Lakeland Asia Pacific
LAKELAND INDUSTRIES ASIA PACIFIC

Technical Data Sheet

Summary	
Product	**Micromax NS Coolsuit**
Description	Lakeland's breathable back garment combining the protection of MicroMAX® NS with the comfort of SafeGard®. A white coverall with blue breathable back panel and tough bound seams in blue. The best combination of protection and comfort
Fabric & weight	55 gsm Microporous film laminate with a 55 gsm SMMS polypropylene back panel
Style *(see overleaf)	AMNC428E
Seam Type	Stitched and bound with blue CPE fabric
Colour	White with blue breathable panel at the rear and blue seams

CE Certification		
EN Standard*	**Description**	**Result**
EN 340: 2002	Protective Clothing : general Requirements	Pass
EN 13034: 2005	Type 6: Protection against light spray of liquids	Pass
EN 13982: 2004	Type 5: protection against hazardous dry particles	Pass
EN 14605: 2004	Type 3 & 4: Protection against splashes and sprays of liquid chemicals	NT
EN 1073: 2002	Protection against dust particles that may be contaminated with radiation	Pass
EN 14126: 2003	Protection against infectious agents	Pass (NS ONLY)
EN 1149-5: 2003	Anti-static garment requirements: (ATEX regulations exclude certification for PPE: However, both ATEX and BGR 132 / TBRS2153 reference certification to EN 1149 as a suitable measure for protective clothing for explosive atmospheres.)	1.3 x 10^9
Back Panel	See Safegard SMS Technical Data Sheet	

* All Lakeland garments are certified to the latest versions of standards where possible

Mechanical Properties			
EN Standard	**Description**	**Result**	**EN Class**
EN 13934	Tensile Strength	79.87/34 N	Class 2/1
EN 530	Abrasion Resistance	<100 Cycles	Class 1
EN 863	Puncture Resistance	6.2 N	Class 1
ISO 2960	Burst Strength	50.9 kPa	Class 1
ISO 7854	Flex Cracking	<40000 Cycles	Class 4
ISO 9073	Trapezoidal tear md/cd	28.1/19.4 N	Class 2/1
ISO 9073	Trapezoidal tear-mean	23.75 N	Class 2
ISO 5082	Seam Strength	88.8 N	Class 3

Chemical Repellency – EN 368 (for Type 6)		
Chemical	**EN Class**	
	Repellency	**Penetration**
Sulphuric Acid 30%	Class 3	Class 3
Sodium Hydroxide 10%	Class 3	Class 3
O-Xylene	-	-
Butan-1-ol	-	-

Chemical Permeation – EN 6529 – For Types 1 to 4		
The chemical list below is from EN 6529 Annex A2 and is intended to provide a broad spectrum of chemical types if general chemical suit assessment		
Chemical	**CAS No**	**Result / EN Class**
Acetone	67-64-1	-
Acetonitrile	75-05-8	-
Carbon Disulphide	75-15-8	-
Dichloromethane	75-09-2	-
Diethylamine	109-89-7	-
Ethyl Acetate	141-78-6	-
n-Hexane	110-54-3	-
Methanol	67-56-01	-
Sodium Hydroxide	1310-73-2	-
Sulphuric Acid (96%)	7664-93-9	-
Tetrahydrafuran	109-99-9	-
Toluene	108-88-3	-

Breakthrough times are a reflection controlled lab tests measuring "Normalised Breakthrough" as the time to reach a permeation rate of 1.0µg/min/cm^2.
This does not imply "no breakthrough" and is not intended to indicate any duration of "safe-use" in any specific application. It is always the users' final responsibility to ensure a garment is suitable for the application.

Key Features

- Optimum combination of superior Micromax NS fabric for protection and Safegard for high comfort
- Protection and comfort the best of both worlds
- Coverall with 3 piece hood, inset sleeves, 2 piece diamond crotch gusset, elasticated hood, waist, cuffs and ankles
- NB: The breathable panel has a lower protection factor than the rest of the garment, so Cool Suit may not be suitable in all applications

Suggested Applications

- Warm environments where Type 5 & 6 protection is required
- Paint spray applications
- Low level insecticide spraying
- Wet applications in GRP manufacturing
- Boat Building
- Wind-blade manufacture
- Pharmaceutical manufacture
- General maintenance and cleaning applications
- Scene of the crime operations
- Low hazard emergency response applications

