GTB™ ET GAS-TIGHT SUIT

VITON® / BUTYL / VITON®

RESPIREX™

Description

The fully encapsulating GTB is a **Type 1A - ET** enhanced robustness reusable gas-tight suit covering both the wearer and breathing apparatus.

Manufactured in **Viton®/Butyl/Viton®** (VBV), a premium coated fabric in high visibility orange DuPont™ Viton® that provides excellent chemical protection and is the hardest wearing fabric option in the GTB suit range.

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

EN 14126:2003
Protective Clothing Against Infective Agents

Product Documentation

The CE Certificate, Declaration of Conformity and user instructions can all 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 double zip flap with hook & loop fastener

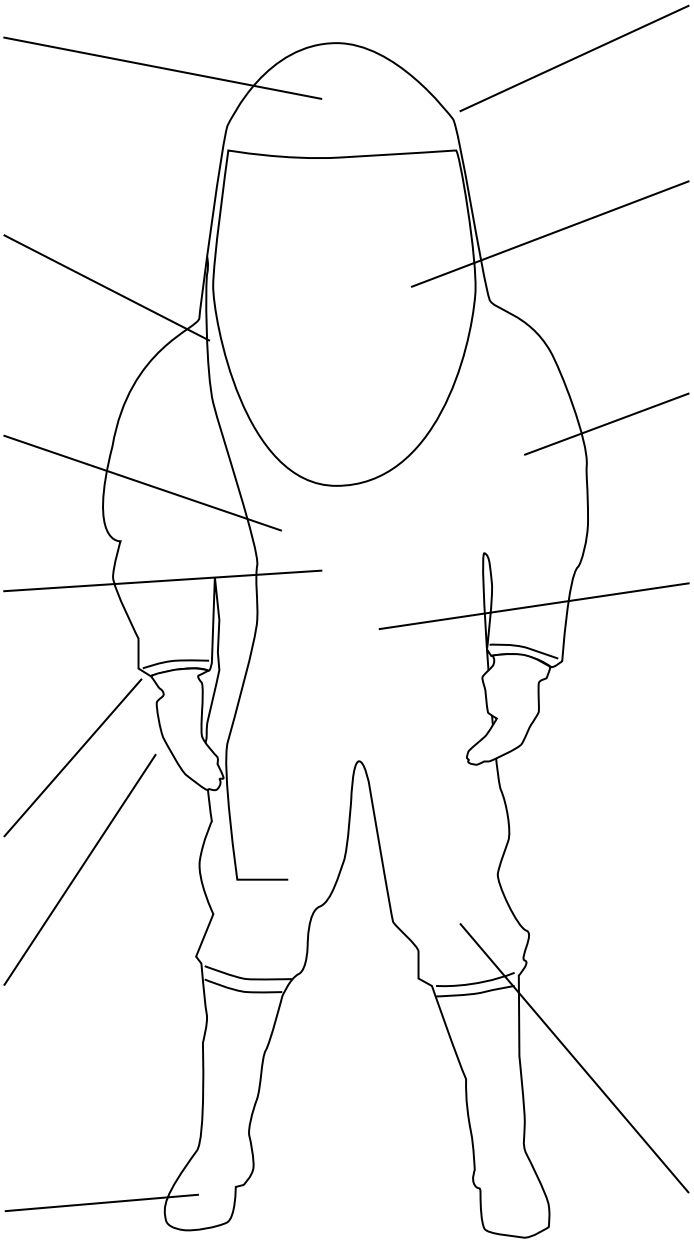
Protection against liquid & gaseous chemicals (**Type 1**), infective agents and chemical warfare agents

Inward Leakage tested to **EN 1073-2:2002, Class 3** with a Nominal Protection Factor (NPF) >9090

Gas-tight locking cuff system for changing gloves

Dual glove system consisting of a **Kemblok™ chemical barrier inner glove** bonded to an **outer neoprene glov**e 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

Rigid chemically resistant double layer visor permitting clear undistorted vision and a 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**

Fifteen year shelf-life, with internal pressure test required annually or after each use

Internal pressure test based on ISO 17491-1:2012 (Clause 5.3, Method 2) conducted before despatch **to confirm the suit is gas-tight**

Foot or Boot Configuration

Sock Foot and Outer Leg

A sock foot of the suit fabric 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.

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Suit Options

Fall Arrest

Fall arrest facility for use with an internal fall arrest harness with a back D ring fixing and used in conjunction with a retractable type fall arrester

Suit Ventilation (GTVB Model)

Adjustable ventilation system for the arms and legs of the suit, fed from the wearers BA set. Adjustable in steps from 0 to 100l/m from a control valve mounted on the chest.

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 wearers 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 1370 mm

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

Training Suit

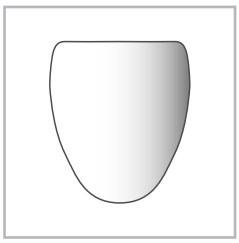
A training version of the operational suit manufactured in green PVC and designed for multiple re-use with no testing required.

