



RESPIREX™



Chemical Protective Trousers Instructions for use



EN14605:2005+A1:2009

TYPE PB[3], TYPE PB[4]

TYPE 3, TYPE 4



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General information

Respirex BTRS series chemical protective trousers are supplied with a variety of options for termination of the ankle and in a range of sizes and materials. All trousers are CE and UKCA marked to indicate compliance with European Regulation 2016/425 on personal protective equipment (PPE) and Regulation 2016/425 on personal protective equipment, as amended to apply in GB and comply with the harmonized standard EN 14605:2005+A1:2009 (protective clothing against liquid chemicals); this specifies the performance requirements both for the materials of construction and for the garment as a whole. Refer to the data sheet supplied for further information on the performance results for the garment's main material of construction.

All declarations of conformity: <http://www.respirex.co.uk/doc>

Limitations & warnings

- Always follow the instructions carefully otherwise there may be a drastic impact upon the protection offered by the garment. BTRS series chemical protective trousers should only be worn in areas where there is a low risk of chemical spillage occurring. In areas of high risk Respirex can advise on alternative items of PPE that will provide the necessary level of protection.
- End-users should carry out a suitable risk assessment in accordance with local legislation to ensure that appropriate PPE is selected for the intended use. Respirex International cannot accept responsibility for the selection or use of inappropriate PPE.
- When worn individually BTRS series chemical protective trousers provide partial body protection and meet the performance requirements of TYPE PB[3] and TYPE PB[4] chemical protective clothing. If full body protection is required, BTRS series chemical protective trousers must form part of a two-piece suit worn with a chemical protective jacket; both parts of the suit should be manufactured from the same fabric so as to offer a uniform degree of chemical protection to all parts of the body. In addition the two-piece suit must be worn with a suitable full face mask, appropriate protective gloves and safety footwear. Worn as a combination with the items of PPE described, the BTRS series chemical protective trousers meet the performance requirements of TYPE 3* (liquid-tight) and TYPE 4* (spray-tight) chemical protective clothing.



- *To ensure the performance requirements of TYPE 3 (liquid-tight) and TYPE 4 (spray-tight) chemical protective clothing are met, trousers should be worn in combination with a jacket incorporating an integral hood and a full face mask which is "tape sealed" to the hood. Alternatively trousers can be worn in combination with a jacket without integral hood but with a separate "tape sealed" hood which totally covers the head and neck. If the trousers contain an outer zipper flap along the leg, the flap will require to be sealed shut with tape. It is also necessary to tape the outer zipper flaps of the jacket and dependant upon the style of wrist, it may also be necessary to tape cuffs to achieve the claimed protection.
- Wearers of BTRS series chemical protective trousers should be physically fit and capable of wearing the garments under the anticipated conditions of work. If in doubt please seek medical guidance before wearing.
 - BTRS series chemical protective trousers are manufactured from non-breathable materials and should only be worn within a temperature range that maintains wearer's comfort and safety. Wearers are advised to take suitable precautions to avoid heat stress occurring, e.g. working to a planned work/rest schedule. Always leave the work area and remove the trousers before becoming distressed.
 - Materials that may come into contact with the wearer's skin are not known to release substances that are toxic, carcinogenic, mutagenic, allergenic, toxic to reproduction or otherwise harmful to the majority of individuals. These products contain no components made from natural rubber latex.
 - Always use compatible PPE, e.g. jackets, gloves and boots advised by Respirex.
 - Flammable Material, keep away from fire

For any further information, please contact the Respirex customer services department on
Tel: +44(0) 1737 778600 or Fax: +44(0) 1737 779441

Pre-checks

It is recommended that pre-checks are carried out in a clean area at least once per month, and always before the start of each shift cycle.

1. Visually inspect the trousers for any damage that may reduce the level of protection offered (see service and maintenance section on page 5)
2. Check that garment is free from contamination both externally and internally

Trousers that have defects identified during the pre-checks should be withdrawn from use.