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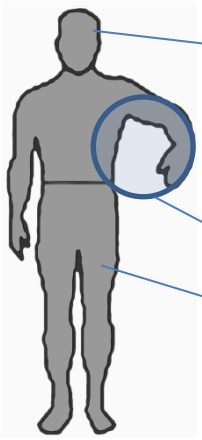
Other Information

Lakeland Super-B Style Pattern – ergonomic design for freedom of movement, comfort and durability

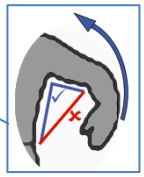
All Lakeland coveralls are constructed using Lakeland's "Super-B" style pattern. Using the company's global knowledge and experience of protective clothing this takes European CE and North American ANSI styles to produce a garment design which combines the best elements of both to produce a garment which is generous in size yet better fitting and allows greater freedom of movement.



The Super-B style consists of 3 key elements:-

Three Piece Hood

Many cheaper garments feature a 2 piece hood. Lakeland's 3-piece hood creates a 3D profile which fits the head better and allows greater freedom of movement. It also fits better with face masks when worn.



Inset Sleeves

Most European styles use a "bat-wing" style (red line) in which the under-arm reaches down to the waist. The argument is that it creates more room in the chest. However, THIS CLEARLY RESTRICTS MOVEMENT WHEN THE USERS REACHES ABOVE HIS HEAD, PLACING STRESS ON THE CROTCH AREA.

However, Lakeland use an inset sleeve (blue line) which follows the contours of the body and allows much greater freedom of movement

Two-piece diamond crotch gusset

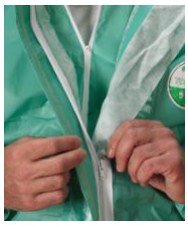
Commonly garments have four seams – two body and two leg – that meet at one point in the crotch. This is a key weak point and often results in tearing and rip-outs. Lakeland inserts a two-piece diamond shaped crotch that spreads the stress and creates a more 3D fitting shape, improving wearer movement, comfort and enhancing coverall durability

The unique combination of three key elements of the Super-B style coverall makes Lakeland garments the best designed available

Other Design Features

All Lakeland chemical suits (TomteX & ChemMAX) feature a front fastening consisting of a double zip with storm flaps. This ensures both full protection against sprays to the front of the garment and easy donning and doffing.

In addition ChemMAX garments (Except ChemMAX 4) feature wide double layer knee-pads to enhance comfort, durability and safety.

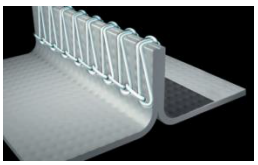


Sizing

Size	Body Height	Chest
S	164-170cm	84-92cm
M	170-176cm	92-100cm
L	176-182cm	100-108cm
XL	182-188cm	108-116cm
XXL	189-194cm	116-124cm
XXXL	194-200cm	124-132cm

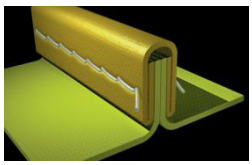
Seams

Lakeland garments use 3 types of seams:-



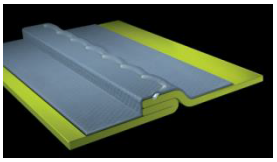
Serged or Stitched

Safegard GP
MicroMAX NS



Bound

Safegard EP
Safegard 76 / Diamant
MicroMAX
Cool Suit



Stitched & Taped

MicroMAX TS
Tomtex
ChemMAX

Storage, Shelf-life and Disposal

Storage

Lakeland garments can be stored in normal storage areas and require no special condition. Keep in cool, dry areas where possible and away from direct heat and sunlight

Shelf-Life

Lakeland coveralls are primarily manufactured from inert polymers (usually polypropylene and/ or polypropylene which should normally degrade over longer periods in excess of 10 years. Garments are supplied in sealed bags and so a shelf life of ten years or more should be reasonable under normal conditions. However, we recommend that after 5 years Type 3 and 4 chemical suits should be disposed of and replaced or used for training only. Some discoloration of especially white fabrics may occur over time though this will not affect performance. In any circumstances it is the users' responsibility to check garments for damage tears or wear before use

Disposal

Polymers used in Lakeland garments are generally inert, non-harmful and non-toxic and can be disposed of by incineration or to landfill according to local regulations. However, any garments contaminated with chemicals must be disposed of according to the requirements of the chemical or cleaned before disposal

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