the alternatives and is the superior choice for a comfortable garment.

A common sense approach and simple 'home' tests clearly confirm both the low air-permeability of MicroMax® and FSPE and the superior air-permeability of SafeGard™.

Where protection *and* comfort are required, Lakeland Cool Suit® options provide the best of both MicroMax® and SafeGard™ fabrics and may be the best choice available.

Type 5 and 6 garments can be selected on the basis of a combination of three factors:
1. Protection
2. Physical Properties
3. Comfort and Breathability

For all three factors, Lakeland garments provide the best choice ....

Use the QR Code or visit:
https://promo.lakeland.com/europe/guide-to-type-5-and-6-protective-coveralls
to download our complete **Guide to Type 5 & 6 Coverall selection**

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** Competitor brand results are from competitors' own websites and were correct at the time of publication. Users are recommended to check up to date information with competitors before making any assessment based on specific chemicals. Other chemical test results may be available from competitors.*

W: www.lakeland.com/europe
E: sales-europe@lakeland.com

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