Lakeland

Technical Data Sheet

Summary	
Product	**Lakeland ALM Series 500**
Description	Approach Suit for areas of high radiant and low ambient temperatures up to 93°c – the aluminised glass outer provides effective protection with flexibility. With nylon taffeta neoprene moisture/steam barrier
Fabric & weight	Double layer with outer aluminised fibreglass and moisture barrier–see below
Styles (see below)	See Style codes below
Seam Type	Safety Seam with FR para-aramid thread
Colour	Reflective aluminised silver

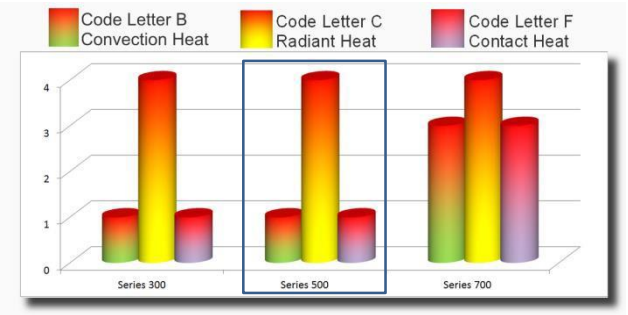
CE Certification		
EN Standard*	Description	Result
EN ISO 13688:2013	Protective Clothing: General Requirements	Pass
EN ISO 11612: 2008	Clothing to protect against heat and flame	A1/A2/B1/C4/D3/E3/F1
EN ISO 11611: 2007	Protective clothing for use in welding and allied processes	Pass A1 and A2

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

Mechanical Properties			
EN Standard	Description	Result	EN Class
EN 13934	Tensile Strength	3879/2463 N	Pass
ISO 9073	Trapezoidal tear md/cd	89.7/76.4 N	Pass
ISO 5082	Seam Strength	492 N	Pass

The Heat Performance Graph is intended to assist in garment selection. It shows results for 300, 500 and 700 for comparative purposes, based on classes according to Convective Heat (Code B), Radiant Heat (C) and Contact Heat (F). Classes relate to the time taken to raise the temperature behind the fabric sufficiently to cause a 2nd degree burn (see standards). Actual results are shown in the table below. Results are based on lab tests and are not intended to imply guarantee of "safe-use" in any particular application as conditions may vary considerably. A suitable risk assessment should always be carried out by trained personnel as part of a garment selection process

Heat Protective Performance – CE Classes



Heat and Flame Properties		
Standard	Description	Description
ISO 15025 A1	Flame Spread Face Ignition	Class 1 + 2 Pass
ISO 15025	Flame Spread Edge Ignition	Class 1 + 2 Pass
ISO 17493	Heat Resistance	Pass
ISO 9151	Convective Heat	9.9s – B1
ISO 6942	Radiant Heat	119s – C4
ISO 9185	Iron / aluminium molten	D3 (350g) / E3 (<200g)
ISO 12127	Contact Heat	7.4s – F1

Fabric Construction	
Inner Layer	None
Middle Layer	Nylon taffeta with neoprene moisture/steam barrier
Outer layer	545gsm Aluminised fibreglass – Gentex "Dual Mirror"®

Key features

- Fire "Approach" Suit - general work near high temperatures – up to 93°C ambient heat
- Aluminised fibreglass outer material for efficient heat protection with flexibility
- Neoprene moisture/steam barrier
- Hood with gold reflective face-shield
- Not to be used for fire entry

Suggested applications/industries

- Power generation
- Cement manufacture
- Foundries
- Ceramic and glass manufacture
- Chemical Processing

Note: Aluminised garments use the reflective "mirror" properties of the fabric surface to enhance heat resistance. Dirty or soiled garments may not work efficiently. Fabric can be wiped clean with a light detergent

Available Styles			
Description	Code	Description	Code
Hood Without Helmet	**510-E**	Coverall With BA Accommodation	**522BA**
Hood With BA Accommodation (Without Helmet)	**510BA-E**	Trousers With Suspenders (Braces)	**530**
Reduced Peak Safety Helmet	**407500**	Gloves	**N/A**
Jacket	**520**	Boots	**N/A**
Jacket With BA Accommodation	**520BA**	Storage Bag	**PKG13-E**
Coverall	**522**		

