



RESPIREX™



## Chemical Protective Trousers Instructions for use



**EN14605:2005+A1:2009**

**TYPE PB[3], TYPE PB[4]**

**TYPE 3, TYPE 4**



# Contents

General information .....	1
Limitations & warnings.....	1
Pre-checks .....	1
Donning procedure.....	2
Wearing trousers with elasticated inner & outer legs.....	2
Wearing trousers with velcro securing strips on outer legs.....	3
Recommended cleaning procedures.....	4
Cleaning accessories.....	5
Servicing & maintenance.....	5
Storage.....	5
Product labelling.....	6
Sizes.....	7
Whole suit performance testing.....	8
Risk Assessment.....	8


## 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 marked to indicate compliance with the EC Council Directive 89/686/EEC and the Regulation (EU) 2016/425 on personal protective equipment (PPE) 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.

## 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. 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 used in the construction of BTRS series chemical protective trousers are not known to cause allergic reactions to the majority of individuals. trousers contain no components made from natural rubber latex.
- Always use compatible PPE, e.g. jackets, gloves and boots advised by Respirex.

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.

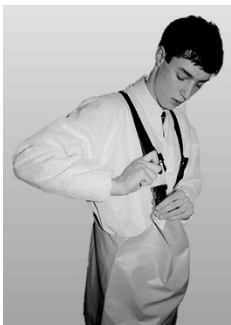


Fig. 1

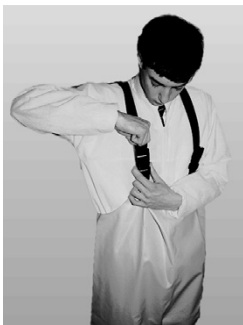


Fig. 2



Fig. 3

## Wearing trousers with elasticated inner & outer legs

1. Step into trousers 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 trousers 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

## 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.

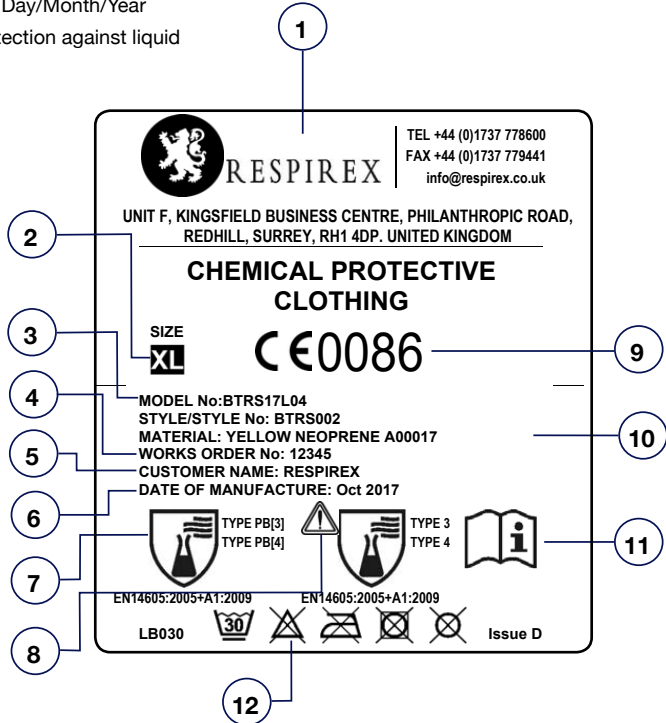
## Storage

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.

