

CBRN BODY BAG

CHEMPROTEX™ X



RESPIREX™

Description

A **gas-tight body bag**, designed to contain chemically contaminated mortalities and body parts after a CBRN incident.

Manufactured in **Chemprotex™ X**, a high performance multi-layer chemical-barrier fabric, the CBRN body bag is lightweight and extremely durable.

Applications



Fire
Brigades



Health
Authorities



Civil
Defence



Military



Police



Colours may vary

Tested



ISO 17491-1:2012 | Method 2
Gas-Tight Chemical Protective Clothing

Material Performance



FINABEL 0.7.C
Chemical Warfare Agents



EN 14126:2003
Protective Clothing Against Infective Agents



ISO 6529:2013
Protection Against Chemicals

Key Features

Clear **viewing window** for casualty identification (Adult/Large bag only)

A4 **Waterproof pouch** (over viewing window on large bag) to enable the viewing window to be obscured if necessary and allowing **identification paperwork** to be attached to the body bag

(10x) Sturdy **carrying straps** allow four people in PPE to assist with lifting and carrying

Durable material with **double skinned base** for abrasion protection

Heavy duty **gas-tight zip** around three sides of the bag for ease of access.

Absorbent pads in the bottom of the bag capable of holding more than five litres of fluid

Disposal by means of either **cremation or burial**

Internal securing straps to hold casualty secure

Manufactured with a **Chemprotex™ X shell**, which provides excellent protection against a broad range of chemicals

For use with two CleanAir® CBRN filters allowing gasses produced by the body as part of the decomposition process to safely pass out of the bag.

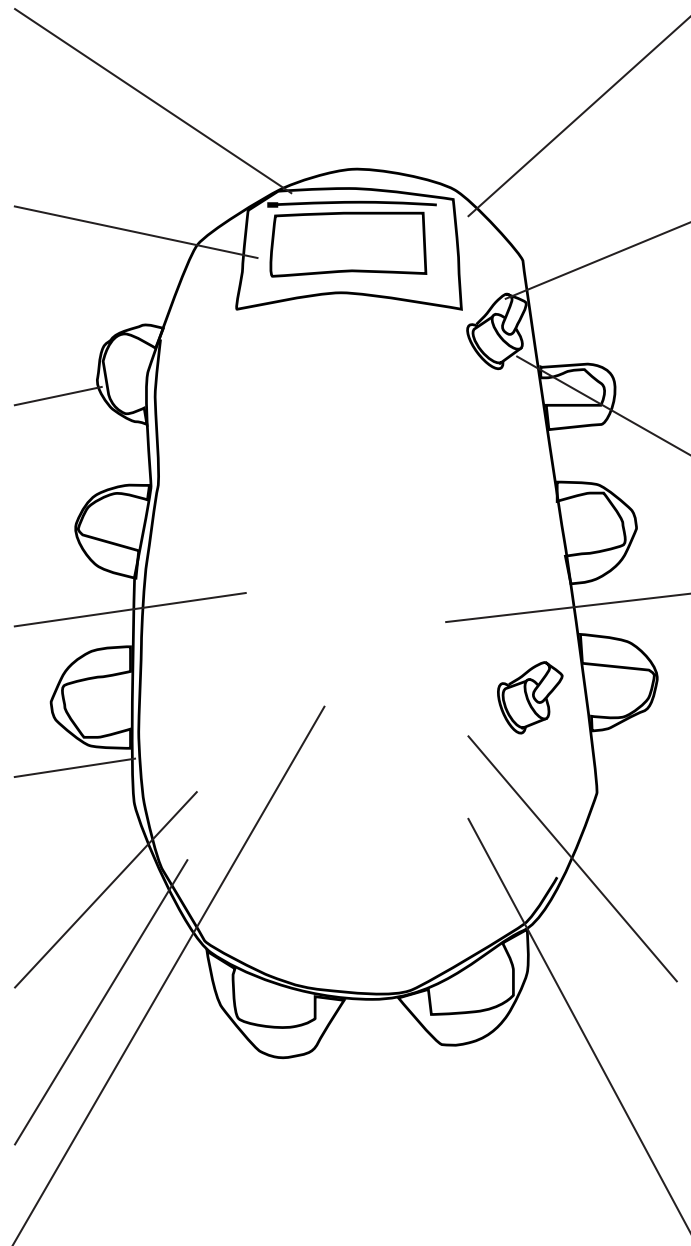
Shut off valves (x2) over CBRN filter exhaust prevents outflow from the bag during handling

Durable, lightweight material for ease of transport, handling and storage

Ten year shelf-life, with three service inspections and recertifications over the life of the body bag*.

