

## Summary

|                       |                                                                                                                                                                                                                               |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product               | <b>Pyrolon CRFR</b>                                                                                                                                                                                                           |
| Description           | A Type 3 & 4 chemical protective suit meeting EN14116 (Limited Flame Spread – Index 1) that can be worn over Thermal Protective (EN11612) Garments without compromising thermal protection as a standard chemical suit would. |
| Fabric & weight       | Proprietary mix of viscose rayon and FR treated PVC barrier film. 144 gsm                                                                                                                                                     |
| Style *(see overleaf) | ECR428                                                                                                                                                                                                                        |
| Seam Type             | Stitched and taped                                                                                                                                                                                                            |
| Colour                | Grey, also available in Orange                                                                                                                                                                                                |



## CE Certification

| EN Standard*      | Description                                                                 | Result                |
|-------------------|-----------------------------------------------------------------------------|-----------------------|
| EN ISO 13688:2013 | Protective Clothing: General Requirements                                   | Pass                  |
| EN 13034: 2005    | Type 6: Protection against light spray of liquids                           | Class 3               |
| EN 13982: 2004    | Type 5: Protection against hazardous dry particles                          | NT                    |
| EN 14116:2015     | Clothing against Heat & Flame: Limited Flame Spread                         | Index 1               |
| EN 14605: 2004    | Type 3 & 4: Protection against splashes and sprays of liquid chemicals      | Pass                  |
| EN 1073: 2002     | Protection against dust particles that may be contaminated with radiations  | NT                    |
| EN 14126: 2003    | Protection against infectious agents                                        | NT                    |
| EN 1149-5: 2008   | Anti-static garment requirements: (Includes approval for ATEX requirements) | 1.7 x 10 <sup>9</sup> |

\* 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       | 168 / 110 N    | Class 3  |
| EN 530      | Abrasion Resistance    | >2000 Cycles   | Class 6  |
| EN 863      | Puncture Resistance    | 19.2 N         | Class 2  |
| ISO 2960    | Burst Strength         | 111.8 kPa      | Class 2  |
| ISO 7854    | Flex Cracking          | >40,000 Cycles | Class 5  |
| ISO 9073    | Trapezoidal tear md/cd | 48/34.3 N      | Class 2  |
| ISO 9073    | Trapezoidal tear-mean  | 41.15 N        | Class 2  |
| ISO 5082    | Seam Strength          | 186.80 N       | Class 4  |

## Chemical Repellency – EN 368 (for Type 6)

| Chemical             | EN Class   |             |
|----------------------|------------|-------------|
|                      | Repellency | Penetration |
| Sulphuric Acid 30%   | -          | -           |
| Sodium Hydroxide 10% | -          | -           |
| 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  | -                 |
| Hydrofluoric Acid    | 7664-39-3 | Class 1           |
| Methanol             | 67-56-01  | >480 / Class 6    |
| Sodium Hydroxide     | 1310-73-2 | >480 / Class 6    |
| Sulphuric Acid (96%) | 7664-93-9 | Class 1           |

## Key features

- Pyrolon base fabric with PVC chemical barrier film laminate for combined FR and chemical protection properties
- Stitched / taped seams for full seal
- Coverall with 3 piece hood, inset sleeves, 2 piece diamond crotch gusset, elasticated hood, waist, cuffs and ankles.
- Double zip / storm flap front fastening

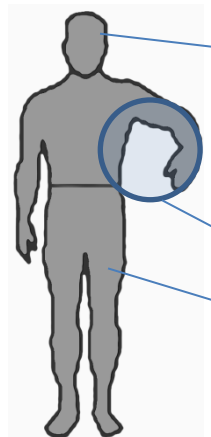
## Suggested applications

- 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

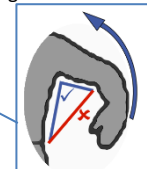
All Lakeland coveralls are constructed using Lakeland's "Super-B" style pattern. Using the company's global knowledge and experience of protective clothing this takes European CE and North American ANSI styles to produce a garment design which combines the best elements of both to produce a garment which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



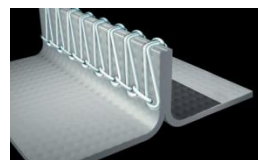
### Sizing



| 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 |

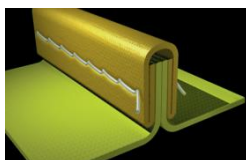
### Seams

Lakeland garments use 3 types of seams:-



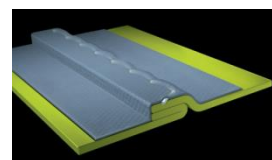
#### Serged or Stitched

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