

COMPACT PRODUCT CATALOGUE



RESPIREX™



GAS-TIGHT SUITS FOR EMERGENCY TEAMS

BACKGROUND:

Gas-tight suits for emergency teams protect responders and chemical workers from dangerous and toxic chemicals in liquid or gaseous form. They are used in areas that are considered immediately dangerous to life and health (IDLH).

Our **Type 1A-ET** suits are designed for Self-Contained Breathing Apparatus (SCBA) worn inside the suit, which provides the greatest protection to the emergency responder and simplifies decontamination after an incident.

All gas-tight suits are leak-tightness tested during manufacture.

APPLICATIONS:

EN 943-2 ET Suits

- HAZMAT Incidents
- CBRN Incidents
- Chemical Manufacture, Handling & transport
- Petrochemical
- Shipping
- Bomb disposal

SUIT FAMILIES

Respirex manufacture three distinct families of Type 1A (ET) gas-tight suits; the best suit for your particular application will depend on the usage environment and how often suits are worn

GTL - Single-Use, Regular Robustness Suit

- Material:** Chemprotex™ 400
- Life:** 7 Years Maintenance Free
10 Year Shelf Life
- Features:** Fixed Kemblok™ gloves with outer neoprene glove, sock feet with splashguard outer leg. ESD Option for ATEX environments.



**USE
1x**

GTR - Limited Life, Regular Robustness Suit

- Materials:** Chemprotex™ X, Tychem® TK
- Life:** 5 Years Maintenance Free*
10 Year Shelf Life
- Features:** Gas-tight locking cuff system for easy glove changes, detachable Hazmax™ FPA boots or sock feet with outer splashguard leg. Options for pass through & equipment attachment points
- *Suits may be reused up to 5 times, depending on damage and contamination*



**USE
5x***

GTB - Reusable, Enhanced Robustness

- Materials:** Viton®/Butyl/Viton® (VBV), Viton® Laminate
- Life:** 15 Year Shelf Life
Re-test after each use or annually
- Features:** Gas-tight locking cuff system for easy glove changes, detachable Hazmax™ FPA boots or sock feet with outer splashguard leg. Options for pass through, equipment attachment points, suit ventilation and fall arrest.
- *Suits can be reused until they are no longer repairable, or cannot be decontaminated*



**FULLY
REUSABLE†**

GTL™ LIGHTWEIGHT SUIT



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

- Ten year shelf life (seven years maintenance free)
- ESD Version available for use in ATEX atmospheres
- Compatible with the Permeasure® Toxicity Modeller for calculation of safe working time with a given chemical based on real world conditions
- Fully encapsulating design to allow breathing apparatus to be worn inside the suit
- Heavy-duty 122cm (48") long gas-tight zip, fitted to the right hand side of the suit; a flap with a hook and loop fastener fitted to cover the teeth of the zip
- Adjustable internal support belt and bat-wing sleeves for optimum wearer comfort
- Flexible, multi-laminated, anti-mist visor giving clear undistorted vision
- Chemically protective, laminated glove welded to the suit material with an elasticated over-sleeve to prevent splash entering the supplied Neoprene outer gloves
- Integral sock feet with outer splash guard legs for use with F3A rated safety wellingtons (e.g. Hazmaz™ FPA)
- Pressure test & inspection required at year seven



Testing & Certification:



TYPE 1a-ET, EN 943-2:2019(ET)

Protective clothing against liquid and gaseous chemicals, aerosols and solid particles - Requirements for suits for Emergency Teams



EN 1073-2:2002, Class 3 (NPF >9090)

Protective clothing against radioactive contamination



FINABEL 0.7.C

Chemical Warfare Agents



EN 14126:2003

Protective Clothing Against Infective Agents



SOLAS 1974/1988

Reg. II-2, 19.3.6.1



Permeasure®
App
Compatible

GTL™ LIGHTWEIGHT SUIT

FABRIC OPTIONS

Chemprotex™ 400

A high performance chemical barrier material manufactured by laminating spunbonded polythene to a 7-layer barrier film with a protective outer coating.



