PVC Chemical Protective Clothing

Download Certificate | Download Declaration of Conformity | Stitched & Taped Seams | TYPE 3 | TYPE 4 | EN 1149-5

Lightweight PVC coverall and two piece ensemble for protection against splashes and sprays of liquid chemicals

- Superior lightweight PVC fabric – weight 310gsm. Lighter than most PVC coveralls
- Zip front fastening with double storm flap and hook & loop closure
- Certified to EN 14605 Type 3 & 4 for protection against liquid and jet chemical sprays
- Anti-static - certified to EN 1149-5: tested to EN 1149-3 (charge decay)
- Stitched and taped sealed seams
- Tested for up to 20 washes at 30°C*
- Coverall features Super-B style with 3-piece respirator-fit hood, crotch gusset and inset sleeves for superior freedom of movement
- Jacket features respirator-fit drawstring hood and zip front with double storm flap and hook and loop fastening
- Bib & Brace style pants with adjustable braces and quick release snaps
- Ideal for petrochemical applications such as tank cleaning and chemical storage applications, agricultural applications and chemical handling

* Physical properties and permeation tests conducted before washing. Garments contaminated with chemicals should not be washed and re-used. Inspect all garments before re-use; garments that are damaged or worn should not be re-used.

PVC Chemical Protective Clothing Styles

EPVC428V
Coverall with hood, single zip with double storm flap and hook and loop fastening
Size: S - XXXL

EPVCJT02
Jacket with drawstring hood, single zip, double storm flap and hook and loop fastening
Size: S - XXXL

EPVCTS02
Bib and brace pants with adjustable braces and quick-release snaps
Size: S - XXXL

Available in: Yellow

Physical Properties		
Property	**EN Standard**	**CE Class**
Abrasion Resistance	EN 530	6
Flex Cracking	ISO 7854	6
Trapezoidal Tear	ISO 9073	2
Tensile Strength	EN 13934	3
Puncture Resistance	EN 863	3
Seam Strength	EN 13935	4
Anti-Static	EN 1149-3	t_{50} = 0.89s

Chemical Permeation - EN 6529		
Chemical	**CAS No.**	**CE Class**
Acetic Acid 30%	64-19-7	6
Hydrochloric Acid 30%	7647-01-0	6
Phenol/Sodium Hydroxide 1:1	139-02-6	6
Sodium Hydroxide 50%	1310-73-2	6
Sodium Hypochlorite	7681-52-9	6
Sulphuric Acid 50%	7664-93-9	6

* NB = normalised breakthrough. This is the time taken for the PERMEATION RATE to reach 1.0µg/minute/cm² 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®.**

A limited number of chemicals have been tested against Lakeland PVC material. More tests can be conducted on request. ChemMax® garments provide a more comprehensive protection against a much wider range of chemicals.

Note that when contaminated a chemical may permeate into the fabric and washing or decontamination may not remove it. In this case when re-using the normalized breakthrough may be lower than indicated by a test. For this reason we do not advise re-use of heavily contaminated garments. Where garments may have been contaminated and are to be re-used additional care must be taken during donning to ensure users do not make contact with any residual contamination that has not been removed.

See our full chemical permeation database which can be downloaded at **https://www.lakeland.com/europe/resources/documents-gallery**

Clothing For Protection against Hazardous Chemicals

Selecting the right chemical suit for the job is vital to ensure not only are workers properly protected but that they are not over-protected – which could mean paying more than you need for PPE and that workers suffer more discomfort than necessary.

Chemical protection is defined by three key standards:

Type 4 EN 14605	Type 3 EN 14605	Type 1 EN 943-1&2
protection against sprays of hazardous liquids	protection against jet sprays of hazardous liquids	protection against hazardous vapours and gases
Type 4 Garments: ChemMax® 1 EB MicroMax® TS Cool Suit ChemMax® Cool Suits Pyrolon™ CRFR Cool Suit	**Type 3 & 4 Garments:** TomTex® ChemMax® 1 and 2 ChemMax® 3 and 4 Pyrolon™ CRFR, CBFR, TPCR	**Type 1 Garments:** Interceptor® Plus *Note: Type 2 has been removed in the 2015 version of EN 943 so no longer exists.*

Consider three key factors when selecting the most appropriate clothing for an application

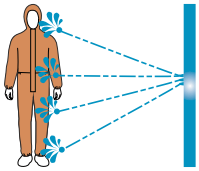
1. The chemical

- 'Breakthrough time' provided by (EN 6529 or ASTM F739) permeation tests can be used for comparison of fabrics but provides no information about how long you are safe.
- Consider the hazard presented by the chemical:
  How toxic is it?
  Is it harmful in very small quantities?
  Is it carcinogenic or causes long term harm in other ways?
- Is the application performed in a warm temperature? (permeation rates increase at higher temperatures). What effect does temperature have on the safe use time?
- Calculate a maximum safe use time using permeation rates, temperature & chemical toxicity.

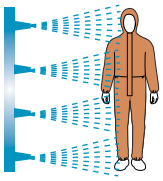
Use **PermaSURE®** to calculate safe-use times for Lakeland chemical suits **ChemMax® 3**, **ChemMax® 4 Plus** and **Interceptor® Plus**

2. Which hazard / spray type?

- Protection against gases and vapours may require a Type 1 gas-tight suit such as Interceptor® Plus
- The type of spray in the application indicates whether a Type 3, 4 or 6 garment is required.
- However, with a highly toxic chemical even if the spray type indicates a Type 6 garment, a higher level of protection might be appropriate.



Type 3
Strong jet sprays



Type 4
Shower sprays

Approximately 80% or more applications in the market are Type 4 and not Type 3.

Type 3 or Type 4?

Determining that the application is Type 4 rather than Type 3 means selecting more comfortable options such as a **ChemMax® Cool Suit.**

3. Physical / environment factors

- A variety of factors relating to the task and where it is performed can influence the choice of garment.
- Three groups of factors can be considered.

Factors relating to :

The Task	The Environment	Others
For example: Kneeling / crawling? Climbing? Confined space? Mobility?	For example: Visibility?, Moving vehicles? Sharp edges?, Heat or flames? Warm conditions? Explosive atmosphere?	For example: Co-ordination with other PPE? Training required? Donning and doffing? Regulatory issues?
		

All such factors may influence the choice of fabric and garment design: (physical properties, colour, noise level and additional properties such as flammability).

CE Standard physical tests can be used to assess comparative performance in terms of durability using abrasion resistance, tear strength etc.

Use the QR Code or visit:

https://promo.lakeland.com/europe/chemical-suit-selection-guide

For more information about the factors that contribute to ensuring you select the most appropriate and effective chemical suit for the job, along with details on how to assess safe-wear times, download our **Guide to Chemical Suit Selection**

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** 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.*

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