Donning procedure

Consult the body measurement chart (see page 7) and select the correct size garment. Suitable underclothing should be worn beneath the trowsers. After carrying out the pre-checks as detailed in these instructions put the trowsers on and make sure that any press stud openings or adjustments around the waist are closed securely. Where braces are fitted make sure that the buckles are fully clipped together and that the braces are adjusted to a comfortable tension over the shoulders (see Fig. 1, Fig. 2 & Fig. 3). Before putting safety boots on follow the instructions that apply to your style of garment.



Fig. 1

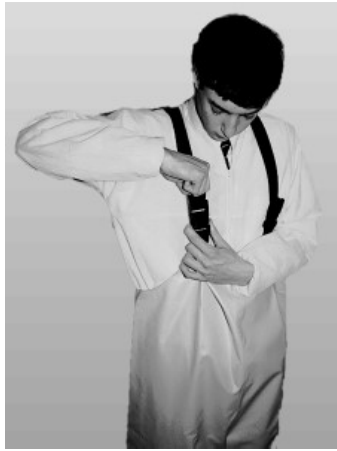


Fig. 2



Fig. 3

Wearing trowsers with elasticated inner & outer legs

1. Step into trowsers as usual with foot through elastic stirrup (see Fig. 4).
2. Roll outer leg up approximately 20-23cms (see Fig. 4).
3. Step into protective boots (see Fig. 5).
4. Roll down outer leg over exterior of boots (see Fig. 6).

Exactly the same procedure should be utilised when wearing trowsers with elasticated inner legs and straight outer legs.



Fig. 4



Fig. 5



Fig. 6

Wearing trousers with velcro securing strips on outer legs

1. Step into the trousers as usual with foot through elastic stirrup (where fitted), as previously described.
2. If fitted, fold the outer leg up approximately 20-23cms (8-9”).
3. Step into protective safety boots.
4. Fold down outer legs over exterior of boots.
5. Tighten the outer leg around the boots using the Velcro strips as demonstrated in Fig. 7 & Fig. 8.



Fig. 7



Fig. 8

Chemical Protective Boot options

For all trousers not supplied with permanently attached chemical protective boots, Respirex provide the Hazmax™ range of chemical protective boots certified to EN ISO 20345 and EN 13832-3. All chosen boots must be designed to protect feet from chemical and mechanical risks complying with EN ISO 20345 and EN 13832-3. For data specific to the chosen chemical protective boot option, detailing the risk parameters, please refer to their user information sheet.

For any further enquiries, please contact our customer services department on:

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Doffing procedure

It is recommended that the doffing procedure is carried out with the aid of a dressing assistant. Depending upon the contaminant encountered, it may be necessary for the assistant to wear appropriate PPE selected by qualified safety personnel.

1. If fitted, remove all sealing tape from around the ankles.
2. make sure that any press stud openings or adjustments around the waist are loosened. Where braces are fitted make sure that the braces are adjusted to be loose over the shoulders before the buckles are unclipped
3. Roll the braces and trousers down around the wearer's legs
4. The wearer should be able to step out of the trouser legs and safety boots.
5. Used trousers should be cleaned in accordance with the procedures detailed on page 4.

Recommended cleaning procedures

If trousers are contaminated by acid splash they should be drenched in a neutralising bath with a pH value of 9 for approximately 10 minutes. The recommended neutraliser is a solution of bicarbonate of soda and water (6% bicarbonate of soda W/V). If contaminated with an alkali, the alkali should be removed by drenching in clean water for approximately 10 minutes.

After decontamination the outer surfaces of the trousers should be wiped with a sponge using a diluted solution of Citrikleen and warm water (temperature not exceeding 50°C). Mix one part Citrikleen to 19 parts water, i.e. 5% solution. Never use Citrikleen in neat form as this will cause damage to the garment materials. After wiping with the diluted Citrikleen solution the trousers should be rinsed with cold water.

