

# GTA GAS-TIGHT SUIT

REUSABLE AIR-FED GAS-TIGHT SUIT



RESPIREX™

## Description

The GTA is a **Type 1C** reusable gas-tight suit designed to be used with an **external compressed air source** providing breathing and cooling air.

Manufactured in a range of chemically resistant fabrics the GTA is designed for long duration use in harmful atmospheres.

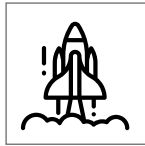
## Applications



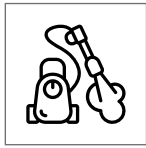
Petro-Chemical



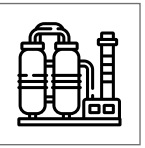
Pharmaceutical



Aerospace



Industrial Cleaning



Tank Entry



## Certification



**TYPE 1 | EN 943-1:2002**  
Gas-Tight Chemical Protective Clothing

## Air Supply

Required Airflow: **360 l/m** (min) to **440 l/m** (max)

The air flowing into the garment must conform to EN 12021:2014 Annex A.

## Fabrics

- Viton®/Butyl/Viton® (VBV) - Orange
- Butyl - Olive
- Neoprene - Yellow or fluorescent orange

## 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.

# Key Features

Breathing air and ventilation system completely contained within the suit

**Gas-tight zip** running from side of head to lower thigh, with optional zip flap

An **audible warning device** designed to activate if the airflow drops below the minimum level required to maintain CO<sub>2</sub> below 1%

**Gas-tight locking cuff** system for changing gloves

Gloves compatible with the choice of suit material are fitted

Airline connection fitted to the back of suit, with customers choice of coupling

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

**Five exhalation valves** maintain a comfortable working pressure inside the suit

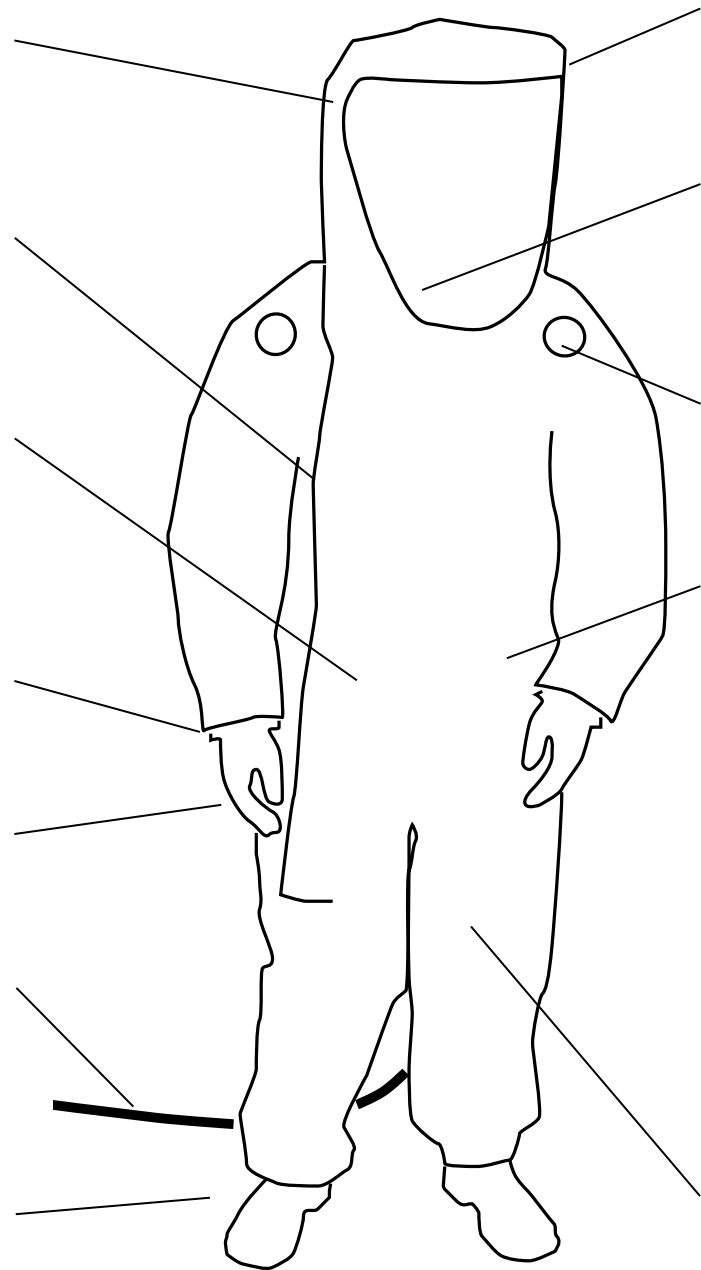
**Rigid double layer visor** permitting clear undistorted vision and a wide field of view

**Three-point hanging system** to prevent damage during storage

Adjustable **internal support belt**

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

**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

(shown in Viton®) 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.

