Selection, Use, Storage, Shelf-Life and Disposal

Lakeland
Protect Your People™

Selection of the correct protective clothing for the task is important in ensuring adequate protection, optimum comfort and minimal cost. Whilst ensuring certification to the appropriate standards related to the application is a good starting point, CE standards represent MINIMUM required performance and selection may depend on a combination of factors relating to the hazard, the task and the environment, many of which may NOT be addressed by standards.

Furthermore, standards generally deal with hazards in isolation whereas in the real world users often face multiple hazards at the same time; if more than one item of PPE must be used it may be important to consider how they work together and whether use of one compromises effectiveness of another (e.g, if both chemical and FR protection is required, you cannot simply wear a standard chemical suit over a thermal protective garment.

For a guide to factors for consideration in selection of chemical suits and Type 5 & 6 coveralls refer to Lakeland's Guides to selection.

Use

Before use, all suits should undergo a thorough visual inspection to ensure there are no tears, wear or other damage evident and that zips and elastic are intact and function correctly. Do not use any garment with apparent damage or wear as this will compromise protection.

Donning and doffing (especially the latter during which suits may be contaminated) is a critical part of the application; correct donning is vital in ensuring correct protection is provided. Lakeland recommends written donning and doffing procedures are established and that a "buddy" system, in which a colleague assists in both donning and doffing and conducts the final check, should always be used. Detailed advice on donning and doffing is available from Lakeland separately and a video on donning and doffing of chemical suits is available on the web site.

During use where possible monitor suits for damage, wear or contamination. Damaged or heavily contaminated suits should be removed, disposed of and replaced as soon as possible.

Re-Use

Most Lakeland garments are designed as single use and disposal is advised after one use. However, regardless of age, or whether a garment is classed as "disposable" or "re-usable", if a garment is undamaged and uncontaminated by any chemical, it may be re-used if appropriate.

Note however that any fabric that has been previously contaminated by a chemical may have a lower breakthrough time than when new. Contaminating chemicals may permeate into the fabric and cannot be removed by a decontamination shower or other cleaning method; de-contamination may remove chemical on the surface but will not remove chemical that has permeated into the fabric. Thus we do not advise re-use of contaminated suits (whether 'disposable' OR 're-usable') that have been contaminated by a hazardous chemical.

ALM® Suits

ALM® suits rely on the reflectivity of the aluminised surface to reflect away radiant heat energy. Thus it is vital that suits are kept clean; a dirty aluminised suit will not work! Suits can be wiped clean after use with a weak detergent solution and should be hung to dry before storage. Also ensure suits that are torn or damaged are also not re-used as this might also affect reflectivity.

Interceptor Plus®

All Interceptor® Plus gas-tight suits are pressure tested to ensure leak-tightness before leaving the factory. However, we recommend pressure testing of Interceptor® suits on receipt before use (to ensure no damage has occurred in transit) after every use before storage and/or as part of an annual service program.

Note: that it is entirely the user's responsibility to determine if re-use of a garment is safe.

Packaging

Most chemical and Type 5 & 6 coveralls are supplied in individual, sealed, vacuum packed polyethylene bags. (Vacuum packing saves 20 to 30% of freight and storage cost) and in outer cardboard cartons. Larger garments such as ARC® 43, Interceptor Plus® and ALM® are supplied individually.

Storage

Most Lakeland chemical suits are manufactured from polymers which are inert materials and are unaffected by normal temperatures and conditions. They can be stored in normal storage facilities. Keep dry and avoid strong light or sunlight or temperatures below -15°C

Larger garments such as ARC® and ALM® garments are better stored by hanging. If storing for re-use ensure garments are dry and clean before storage.

Training

Training on selection, use and maintainance, include pressure testing of gas-tight suits is available on request from Lakeland staff.

Shelf-life

Lakeland chemical and Type 5 & 6 suits are generally constructed from inert polymers that are unaffected by normal storage conditions. In unopened bags and in such conditions (-10°C to 50°C, dry and away from direct light) the expected shelf life can be 10 years or more. Some discolouration of fabrics may occur over time, but this merely relates to seepage of dyes and does not affect fabric performance.

However some specific properties of fabrics MAY alter over time. In particular anti-static properties result from a topical treatment which will degrade over time and in use.

It is vital that all garments, regardless of age, but especially after a longer shelf life, are thoroughly checked for damage or wear immediately before use. Do not use any garment that appears worn or damaged. It is always the end user's responsibility to ensure any garment is fit for purpose.

Interceptor Plus®

Interceptor Plus® is a EN 943 Type 1a gas-tight garment that fully seals the wearer against harmful gases and vapours in the environment. Leak tightness is confirmed through the use of an internal pressure test which inflates the suit and then ensures it does not lose pressure over time.

Because damage may occur during freight we recommend that Interceptors® are pressure tested on receipt to ensure leak-tightness. For suits in storage we also recommend that a regular maintenance procedure should be established with checks every 6 to 12 months maximum that includes both an internal pressure test and a detailed visual check.

We also recommend that if possible Interceptor® suits should be pressure tested before use and after each use before being stored for re-use. Any suit that fails a pressure test should not be used in any hazardous area but may be downgraded for training purposes and should be clearly marked 'Training Suit Only'.

All chemical suits should as a minimum undergo a thorough visual inspection before every use. Look for abrasion, tears, wear and any damage that might compromise protection. If in doubt do not use a suit in a hazardous area. Training and instructions on conducting pressure tests are available on request.

Disposal

Uncontaminated garments can be disposed of as standard waste according to local regulations. However, contaminated garments may require decontamination before disposal and must be disposed of according to regulations relating to the chemical concerned.

CE Certification

All garments presented are certified to relevant CE standards. Lakeland's policy is to ensure where possible garments are certified to the latest versions of standards. As required by the new PPE Regulation EU 2016_425 Declarations of Conformity for all products are downloadable from **www.lakeland.com/europe** and copies of CE certificates are available on request.

Selection of protective clothing means choosing the best garment for the task in hand. This is important not only in ensuring adequate and effective protection, but also in optimising comfort and minimising cost.

CE certification ensures garments meet minimum performance requirements and is a good starting point for selecting the best suit for the job. However, every application is different and meeting CE minimum performance requirements does not mean a suit is perfect for all or that operators are adequately protected. There are many factors relating to the hazard, the task and the environment that may affect garment choice and these should be assessed as part of a selection procedure.

Lakeland's Guides to Chemical Suit and Type 5 & 6 coverall selection provide useful guides to the various factors that might be important, along with explanations of tests, summaries of chemical permeation and penetration performance and detailed product information and comparisons.

Detailed product information is also available from individual product datasheets downloadable from **www.lakeland.com/europe**