Limited light mechanical washing can be carried out using a 5% Citrikleen solution with a water temperature not exceeding 30°C. Note: excessive or hard mechanical washing could reduce the lifespan and level of protection offered by your garment. Trousers should be allowed to dry naturally or hung in a drying cabinet or warm room with a temperature not exceeding 30°C. Garments used by more than one person must be cleaned, inspected and sanitised after each use; if not cleaned contamination may cause illness or disease.

Sanitise the garment by cleaning as described above or by liberally applying Synodor to the inside surface of the fabric.

LIGHT MECHANICAL WASHING ONLY



DO NOT SPIN

DO NOT DRY CLEAN



DO NOT BLEACH



DO NOT IRON



DO NOT TUMBLE DRY



DO NOT USE AGGRESSIVE CLEANING POWDERS

DO NOT SCRUB THE SURFACE OF THE FABRIC

Cleaning accessories

For cleaning garment outer surfaces use Citrikleen, Part No. F00938.

For cleaning garment inner surfaces use Respirex Synodor Odor San, Part No.F00936.

To order these accessories contact Respirex customer services on Tel: +44(0) 1737 778600 or Fax: +44(0) 1737 779441.

Servicing & maintenance

Trousers manufactured from polymer rubber materials, e.g. Neoprene, can be repaired using a Respirex repair kit*. Garments manufactured from thermoplastic materials, e.g. PVC, require specialist equipment and will need to be returned to the manufacturer for repairs.

*Respirex does not guarantee any repairs carried out by the end-user.

It is recommended that used garments are periodically returned to our care and maintenance department for overhaul, repairs, and where necessary report on the condition of your equipment. When your garments should be returned for inspection will depend upon the extent of usage.

There is no pre-determined life expectancy for your garments; this will depend upon usage, maintenance and washing. However, the level of protection offered by your garment will be seriously diminished by the existence of the following;

1. Lifting seam tapes
2. Degradation/Thinning of materials
3. Broken closures
4. Holes/Tears
5. Excessive dirt
6. Stretched or worn cuff seals

For further enquiries on servicing & maintenance contact Respirex customer services on Tel: +44(0) 1737 778600 or Fax: +44(0) 1737 779441.

Storage

Trousers should always be stored in a clean and dry condition and if being stored for long periods of time, out of direct sunlight. The storage environment should be clean, dry and of ambient temperature.

Respirex recommends storing trousers on a hanger; if being stored folded do not stack more than four high. Before first time use the storage shelf life of a pair of trousers is ten years from date of manufacture – each year of storage or before first time use, the trousers should be carefully opened and given a visual check over for any signs of damage or deterioration – following a successful overview the trousers can be repacked - security sealed and stored ready for first time use for up to ten years from the date of manufacture.