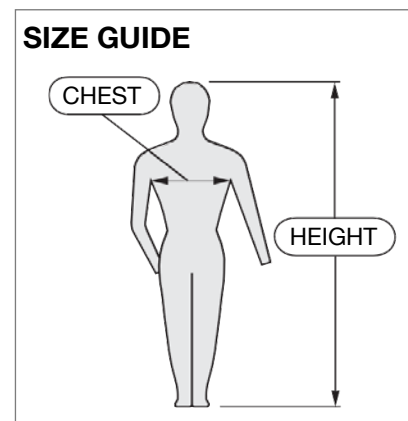


### Fixed Boots

**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.

## Sizing

Size	Chest (cm)	Height (cm)
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



## Material Performance

		VBV	Butyl	Neoprene
Abrasion Resistance	EN 530 Method 2	> 2,000	> 2,000	> 2,000
Flex Cracking Resistance	EN ISO 7854 Method B	> 100,000	> 15,000	> 5,000
Tear Resistance	EN ISO 9073-4	> 100 N	> 60 N	> 40 N
Tensile Strength	EN ISO 13934-1	> 500 N	> 500 N	> 500 N
Puncture Resistance	EN 863	> 100 N	> 50 N	> 10 N
Resistance to Ignition	EN 13274-4 Method 3	Pass	Pass	Pass
Seam Permeation Resistance	EN ISO 6529	> 240 min	> 480 min	> 240 min
Seam Strength	EN ISO 13935-2	> 500 N	> 300 N	> 500 N

## Chemical Permeation

	CAS NO.	VBV	Butyl	Neoprene
Hydrochloric acid, 36%	7647-01-0	> 480 mins		> 480 mins
Hydrofluoric acid 48%	7664-39-3	> 480 mins	> 480 mins	> 480 mins
Hydrofluoric acid 73%	7664-39-3	> 480 mins		> 240 mins
Nitric acid, 10%	7697-37-2			> 480 mins
Nitric acid, 60% - 70%	7697-37-2	> 480 mins	> 480 mins	> 480 mins
Phosphoric acid,85%	7664-38-2		> 480 mins	> 480 mins
Sodium hydroxide, 40%	1310-73-2	> 480 mins	> 480 mins	> 480 mins
Sulphuric acid 10% - 50%	7664-93-9		> 480 mins	> 480 mins
Sulphuric acid 96%	7664-93-9	> 480 mins	> 240 mins	> 240 mins



A garments resistance to chemical permeation depends on the material selected. A selection of common industrial chemicals is shown in the table above, but for the full list please check the Respirex permeation guide - visit [www.respirex.com](http://www.respirex.com) or scan the QR code.

# Suit Options



## Fall Arrest

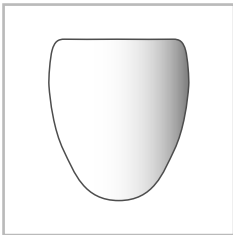
Fall arrest facility for use with an internal fall arrest harness with a back D ring fixing and used in conjunction with a retractable type fall arrester



## Suit ID

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

# Accessories



## Disposable Outer Visor

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



## 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



## Suit Care & Maintenance

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



## 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



## Three-Point Hanger

A three-point hanger designed to prevent damage to your garment from incorrect storage



## 5 Micron Filter

An in-line filter designed to remove dust and particulate contamination down to five microns, with an easy to change filter element.

# Chemical Permeation

Chemical	Physical State	Breakthrough Time VBV	Performance Class
Acetone	Liquid	> 480 mins	6
Acetonitrile	Liquid	> 480 mins	6
Ammonia	Gas	> 480 mins	6
Carbon Disulphide	Liquid	> 480 mins	6
Chlorine	Gas	> 480 mins	6
Dichloromethane	Liquid	> 61 mins	3
Diethylamine	Liquid	> 61 mins	3
Ethyl Acetate	Liquid	> 240 mins	5
n-Heptane	Liquid	> 480 mins	6
Hydrogen Chloride	Gas	> 480 mins	6
Methanol	Liquid	> 480 mins	6
Sodium Hydroxide 40%	Liquid	> 480 mins	6
Sulphuric Acid 98%	Liquid	> 480 mins	6
Tetrahydrofuran	Liquid	> 30 mins	2
Toluene	Liquid	> 480 mins	6

The test results indicate the resistance to permeation by chemicals of the material as required by clause 5.2 of EN943-2:2002. All tests were carried out under laboratory conditions by independent accredited laboratories in accordance with BS EN ISO 6529:2001.

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](http://www.respirex.com).

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## RESPIREX™

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