GTR LIMITED LIFE GAS-TIGHT SUIT

CHEMPROTEX™ X

RESPIREX™

Description

This fully encapsulating **Type 1A - ET** regular robustness gas tight suit is designed to protect the emergency responder against toxic or corrosive gases, liquids and solid chemicals.

The suit is manufactured from **Chemprotex™ X**, a high performance, multi-layer, nonwoven, chemical barrier fabric that is also light in weight.

Applications

- Fire Brigades
- Health Authorities
- Civil Defence
- Water Companies
- Nuclear
- Petro-Chemical
- Shipping
- Pharma-ceutical

Certification

TYPE 1A | EN 943-2:2019 (ET)
Gas-Tight Chemical Protective Suits for Emergency Teams

Material Performance

FINABEL 0.7.C
Chemical Warfare Agents

EN 14126:2003
Protective Clothing Against Infective Agents

Product Documentation

The Declaration of Conformity and user instructions can be downloaded from the product page on the Respirex website, links are in the downloads tab.

There are also additional photos and videos on donning procedure.

: www.respirex.com : +44 (0)1737 778600

Key Features

Encapsulating design for **Self Contained Breathing Apparatus (SCBA) worn inside the suit**

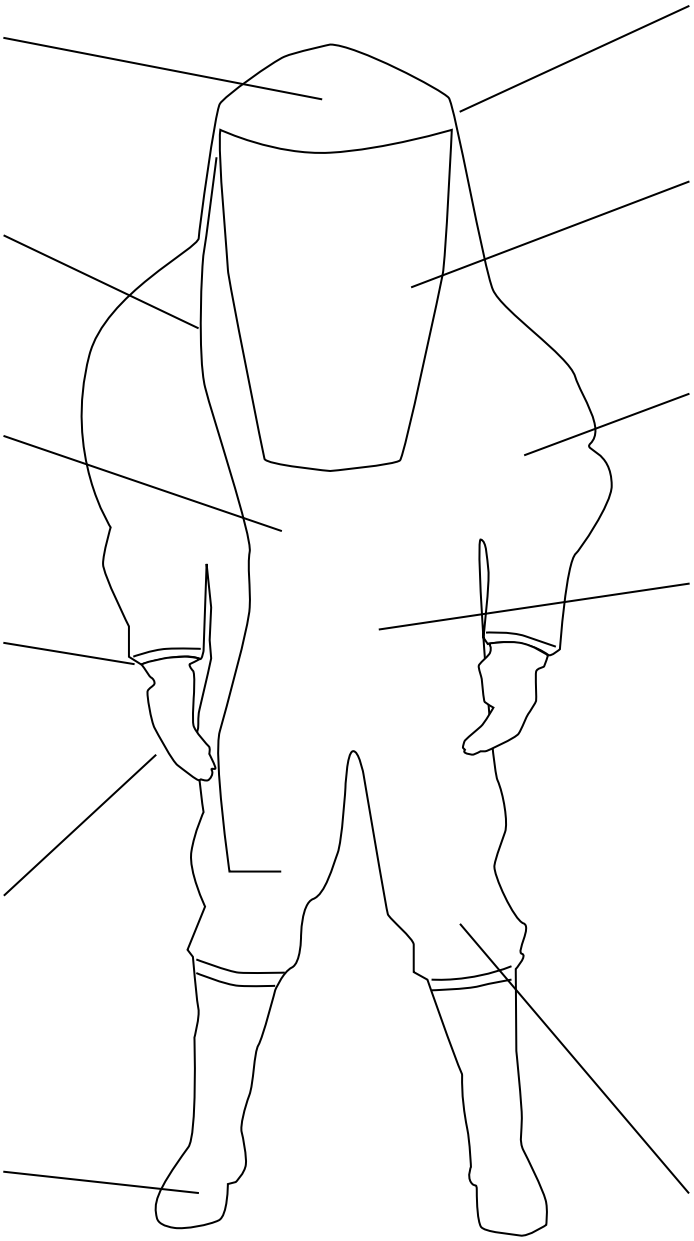
Gas-tight zip running from side of head to lower thigh, covered by zip flap with hook & loop fastener

Protection against liquid & gaseous chemicals (**Type 1**), infective agents and chemical warfare agents

Gas-tight locking cuff system for changing gloves

Dual glove system consisting of a **Kemblok™** chemical barrier inner glove bonded to an outer neoprene glove for mechanical protection.