Flex



Tear



Puncture



>480mins



Permasure®



SUIT OPTIONS



GTL ESD Suit for ATEX zones

Tested in accordance with IEC 60079-32-2:2015 and CEN/CLC/TR 16832:2015 the GTL ESD suit is suitable for use in the following ATEX environments:

Dust Ex atmospheres: **ZONES 20, 21 & 22***

Gas Ex atmospheres: **ZONES 0, 1 & 2**

The ESD version of the GTL suit incorporates attached antistatic butyl outer gloves and covered exhalation valves. **N.B.** The GTL ESD suit requires the use of ESD F3A safety wellingtons (e.g. Hazmaz™ ESD FPA)

** A risk assessment will be required in conductive dust environments*



Suit/Brigade ID

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

GTR LIMITED LIFE SUIT



Fully encapsulating **Type 1a - ET** regular robustness gas-tight suit manufactured in a choice of high performance, multi-layer layer, non-woven, chemical barrier fabrics.

- Fully encapsulating design to allow breathing apparatus to be worn inside the suit
- Heavy duty 122cm (48") long gas-tight zip, fitted to the right hand side of the suit - flap with a hook and loop fastener fitted to cover the teeth of the zip
- Adjustable internal support belt and bat-wing sleeves for optimal wearer comfort
- Flexible, multi-laminated, anti-mist visor giving clear undistorted vision
- Detachable gloves fitted using gas-tight locking cuff
- Bonded inner & outer gloves provide chemical and mechanical protection
- Supplied with detachable Hazmax™ FPA safety boots for speed of donning and increased user comfort; sock feet with outer splash guard legs available as an option
- Ten year shelf-life
- Maintenance free for the first five years unless used
- Pressure test annually from year five or after each use



Testing & Certification:



TYPE 1a-ET, EN 943-2:2019(ET)

Protective clothing against liquid and gaseous chemicals, aerosols and solid particles - Requirements for suits for Emergency Teams



EN 1073-2:2002, Class 3 (NPF >9090)

Protective clothing against radioactive contamination



FINABEL 0.7.C

Chemical Warfare Agents



EN 14126:2003

Protective Clothing Against Infective Agents



SOLAS 1974/1988

Reg. II-2, 19.3.6.1

GTR LIMITED LIFE SUIT

FABRIC OPTIONS

Chemprotex™ X (NEW)

Two layers of the Chemprotex™ 400 barrier film sandwiched around a spunbonded polythene core.



Flex



Tear



Puncture



>480mins



Permasure®



DuPont™ Tychem® TK

A high strength, tear resistant, 100% nonwoven polyester staple fabric sandwiched between two proprietary non-halogenated barrier films.



Flex



Tear



Puncture



>480mins



DuPont™ and Tychem® are trademarks or registered trademarks of E.I. du Pont de Nemours and Company

SUIT OPTIONS



Anchor Hook

External equipment attachment point



Torch Ring Attachment

External equipment attachment point



DSU Attachment

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



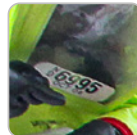
Personal Line Attachment

External equipment attachment point



Pass-Through

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



Suit/Brigade ID

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

GTB™ REUSABLE SUIT



The GTB is a **Type 1A - ET** enhanced robustness gas-tight suit suitable for emergency responders and in industrial applications such as HF alkylation facilities. The fully encapsulating suit covers the breathing apparatus and facemask, simplifying decontamination. Manufactured in either Viton®/Butly/Viton® (VBV), our hardest wearing material, or Laminate Viton®, our lightest reusable Type 1A-ET suit fabric, with excellent chemical permeation resistance.

- Heavy-duty gas-tight zip fitted to the right hand side of the suit (running from the thigh to the top of the head), protected by double storm flaps with a hook and loop fastener
- Large double-layer rigid visor, provides clear undistorted vision
- Detachable gloves fitted using gas-tight locking cuff
- Bonded inner & outer gloves provide chemical and mechanical protection
- Supplied with detachable Hazmax™ FPA safety boots for speed of donning and increased user comfort, sock feet with outer splash guards available as an option
- Adjustable internal waist belt allows wearers of varying sizes to use the suit comfortably
- Fifteen year shelf life
- Pressure test required annually or after each use



