

Summary	
Product	ChemMAX 4 Plus
Description	Improved permeation protection. Lighter and more flexible fabric. Far more superior Super B design offering better fit 3-piece hood. Improved closure assembly.
Fabric & weight	Proprietary multi-layer composite material consisting of various Polymer films non woven 220gsm
Style *(see overleaf)	CT4SG428PS (Green), CT4SY428PS (Yellow), CT4SK428PS (Khaki) CT4SG428PSG (Green with gloves) CT4SY428PSG (Yellow with gloves) CT4SK428PSG (Khaki with gloves)
Seam Type	Stitched and taped.
Colour	Yellow / Khaki / Green

CE Certification		
EN Standard*	Description	Result
EN ISO 13688	Protective Clothing: General Requirements	Pass
EN 13034	Type 6: Protection against light spray of liquids	Pass
EN 13982	Type 5: Protection against hazardous dry particles	Pass
EN 14605	Type 3 & 4: Protection against splashes and sprays of liquid chemicals	Pass
EN 1073-2	Protection against dust particles that may be contaminated with radiations	Pass
EN 14126	Protection against infectious agents	Pass
EN 1149-5	Anti-static garment requirements: (ATEX regulations exclude certification for PPE: However, both ATEX and BGR 132 / TBR52153 reference certification to EN 1149 as a suitable measure for protective clothing for explosive atmospheres.)	Pass 1.4x10 ⁸

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



Mechanical Properties			
EN Standard	Description	Result	EN Class
EN 13934-2	Tensile Strength	218/150 N	3
EN 530	Abrasion Resistance	2000 Cycles	6
EN 863	Puncture Resistance	15.4 N	2
EN 13938	Burst Strength	-	NT
ISO 7854	Flex Cracking	1000 Cycles	1
ISO 7854	Flex Cracking -30°C	200 Cycles	2
ISO 9073	Trapezoidal tear md/cd	101/87 N	4
ISO 9073	Trapezoidal tear-mean	90 N	4
EN 13274-4	Resistance to Ignition	-	Pass
EN 13935	Seam Strength	125 N	4

Chemical Repellency – EN 6530 (for Type 6)		
	EN Class	
	Repellency	Penetration
Sulphuric Acid 30%	NT	NT
Sodium Hydroxide 10%	NT	NT
O-Xylene	NT	NT
Butan-1-ol	NT	NT

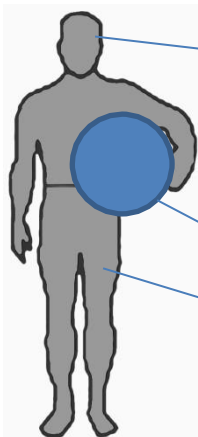
Chemical Permeation – EN 6529 – For Types 1 to 4		
The chemical list below is from EN 6529 Annex A2 and is intended to provide a broad spectrum of chemical types if general chemical suit assessment		
Chemical	CAS No	Result / EN Class
Acetone	67-64-1	480 / Class 6
Acetonitrile	70-05-8	480 / Class 6
Carbon Disulphide	75-05-8	480 / Class 6
Dichloromethane	75-09-2	480 / Class 6
Diethylamine	209-89-7	480 / Class 6
Ethyl Acetate	141-78-6	480 / Class 6
n-Hexane	110-54-3	480 / Class 6
Methanol	67-56-01	480 / Class 6
Sodium Hydroxide (50%)	1310-73-2	480 / Class 6
Sulphuric Acid (96%)	7664-93-9	480 / Class 6
Tetrahydrofuran	109-99-9	480 / Class 6
Toluene	108-88-3	480 / Class 6

Key features
<ul style="list-style-type: none"> • High barrier – handles the more “difficult” chemicals • Taped seams for full seal • Tough and resilient fabric – multi-use if uncontaminated and undamaged • Lighter fabric for better comfort • 3-piece hood for improved fit
Suggested applications
<ul style="list-style-type: none"> • Very high chemical barrier • Petrochemical and refining applications • Chemical handling and distribution • Chemical clean-ups and spill management • Contaminated land clearance

Other Information

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

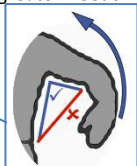
All Lakeland coveralls are constructed using Lakeland's "Super-B" style pattern. Using the company's global knowledge and experience of protective clothing this takes European CE and North American ANSI styles to produce a garment design which combines the best elements of both to produce a garment which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

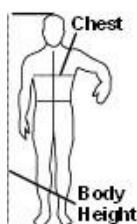
However, Lakeland use an inset sleeve (blue line) which follows the contours of the body and allows much greater freedom of movement

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

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

Other Styles



430 Coverall
"Plus" version
with attached
boot flap and
double cuffs.



400 Level B
encapsulated suit
Rear entry, PVC
face shield.
Flat back, which
can connect the
air tube.



450 Level B
encapsulated suit
Rear entry, PVC
face shield.
Expanded back for
SCBA.

PermaSURE

PermaSURE® allows users to calculate safe-use times for ChemMax® garments based on real world data including temperature and exposed area.

PermaSURE®: easy-to-access safe-use times for ChemMax® 3 & 4 and Interceptor®

- Works on any browser-enabled device with an internet connection.
 - Simple to use. Easy-to-access interface with data input and output fields.
 - User inputs suit type, exposure time, temperature and chemical.
- PermaSURE® provides key hazard data and in seconds an assessment of whether the user is safe in the input exposure time.
- Over 4000 chemicals in the database.
 - PermaSURE® calculates safe-use times taking into account temperature and the toxicity thresholds of specific chemicals.
 - PermaSURE® provides instant basic chemical hazard data and single-click links to detailed online safety data sheets

PermaSURE® Toxicity Database Modeller v 5.01

Home Account App Comment Logout

English GB

1. Set Operational Parameters

Task / Incident Number: PermaSURE 2018-05-02 14:18:01 ChemMax 3 - Hooded

Suit Type: ChemMax 3 - Hooded

Suit Temp (°C): 25

Exposure Time (mins): 180

Air Changes (hr): 5

2. Select Challenge Chemical

Search: sulphuric acid

Chemical: 17894-02-01 sulphuric acid

Challenge level: 100%

3. Toxicity Risk Assessment

Toxicity State: Hazardous

Highly Toxic

Caution: severe skin burns and eye damage. Irritation to permeable due to the molecular size in suit-like material.

Chemical Properties

Time to TOL Limit: 0:00:00 (min)

Timer (hh:mm:ss): 00:00:00

Advanced

Toxicity Limit: 25

Exposed Area (%): 100

Perm. Rate: 0.0000

Total Permeated (g): 0.0000

Specify suit type

Specify temperature

Specify exposure time

Search database of over 4000 chemicals

Data on toxicity, state and hazard types

Links to CDC emergency response and data sheets

Click on Calculate

PermaSURE® indicates if toxicity is reached in more or less than the exposure time

What is PermaSURE®?

EN6529 Permeation test breakthrough data is NOT when the chemical first breaks through the fabric and provides NO information on how long you are safe.