

Summary

Product	Pyrolon CBFR
Description	High barrier Type 3 & 4 chemical suit combined with FR properties to EN 14116 – Index 3. Can be worn over Thermal Protective (EN11612) Garments without compromising thermal protection as a standard chemical suit would.
Fabric & weight	PVC film / EVOH film/ woodpulp/polyester nonwoven fabric. 232gsm.
Style *(see overleaf)	EBR228 - Coverall with hood, single zip, double velcro storm flap, elasticated cuff and ankle. EBR214 - Coverall with hood, single zip, double velcro storm flap, elasticated cuff with attached feet.
Seam Type	Stitched and taped seams
Colour	Dark Blue

CE Certification

EN Standard*	Description	Result
EN ISO 13688	Protective Clothing: General Requirements.	Pass
EN 14605	Type 3 & 4: Protection against splashes and sprays of liquid	Pass
EN 13034	Type 6: Protection against light spray of liquids	Pass
EN 14116	Clothing against Heat & Flame: Limited Flame Spread	Index 3
EN 1149-3	Electrostatic properties. Test methods for measurement of charge decay	SF=0.1/HDT =0.24s

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

Mechanical Properties

EN Standard	Description	Result	EN Class
EN 530	Abrasion Resistance	>2000 Cycles	Class 6
ISO 7854	Flex Cracking	>5,000 Cycles	Class 3
ISO 9073	Trapezoidal tear md/xd	82/55.70 N	Class 3
EN 13934	Tensile Strength	140 / 110 N	Class 3
EN 863	Puncture Resistance	10 N	Class 2
ISO 2960	Burst Strength	-	NT
ISO 13935-2	Seam Strength	190 N	Class 4

Chemical Repellency – EN 6530 (for Type 6)

Chemical	Result / EN Class	
	Repellency	Penetration
Sulphuric Acid 30%	3	3
Sodium Hydroxide 10%	3	3
O-Xylene	3	3
Butan-1-ol	3	3

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 99.5%	67-64-1	>480 / Class 6
Acetonitrile 99%	75-05-8	>480 / Class 6
Ammonia 99%	7664-41-7	>480 / Class 6
Benzene 99.8%	71-43-2	>480 / Class 6
Butadiene 99%	106-99-0	>480 / Class 6
Carbon Disulphide 99.9%	75-15-8	>480 / Class 6
Crude Oil (Mixture)	Various	>480 / Class 6
Chlorine 99.5%	7782-50-5	>480 / Class 6
Dichloromethane 99.8%	75-09-2	>480 / Class 6
Dimethylformamide 99.9%	68-12-2	>480 / Class 6
Diesel Fuel	Mixture	>480 / Class 6
Ethyl Acetate 99.8%	141-78-6	>480 / Class 6
Ethylene Oxide 98%	6552-57-4	>480 / Class 6
Gasoline (Mixture)	Various	>480 / Class 6
Hydrofluoric Acid 48%	7664-39-3	>480 / Class 6
Hydrogen Chloride 99%	7647-01-0	>480 / Class 6
Nitrobenzene 99%	98-95-3	>480 / Class 6
Sodium Hydroxide 50%	1310-73-2	>480 / Class 6
Sulphuric Acid 96%	7664-93-9	>480 / Class 6
Methyl Chloride 99.5%	74-87-3	>480 / Class 6
Hexane 95%	110-54-3	>480 / Class 6

Key Features

- Pyrolon base fabric with PVC chemical barrier film laminate for combined FR and chemical protection properties
- Stitched / taped seams for full seal
- Single zip and double storm flap front fastening with hook and loop seals enabling re-use where appropriate (chemical suits should ONLY be re-used if uncontaminated and undamaged. Decision on re-use is the users' responsibility.
- Coverall with hood, elasticated cuffs, waist and ankles. Double layer, cushioned kneepads for comfort and durability. Version with attached feet available.

Suggested applications

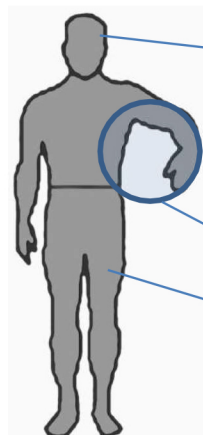
- Petrochemical & Refining applications
- Fabric will not ignite and burn... wear over TPG's without compromising thermal protection
- Maintenance applications during petrochemical clean-downs
- Fuel handling and distribution



Other Information

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

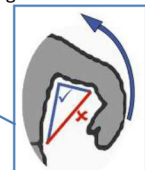
All Lakeland coveralls are constructed using Lakeland's "Super-B" style pattern. Using the company's global knowledge and experience of protective clothing this takes European CE and North American ANSI styles to produce a garment design which combines the best elements of both to produce a garment which 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.



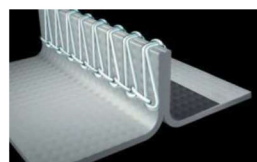
Sizing



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

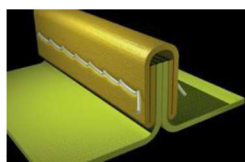
Seams

Lakeland garments use 3 types of seams:-



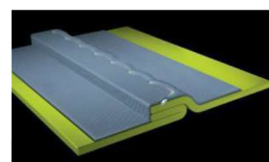
Serged or Stitched

Safeguard GP
MicroMAX NS



Bound

Safeguard 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 polyethylene 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