# 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

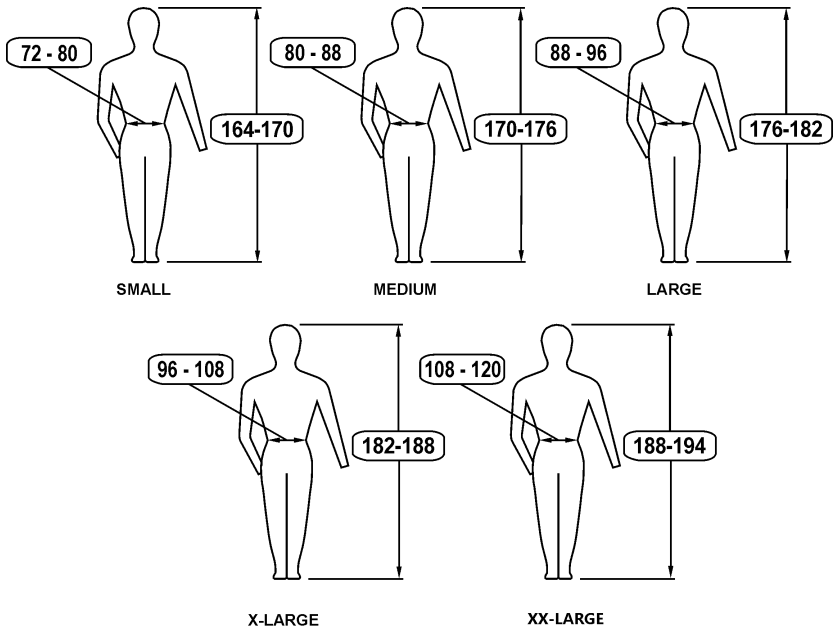


8. Warning: Special conditions required for full body protection, refer to user instructions.
9. CE Mark and notified Body code
10. Material of Manufacture
11. “Open Book Pictogram”; wearer must refer to the “Instructions for use” for further information
12. Five care pictograms indicating that clothing 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

For further information on the performance results of each specific material 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.



RESPIREX™

## EU DECLARATION OF CONFORMITY

RESPIREX INTERNATIONAL LTD  
Unit F Kingsfield Business Centre,  
Philanthropic Road,  
Redhill,  
Surrey RH1 4DP  
United Kingdom

Declares that the PPE described hereafter:

**Respirex (logo) BTRS series Reusable Chemical Protective trousers**

Meets the minimum requirements specified by product standards:

EN 14605:2005+A1:2009

*Types PB [3]\* & PB[4]\* (Reusable, partial body chemical protective clothing with liquid tight & spray tight connections)  
\*When worn as an ensemble with the manufacturer's compatible BTRS series trousers, the ensemble provides full body protection and is classified as Type 3 & Type 4 product.*

- is identical to the PPE which is subject of EU type-examination certificate No GB18/962700 (Issue 1) issued by

SGS United Kingdom Ltd,  
Unit 202b Worle Parkway,  
Weston-super-Mare,  
BS22 6WA

- is subject to the procedure set out in Module D of the European PPE Regulation (EU) 2016/425 under the supervision of the notified body:

BSI  
Davy Avenue, Knowhill,  
Milton Keynes. MK5 8PP, United Kingdom  
EC Notified Body No 0086

These garments are described in the manufacturer's technical file TF002, Issue D.

Done at: RESPIREX, Redhill, Surrey, on 12<sup>th</sup> January 2019

Signed:.....

Mark Bellas Simpson (Managing Director)



Registered in England No. 592506 VAT No. GB 115 0754 43  
Directors: M. Bellas Simpson A.C.A. D.G. Mackie PJ Wilson

**Respirex International Limited**  
Unit F, Kingsfield Business Centre,  
Philanthropic Road, Redhill,  
Surrey RH1 4DP.  
Tel: +44 (0) 1737 778600  
Fax: +44 (0) 1737 779441  
Email: [info@respirex.co.uk](mailto:info@respirex.co.uk)  
Web: [www.respirex.co.uk](http://www.respirex.co.uk)

**RESPIREX INTERNATIONAL LTD,**

Unit F Kingsfield Business Centre,  
Philanthropic Road,  
Redhill,  
Surrey, RH1 4DP  
ENGLAND

**TELEPHONE** +44(0) 1737 778600

**FAX** +44(0) 1737 779441

**EMAIL** info@respirex.co.uk

Module B Type  
Examination By:

**SGS United Kingdom Ltd.**

Weston-super-Mare,  
Somerset, BS22 6WA  
ENGLAND

**Notified Body No. 0120**

Module D Type  
Examination By:

**BSI**

Kitemark Court,  
Davy Avenue, Knowhill,  
Milton Keynes, MK5 8PP  
ENGLAND

**Notified Body No. 0086**