

# ChemMax® 1 Cool Suit



The ChemMax® 1 Cool Suit uses the unique Type 4 Cool Suit® design with Lakeland's lightweight and flexible ChemMax® 1 chemical suit fabric to produce a chemical splash suit that features improved comfort over standards chemical suits.



- ChemMax® 1 coverall with a breathable rear panel covered by a ChemMax® 1 flap sealed at top and sides and with an open overlapped flap at the bottom to allow free circulation of air inside and outside the suit.
- Yellow fabric with green seams and rear panel for easy identification.
- The 'bellows effect' assists in ensuring effective circulation of air.
- Stitched and taped seams for effective protection.
- Fabric is light and flexible to improve comfort further.
- Suitable for protection against a broad range of hazardous chemicals in applications with Type 4 splashes and sprays\*
- Super-B style pattern featuring three piece hood with tapered centre section, two-piece crotch gusset and inset sleeves.

\* Note: ChemMax® Cool Suits are for Type 4 applications only. The covered breathable rear panel has a much lower chemical barrier than the main body fabric and so the garment should not be used in any application where there is a possibility of a chemical being sprayed or splashed under the rear flap.

## Physical Properties

Property	EN Standard	ChemMax® 1	Brand A	Brand B
		CE Class	CE Class	CE Class
Abrasion Resistance	EN 530	2	5	3
Flex Cracking	ISO 7854	1	3	6
Trapezoidal Tear	ISO 9073	3	1	2
Tensile Strength	EN 13934	3	3	2
Puncture Resistance	EN 863	2	2	2
Anti-Static (Surface Resistance)	EN 1149-1	<2.5 x 10 <sup>9</sup> ohms	Pass	Pass
Seam Strength	EN 13935	170N	>125N	>125N

## Permeation Test Data \*

Liquid chemicals from EN 6529 Annex A. For a full list of chemicals tested see Permeation Data Tables or Chemical Search at [www.lakeland.com/europe](http://www.lakeland.com/europe). Tested at saturation unless stated.

Chemical	CAS No.	ChemMax® 1	Brand A	Brand B
		CE Class	CE Class	CE Class
Acetone	67-64-1	NT	NT	1
Acetonitrile	70-05-8	NT	NT	Imm
Carbon Disulphide	75-15-0	NT	NT	Imm
Dichloromethane	75-09-2	NT	NT	Imm
Diethylamine	209-89-7	3	NT	Imm
Ethyl Acetate	141-78-6	NT	NT	Imm
n-Hexane	110-54-3	Imm	NT	Imm
Methanol	67-56-1	Imm	NT	6
Sodium Hydroxide (30%)	1310-73-2	6	6	6
Sulphuric Acid (96%)	7664-93-9	6	6	6
Tetrahydrofuran	109-99-9	NT	NT	Imm
Toluene	95-47-6	NT	NT	Imm

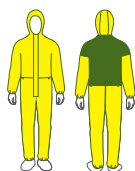
\* NB = normalised breakthrough. This is the time taken for the PERMEATION RATE to reach 1.0µg/minute/cm<sup>2</sup> in controlled laboratory conditions at 23°C. It is NOT the point at which breakthrough first occurs. For safe use times see Selection Guide and PermaSURE®.

Areas shaded green indicate where ChemMax® 1 is either equal to or better than the equivalent brand C and D products.

The physical and permeation data relates to the ChemMax® 1 main body fabric only and not to the concealed rear breathable panel which has different properties and much lower resistance to penetration or permeation of chemicals. For properties of the breathable panel see SafeGard™ GP information.

\* 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.

## ChemMax® 1 Cool Suit Styles



Styles Code: CT1SCF428  
Coverall with elasticated hood, cuffs, waist and ankles.  
Sizes: S - XXXL



Available in: Yellow (with green seams and rear panel)

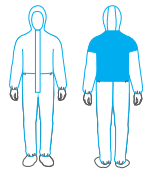
# Introduction: The Cool Suit® Principle - Breathable Protection

## What is a Cool Suit®?

What makes a protective coverall comfortable?

How do Cool Suits® work?

What Cool Suit® variations are available?



## What makes a protective coverall comfortable?

The primary influence on comfort is air-permeability - *the tendency to allow air to circulate in and out of the suit*

The only truly breathable fabric for Type 3, 4, 5 and 6 coveralls is SMS - *primarily suitable for dust and light or low level liquid splash protection.*

Claimed Moisture Vapour Transmission Rate(MVTR) is not air-permeability or true breathability and has only a very limited effect on comfort.  
*Comfort needs air-permeability*

Fabrics with an effective barrier cannot also feature high air permeability.  
*You can have an effective barrier or high air permeability... but not both*

Lakeland Cool Suits are a coverall design which combines high breathability fabrics with high-protection fabrics for Type 4, 5 and 6 protection.

## How do Cool Suits® work?



All Cool Suits® feature a rear panel of highly air-permeable fabric.

Air can circulate in and out of the coverall through the breathable panel, keeping the wearer more cool and comfortable.

In the case of Type 4 Chemical Protective Cool Suits®, the breathable panel is protected by a cover sealed at top and the sides and left open at the bottom.



The critical protection areas - the **torso** front, the **legs**, the **arms** and **hood** use Lakeland's effective range of protective fabrics, depending on protection type.

The 'Bellows Effect', the movement of air inside the suit created by movement helps pump air in and out of the suit through the breathable panel.

**Type 4 Cool Suit Protection:** Most chemical protective applications are Type 4 and NOT Type 3. Distinguishing between the two can have benefits in terms of comfort and cost.  
*See Lakeland 'Guide to Chemical Suit Selection' for more info.*

## What Cool Suits® options are available?



Type 5 & 6 Protection



Type 4 Chemical Protection



Type 4 Chemical Protection with FR



MicroMax® NS Cool Suit

MicroMax® NS Cool Suit Auto

MicroMax® TS Cool Suit

ChemMax® 1 Cool Suit

ChemMax® 3 Cool Suit

Pyrolon™ CRFR Cool Suit