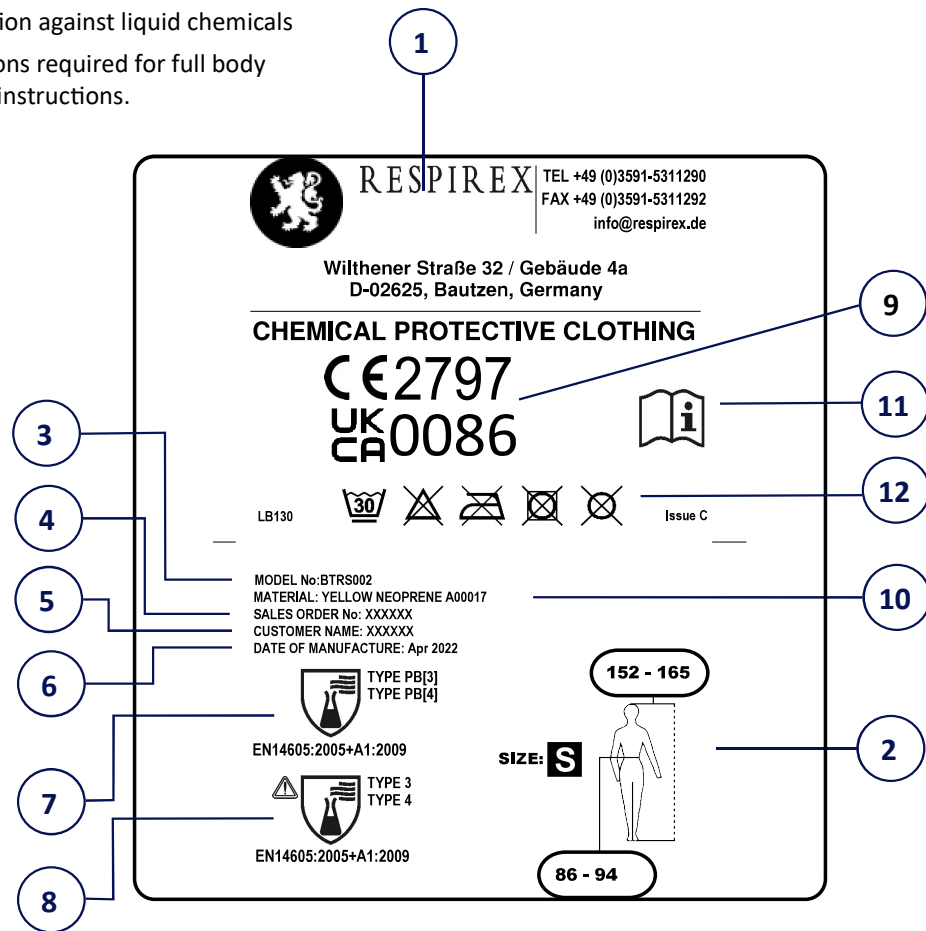
Always store the trousers in a dry area of ambient temperature, not exceeding 30°C and out of direct sunlight. Decontaminated and cleaned.

ALWAYS STORE THE TROUSERS IN A DRY CONDITION.

In order to maintain the level of protection offered, care should be taken to minimize the risk of damage occurring to the trousers during transportation between work areas. It is recommended that all chemical protective trousers are transported in a suitably sized rigid container resistant to penetration by sharp objects, abrasive surfaces, chemicals, oils, solvents etc.