Internal gas-tightness **pressure test to ISO 17491-1:2012 Method 2** conducted prior to despatch to confirm the bag is gas-tight

Provides a physical barrier to **particulate, liquid, vapour and gas materials**



Accessories



CBRN Filter

Fitted internally, the CleanAir® CBRN filters are (A3B2E2K2P) supplied in a sealed bag of two and provide protection against organic, inorganic and acid gases and vapours as well as ammonia and organic ammonia derivatives, solid and liquid, radioactive and toxic particles, plus micro-organisms (e.g. bacteria and viruses) as well as chemical and biological warfare agents. The filter allows gasses to safely exit the CBRN body bag, avoiding a build up in internal pressure.

* CleanAir® CBRN filters have a 10 year shelf life from the date of manufacture and will be delivered with minimum of 9 years shelf life remaining

Sizing Chart

Size	Product Code	Dimensions (LxWxH) (cm)	Max Load (kg)
Adult/Large (with carry straps)	TBB005L	235 x 95 x 16	130
Adult/Medium (with carry straps)	TBB005M	175 x 70 x 16	80
Infant/Small (with carry straps)	TBB005S	80 x 50 x 16	25

Specifications

CBRN Body Bag (Chemprotex™ X)	Small	Large
Pack Size (max)	TBA	TBA
Pack Weight (max)	TBA	TBA
Carton Qty	TBA	TBA
Outer Carton Size	84 x 62 x 40 cm	84 x 62 x 40 cm
Outer Carton Weight (max)	TBA	TBA
Commodity Code	42021250	42021250

Specifications are for guidance only

Material Properties

Property	Test Method	Property value of Chemprotex™ X	Performance Class of Chemprotex™ X	Minimum Class Required For EN943-2:2019
Abrasion resistance	EN 12974-2 (inc. pressure drop)	> 2,000 cycles	6	4
Flex cracking resistance	EN ISO 7854 Method B (inc. pressure drop)	> 1250 cycles	2	1
Flex cracking resistance at low temperatures (-30°C)	EN ISO 7854 Method B at -30°C (inc. pressure drop)	> 200 cycles	2	2
Trapezoidal tear resistance	EN ISO 9073-4	>150 N	6	3
Puncture resistance	EN 863	> 50 N	3	2
Tensile strength	EN ISO 13934-1:1999	> 250 N	4	4
Resistance to flame	EN 13274-4 Method 3 modified (inc. pressure drop)	No part ignited or continued to burn on removal from the flame	2	1
Seam strength	EN ISO 13935-2	> 500N	6	5

Material tested in accordance with Table 1 of EN943-2:2019 - Minimum performance requirements of chemical protective clothing materials for regular robustness suits.

Chemical Warfare Agent Protection

The Chemprotex™ X material has been tested for resistance to permeation by chemical warfare agents in accordance with FINABEL O.7.C methods at the respected TNO laboratories.

Both the material and seams were found to offer an extremely high level of protection against the following agents:

- Mustard agent (HD)
- Sarin (GB)
- Soman (GD)
- VX

Table 1 Material samples

Agent	Breakthrough time (hours)	Temperature (°C)
HD	>48	37
GB	>48	37
GD	>48	37
VX	>48	37

Table 2 Seam samples

Agent	Breakthrough time (hours)	Temperature (°C)
HD	>48	37
GB	>48	37
GD	>48	37
VX	>48	37

Resistance to penetration by Infective Agents

The material has passed the requirements of EN14126:2003 for protective clothing against infective agents. It is therefore suitable to provide protection against blood, blood-borne pathogens, body fluids, biologically contaminated aerosols and both wet and dry microbial penetration.

