GTL™ GAS-TIGHT SUIT
CHEMPROTEX™ 400

RESPIREX™

Description

The GTL is a **Type 1a - ET** single use, regular robustness encapsulating gas-tight suit designed to protect the emergency responder against toxic, corrosive gases, liquids and solid chemicals.

Manufactured in **Chemprotex™ 400**, a high performance multi-layer chemical-barrier fabric the GTL suit is exceptionally light weight and comfortable.

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

SOLAS 1974/1988
Reg. II-2, 19.3.6.1

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 videos on donning procedure and on how to use the Permasure app.

: 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

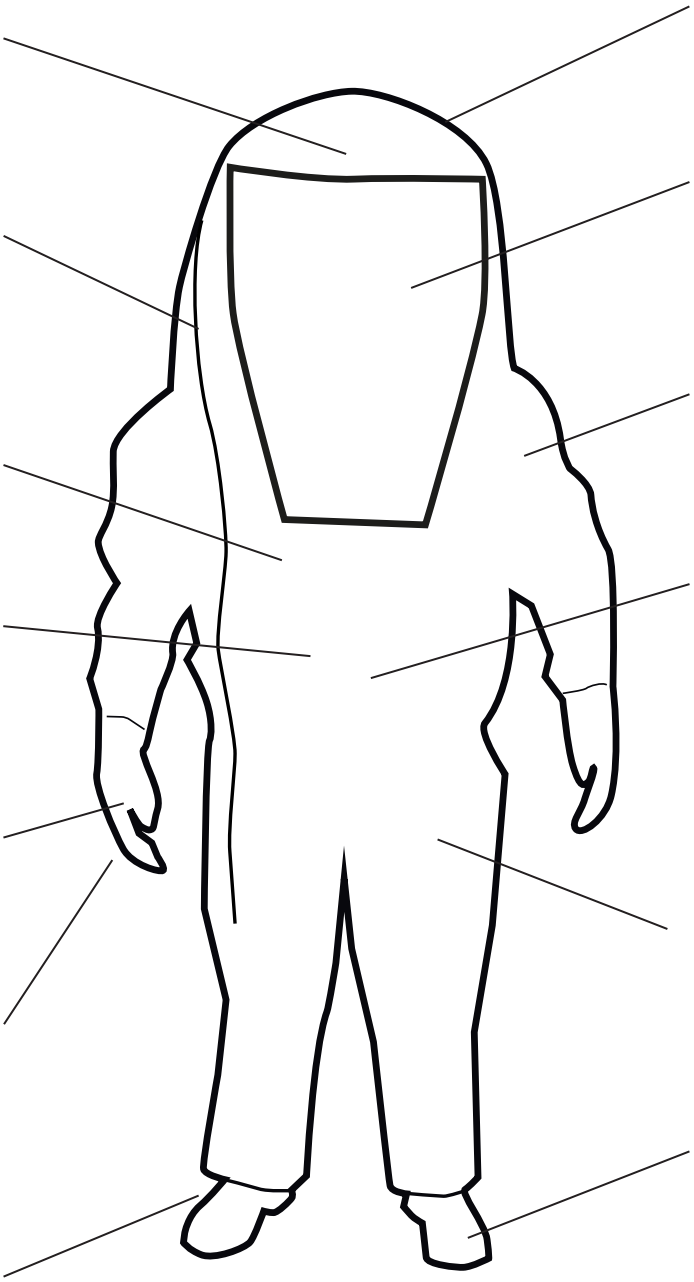
Protection against liquid & gaseous chemicals (**Type 1a**), infective agents and chemical warfare agents

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

Kemblok™ gloves welded to sleeves, with elasticated oversleeve

Neoprene outer gloves permanently attached to the Kemblok™ inner glove, for mechanical protection

Option for Integral **sock feet** with outer splash guard legs or permanently attached **Hazmax™ FPA** heat and flame resistant chemical safety boots.



Two exhalation valves maintain a comfortable working pressure inside the suit

Large chemically resistant flexible 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**

Seven year maintenance free shelf-life, maximum shelf life 10 years

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

For Type 1a (ET) the suit must be **worn with F3A certified safety footwear** (e.g. Hazmax™ FPA)

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.

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.

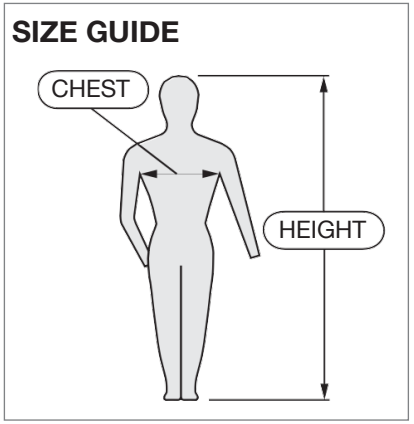
Accessories

HAZMAX™ FPA Boots

A chemically-protective anti-static safety boot with an integral steel toe cap and mid sole and vulcanized rubber sole. Resistant to heat and flame, conforming to the fire fighter boot standard EN 15090:2012 F3A.

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

GTL Suit	
Pack Size (max)	26 x 58 x 36 cm
Pack Weight (max)	3.1 kg
Carton Qty	3
Outer Carton Size	84 x 62 x 40 cm
Outer Carton Weight (max)	11.5 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™ 400	Performance Class of Chemprotex™ 400	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)	> 500 cycles	1	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	> 60 N	4	3
Puncture resistance	EN 863	> 10 N	2*	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	1	1
Seam strength	EN ISO 13935-2	> 300N	5	5

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

** The suit may not be suitable for use where there is a high risk of puncture - see Respirex GTB Reusable suit.*

Chemical Permeation & Permasure®

Chemical	Physical State	Chemprotex™ 400	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 EN ISO 6529 unless otherwise stated. Table shows average breakthrough times in minutes.

For full details of the chemical permeation performance of Chemprotex™ 400 and its performance against chemical warfare and infective agents, please visit the materials section of the Respirex website **www.respirex.com**.

The GTL 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