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

Suit Care & Maintenance

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

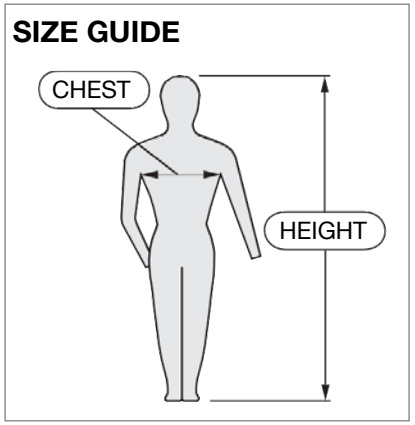


Disposable Outer Visor

Tear-off outer visor held on by hook and loop pads. Provides additional mechanical and chemical protection.

Sizing Chart

Size	Chest (cm)	Height (cm)
X-Small	79-88	150-164
Small	88-96	164-170
Medium	96-104	170-176
Large	104-112	176-182
X-Large	112-124	182-188
XX-Large	124-136	188-194



Specifications

GTB Suit (VBV)

Pack Size (max)	60 x 41 x 41 cm (case)
Pack Weight (max)	12.7 kg
Carton Qty	1
Commodity Code	62104000

Specifications are based on an XL or XXL sized suit with boots but without optional accessories and are for guidance only

Material Properties

Tested In Accordance With	Performance Requirement	Level Of Performance (VBV)	Class (VBV)	Min Class for EN 943-2
EN ISO 12947-2 (inc. pressure drop)	Abrasion Resistance	> 2,000 Cycles	6	6
Method B of EN ISO 7854 (inc. pressure drop)	Flex Cracking Resistance	> 50,000 Cycles	6	4
Method B of EN ISO 7854 at -30°C (inc. pressure drop)	Flex Cracking Resistance at Low Temperatures (-30°)	> 4,000 Cycles	6	2
EN ISO 9073-4	Trapezoidal Tear Resistance	> 100 N	5	3
EN 863	Puncture Resistance	> 100 N	4	3
EN ISO 13934-1	Tensile Strength	> 1 000 N	6	6
En ISO 13934-1	Seam Strength	> 500 N	6	5
Method 3 (modified) of EN 13274-4 (inc. pressure drop)	Resistance to Flame	No droplets, burning or holes	3	3

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

Chemical Permeation

Chemical	Physical State	Breakthrough Time VBV	Breakthrough Time Kemblok Glove	Breakthrough Time Visor	Breakthrough Time Suit Seams VBV
Acetone 100%	Liquid	> 480 mins	> 480 mins	> 480 mins	> 480 mins
Acetonitrile 99.9%	Liquid	> 480 mins	> 480 mins	> 480 mins	> 480 mins
Ammonia 99.9%	Gas	> 480 mins	> 480 mins	> 480 mins	> 480 mins
Carbon Disulphide 99.9%	Liquid	> 480 mins	> 480 mins	> 480 mins	> 120 mins
Chlorine 99.5%	Gas	> 480 mins	> 480 mins	> 480 mins	> 480 mins
Dichloromethane 99.9%	Liquid	> 60 mins	> 480 mins	> 480 mins	> 60 mins
Diethylamine 99.5%	Liquid	> 60 mins	> 480 mins	> 480 mins	> 60 mins
Ethyl Acetate 99.7%	Liquid	> 240 mins	> 480 mins	> 480 mins	> 240 mins
n-Hexane 99%	Liquid	> 480 mins	> 480 mins	> 480 mins	> 240 mins
Hydrogen Chloride 99.9%	Gas	> 480 mins	> 480 mins	> 480 mins	> 480 mins
Methanol 99.9%	Liquid	> 480 mins	> 480 mins	> 480 mins	> 480 mins
Sodium Hydroxide 40%	Liquid	> 480 mins	> 480 mins	> 480 mins	> 480 mins
Sulphuric Acid 95-98%	Liquid	> 480 mins	> 480 mins	> 480 mins	> 480 mins
Tetrahydrofuran 99.9%	Liquid	> 30 mins	> 480 mins	> 480 mins	> 30 mins
Toluene 99.9%	Liquid	> 480 mins	> 480 mins	> 480 mins	> 480 mins

The test results indicate the resistance to permeation by chemicals of the material , seams, glove liner and suit visor as required by EN943-2:2019. All tests were carried out under laboratory conditions by independent accredited laboratories in accordance with BS EN ISO 6529 unless otherwise stated

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

Classification of permeation resistance

Breakthrough Time (mins)	Class
> 480	6
> 240	5
> 120	4
> 60	3
> 30	2

RESPIREX™

Living + Breathing Personal Protection

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