Product labelling

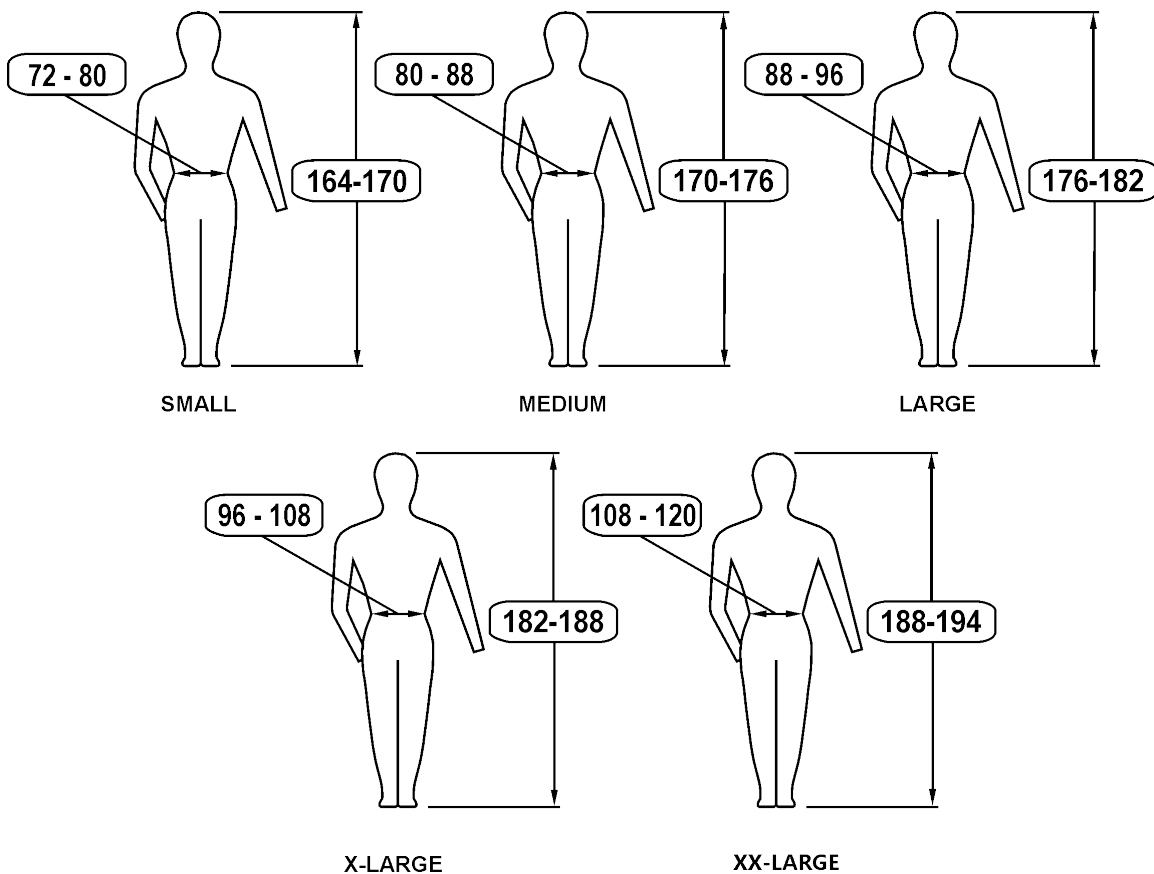
1. Manufacturer of garment;
Respirex International Ltd.
2. Garment size
3. Manufacturer's Model number
4. Manufacturer's Order No.
5. Customer Name
6. Date of manufacture; Day/Month/Year
7. Symbol denoting protection against liquid chemicals
8. Warning: Special conditions required for full body protection, refer to user instructions.



9. CE and UKCA mark with Notified Body and UK Approved Body code.
10. Material of Manufacture
11. "Open Book Pictogram"; wearer must refer to the "Instructions for use" for further information
12. Five care pictograms indicating that clothing is not suitable for cleaning and reuse
 - Pictogram 1 Light mechanical washing only
 - Pictogram 2 Do not bleach
 - Pictogram 3 Do not iron
 - Pictogram 4 Do not machine dry
 - Pictogram 5 Do not dry clean

Sizes

The following pictograms designate the range of height & waist sizes suitable for specific sizes of chemical protective trousers, check your body measurements and select the correct size trousers. Body measurements in cm.



Size	Height	Waist
S	164-170	72-80
M	170-176	80-88
L	176-182	88-96
XL	182-188	96-108
XXL	188-194	108-120

Whole suit performance testing

Performance requirement	Test method	Property value	Result
EN14605:2005+A1:2009 clause 4.3.4.3	EN ISO 17491-3:2008	Resistance to penetration by a jet of liquid (jet test)	Pass*
EN14605:2005+A1:2009 clause 4.3.4.2	EN ISO 17491-4:2008	Resistance to penetration by a spray of liquid (spray test)	Pass*

*As described under the “Limitations & Warnings” section of this document

For further information on the performance results of each specific material and seam refer to the data sheet supplied with your garment.

Risk Assessment

The summary of the risks taken into account in the design of the Trousers.

- Full-body protective clothing with liquid-tight connections between different parts of the clothing (Type 3: liquid-tight clothing) and with liquid-tight connections to component parts, such as hoods, gloves, boots, visors or respiratory protective equipment, which may be specified in other European Standards.
- Full-body protective clothing with spray-tight connections between different parts of the clothing (Type 4: spray-tight clothing) and spray-tight connections to component parts, such as hoods, gloves, boots, visors or respiratory protective equipment, which may be specified in other European Standards.
- Partial body protection garments offering protection to specific parts of the body against permeation of chemical liquids. Partial body protection only protects the localised parts of the body that are covered by relevant PPE.

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