BSiF British Safety Industry Federation Member

For further information see www.lakeland.com/europe or contact sales-europe@lakeland.com
No Information provided is intended to guarantee product suitability for any specific application:
It is always the users' responsibility to ensure garment suitability

a member of SATRA Technology Centre

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UK Company Registration No: 4500660: For company financial information see www.lakeland.com/financial

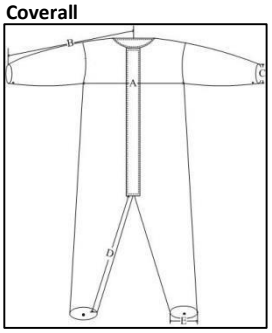
Other Information

ALM Garment Sizing

Lakeland ALM garments are designed to be over sized and should be baggy and loose to wear. They are generally worn over other clothing and effectiveness of any heat protective workwear is reduced if garments are worn tightly. Ensure undergarments are made from natural fibres and not fibre or fabric that may ignite or melt in hot environments.

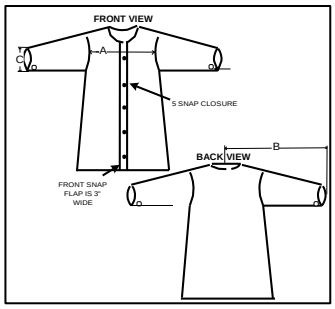
ALM coveralls, jackets and pants are supplied in standard sizes. Special sizes can be made to order. General sizing of garments and of the BA accommodation is shown below:-

Coverall



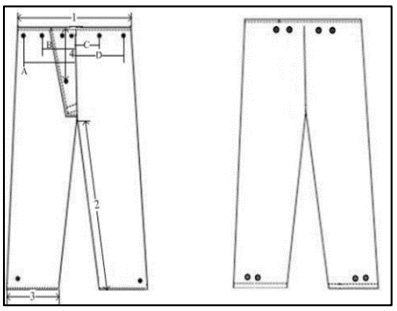
		S	M	L	XL	2XL
A	Chest	63	66	70	74	78
B	Sleeve	86	86	89	91	94
C	Cuff	16	17	17	18	18
D	Inseam	71	71	71	71	71
E	Ankle	31	31	31	32	33

Jacket



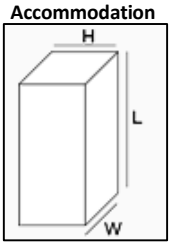
		S	M	L	XL	2XL
A	Chest	64	66	68	73	80
B	Sleeve	80	81	83	86	90
C	Cuff	17	16	16	17	18

Pants



		S	M	L	XL	2XL
1	Waist	50	51	53	58	61
2	Inseam	71	73	73	73	74
3	Ankle	28	28	29	30	30

BA Accommodation



L	57
W	22
H	18

Other Design Features

Coveralls - Circle collar / 5 x brass snaps and FR Nomex® zipper front closure / one snap cuff adjustment / two-snap ankle adjustment / safety stitch, para aramid thread seams

Jackets - Circle collar / Five brass snaps front closure / one-snap cuff adjustment / safety-stitch seams with FR para-aramid thread

Pants - FR brass snaps front fly / FR brass snaps for suspender attachment / two-snap ankle adjustment / Safety stitch seams with FR para-aramid thread

Size Selection

In general users can use the standard Lakeland CE size selection chart as below. Choose oversized garments.

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

Cleaning, storage, shelf life and disposal

Cleaning

Soiled garments will not work effectively. Dirt and soot can be wiped clean with a light detergent. Oil and grease can normally be removed with dry-cleaning solvents (not containing isopropanol or perchloroethylene which may react with the surface). Clean solvents with water. After cleaning dry with a clean, dry cloth. Do not use cleaning agents containing ammonia, chlorine or abrasive agents. Do not machine wash.

Storage

Store in cool, dry & well ventilated areas where possible. Use fans where appropriate. Keep away from direct heat and sunlight. Hang in ample space to avoid folding or creasing.

Shelf-Life

Garments should be kept clean and free from soiling. Do not use soiled or contaminated garments as this may affect performance. Garments kept clean and in good condition can be used for 5 years or more *if clean and undamaged*.

Disposal

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 decontaminated before disposal