Choice of fixed or detachable **chemical safety boots or sock feet** (see below)



Two exhalation valves maintain a comfortable working pressure inside the suit

Large flexible chemically resistant visor for wide field of view

Bat-wing sleeves allow wearer to remove their hand from the glove to check gauges and other equipment inside the suit

Adjustable internal **support belt**

Five year maintenance free shelf-life, with annual test from year 5 up to the maximum shelf life of 10 years

Internal **pressure test to ISO 17491-1:2012** conducted prior to despatch to confirm the suit is gas-tight

Foot or Boot Configuration

Sock Foot and Outer Leg

A sock foot of the suit fabric as the is fitted with an outer splash guard leg, allowing the use of customers own heat & flame resistant chemical safety boots (required as par of EN943-2). This also reduces pack size.

Detachable Boots

Detachable **Hazmax™ FPA** heat and flame resistant chemical safety boots are attached by a locking ring and can be replaced during suit servicing.

Fixed Boots

Hazmax™ FPA heat and flame resistant chemical safety boots are permanently attached to the suit. The suit needs to be returned to Respirex for boot replacement.

Suit Options

Suit/Brigade ID

Customer Identification names & codes can be added to the base of the visor or on the back of the suit.

Pass-Through

Allows the connection of a second cylinder or an air-line to the second man attachment on the breathing apparatus during decontamination.

Anchor Hook

External equipment attachment point

Personal Line Attachment

External equipment attachment point

DSU Attachment

External equipment attachment point for a Distress Signal Unit (DSU)

Torch Ring Attachment

External equipment attachment point

Accessories

Hazbag Containment Bag

A hazardous material containment bag manufactured from Chemprotex™ 300 material. Supplied with a cable tie, tag and wallet for sealing and identification. Dimensions: 1050 x 1370mm

Gas-Tight Suit Test Unit -

Computer controlled test unit that automatically inflates a suit from a compressed air supply and performs an internal pressure test to ISO 17491-1:2012 as required by clause 5.4 of EN 943-1:2015+A1:2019

Training Suit

A training version of the operational suit manufactured in green PVC and designed for multiple re-use with no testing required.

Manual Gas-Tight Suit Test Box

Operator controlled test unit that can be used to inflate a suit from a compressed air supply and perform an internal pressure test to ISO 17491-1:2012 as required by clause 5.4 of EN 943-1:2015+A1:2019

Suit Care & Maintenance

A selection of suit care products including cleaning and deodorising agents, anti-fogging spray for visors and lubricating wax for zips.

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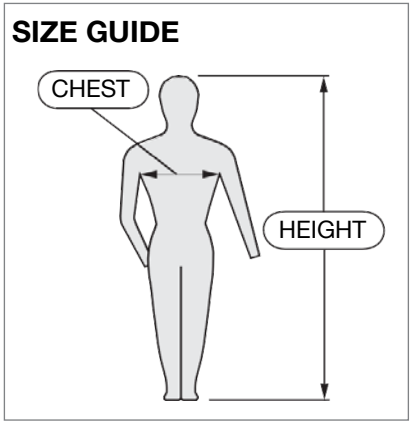
Sizing Chart

Size	Chest (cm)	Height (cm)
Small	88-96	163-175
Medium	96-104	169-182
Large	104-112	176-188
X-Large	112-124	182-194
XX-Large	124-136	188-200



Specifications

GTR Suit	
Pack Size (max)	26 x 58 x 36 cm
Pack Weight (max)	8 kg
Carton Qty	3
Outer Carton Size	84 x 62 x 40 cm
Outer Carton Weight (max)	26 kg
Commodity Code	62104000

Specifications are based on an XL sized suit without optional accessories and 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)	> 1,250 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 Permeation & Permasure®

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

All tests carried out under laboratory conditions by independent accredited laboratories in accordance with 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 GTR gas-tight suit 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**

RESPIREX™

Living + Breathing Personal Protection

Respirex International Limited, Unit F Kingsfield Business Centre, Philanthropic Road, Redhill, Surrey, RH1 4DP, United Kingdom

: www.respirex.com : +44 (0)1737 778600 : info@respirex.co.uk