Tested According To	Requirement	Level of Performance	EN14126:2003 Class
ISO 22610:2006	Resistance to wet microbial penetration	> 75 min	6
ISO 16603:2004	Resistance to penetration by blood and body fluids using synthetic blood	Pass	N/A
ISO 16604:2004	Resistance to penetration by blood-borne pathogens using bacteriophage Phi-X174	20 kPa	6
ISO/DIS 22611:2003	Resistance to penetration by biologically contaminated aerosols	> 5 (Log R)	3
ISO 22612:2005	Resistance to dry microbial penetration	<1 (Log ₍₁₀₎ CFU)	3

Storage Conditions

The Respirix CBRN body bag manufactured from Chemprotex™ X should be stored under the following conditions:

- Temperature range of -5°C to +30°C.
- In dry conditions above ground level; away from direct sunlight and in an environment free from harmful gases and vapours.
- Only remove from its original packaging when intending to use.
- Care should be taken when storing at extreme temperatures. At subzero temperatures the flexibility of the material may be reduced, resulting in a potential lowering of protection.

Disposal

Incineration is acceptable as no halogens are present or used in the manufacture. The calorific value is the same as oil; however uncontrolled combustion can lead to noxious fumes and un-burnt hydrocarbons. All components are thermoplastic and can be recycled as mixed polyolefin where facilities exist. The film has been designed not to biodegrade due to its intended application, so the film will not destabilise or cause toxic leach if used in landfill.

The product is comprised mainly from ethylene gas which is a by-product of oil production and refining which was once flared. No formal carbon footprint has been made on this product, however provided the product is not incinerated overall carbon dioxide release to the atmosphere during production and disposal will be low.

Chemical Permeation & Permasure®

Chemical	Physical State	Chemprotex™ X	Seams	Viewing Window
Acetone	Liquid	> 480 mins	> 480 mins	> 480 mins
Acetonitrile	Liquid	> 480 mins	> 480 mins	> 480 mins
Ammonia	Gas	> 480 mins	> 480 mins	> 480 mins
Carbon Disulphide	Liquid	> 480 mins	> 480 mins	> 480 mins
Chlorine	Gas	> 480 mins	> 480 mins	> 480 mins
Dichloromethane	Liquid	> 480 mins	> 480 mins	> 480 mins
Diethylamine	Liquid	> 480 mins	> 480 mins	> 480 mins
Ethyl Acetate	Liquid	> 480 mins	> 480 mins	> 480 mins
n-Heptane	Liquid	> 480 mins	> 480 mins	> 480 mins
Hydrogen Chloride	Gas	> 480 mins	> 480 mins	> 480 mins
Methanol	Liquid	> 480 mins	> 480 mins	> 480 mins
Sodium Hydroxide 40%	Liquid	> 480 mins	> 480 mins	> 480 mins
Sulphuric Acid 98%	Liquid	> 480 mins	> 480 mins	> 480 mins
Tetrahydrofuran	Liquid	> 480 mins	> 480 mins	> 480 mins
Toluene	Liquid	> 480 mins	> 480 mins	> 480 mins

All tests carried out under laboratory conditions by independent accredited laboratories in accordance with EN ISO 6529 unless otherwise stated. Table shows average breakthrough times in minutes.

For full details of the chemical permeation performance of Chemprotex™ X and its performance against chemical warfare and infective agents, please visit the materials section of the Respirex website www.respirex.com.

The CBRN body bag is compatible with the **Permasure** toxicity modelling app, available for Android and IOS devices. Permasure calculates safe working times for a database of over 4,000 common industrial and toxic chemicals, basing its calculations of the actual working conditions at the time. For full details visit www.respirex.com/permasure

Specifications, configurations and colours are subject to change without notice. PermaSURE® is a registered trademark of Industrial Textiles and Plastics Limited. Respirex and Chemprotex™ are registered trademarks of Respirex International Limited



RESPIREX™

Living + Breathing Personal Protection

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Guidance for use

1. Remove the body bag from the sealed polythene bag and unfold it (a)
2. Unzip the gas-tight zipper and open the bag (b & c)
n.b. (absorbent pads on the bottom of the bag can hold more than 5 litres of liquid)
3. Use the straps inside the bag to secure the body at the legs and across the chest (d)
4. If using a filter, unwrap it and remove the plastic caps from either end (e & f)
5. Screw the filter to the filter port, inside the bag (g)
6. Fasten the gas-tight zip, ensuring it is closed fully
7. The transparent pouch can be used for identification paperwork or to obscure the window (h)
8. When static, open the valve protection caps (x2) on the outside of the body bag (i). When moving, during wet decontamination or exposed to heavy rain, the valve caps **MUST BE** closed.
n.b. (ensure you have 4 people to transport the bag using the handles provided)



a



b



c



d



e



f



g



h



i