Testing & Certification:



TYPE 1a, EN 943-2:2019(ET)

Protective clothing against liquid and gaseous chemicals, aerosols and solid particles - Requirements for suits for Emergency Teams



EN 1073-2:2002, Class 3 (NPF >9090)

Protective clothing against radioactive contamination



FINABEL 0.7.C*

Chemical Warfare Agents



EN 14126:2003

Protective Clothing Against Infective Agents

**Viton®/Butly/Viton® only*

GTB™ REUSABLE SUIT

FABRIC OPTIONS

Viton®/Butyl/Viton®

A polyester fabric coated one side with orange fireproof DuPont™ Viton® with a black fireproof butyl undercoat and one side with black fireproof Viton® with a black fireproof butyl undercoat.



Flex



Tear



Puncture



>480mins



Chlorotex (NEW)

A high-performance laminate material with a CSM (Chlorosulfonated Polyethylene) rubber orange inner and red outer surface and an internal chemical barrier film.



Flex



Tear



Puncture



>480mins

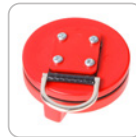


SUIT OPTIONS



Anchor Hook

External equipment attachment point



Torch Ring Attachment

External equipment attachment point



DSU Attachment

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



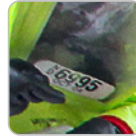
Personal Line Attachment

External equipment attachment point



Pass-Through

Allows connection of a second cylinder or air-line to the second man attachment on the SCBA



Suit/Brigade ID

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



Suit Ventilation (GTVB)

Adjustable ventilation system for the arms and legs of the suit, fed from the wearers BA set.



Fall Arrest

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

GAS-TIGHT SUITS FOR INDUSTRY



BACKGROUND:

The GLS range of suits were developed at the request of several leading European chemical manufacturers and represent a new concept in lightweight industrial gas-tight suits. They are **single-use Type 1** garments that are comfortable, light and flexible.

Type 1a GLS suits are designed for Self-Contained Breathing Apparatus (SCBA) worn inside the suit, which provides the greatest protection to the emergency responder and simplifies decontamination after an incident. **Type 1b** GLS suits are for SCBA worn externally and can be useful when working in confined spaces, as the SCBA cylinder can be slipped off the shoulders and passed forward. **Type 1c** suits provide breathing air via an air-line and are commonly used in industrial applications.

They are also suitable for use in a number of different EX zones (see the individual suits for details).

APPLICATIONS:

EN 943-1 Industrial Suits

- Industrial fire brigades
- Chemical industry
- Petrochemical
- Pharmaceutical

GLS 300 A

The GLS 300A suit in Chemprotex™ 300 is a single use **Type 1a** fully encapsulating gas-tight chemical protection suit covering both the wearer and the breathing apparatus. The suit combines the benefits of a lightweight high-performance chemical barrier fabric with a gas-tight construction. It incorporates attached antistatic chemical gloves, sock feet and a lightweight gas-tight zip.

- Large laminated anti-mist visor gives clear undistorted vision
- Twin exhalation valves to side of hood to ensure that the suit maintains a comfortable working pressure
- Lightweight gas-tight zip fitted to rear of suit, closing at the top and covered with a double storm flap with hook and loop fastener
- Chemically protective anti-static glove attached to the suit
- Integral socks in Chemprotex™ 300 material with splash-guard outer legs allowing the wearing of customer's own boots. (Boots not included)
- Must be worn with ESD footwear to ensure a conductive path to ground [when used in potentially explosive atmospheres]



Testing & Certification:



TYPE 1a, EN943-1:2015+A1:2019
Gas-Tight Chemical Protective Suits



TYPE 3, EN14605:2005+A1 2009
Liquid-Tight Chemical Protective Clothing



TYPE 4, EN14605:2005+A1 2009
Spray-Tight Chemical Protective Clothing



TYPE 5, EN13982-1:2004+A1:2010
Particulate Protective Clothing



TYPE 6, EN13034:2005+A1 2009
Limited Spray-Tight Chemical Protective Clothing

ATEX Tested for use in explosive environments:



Dust Ex atmospheres: **ZONES 20, 21 & 22**
Gas Ex atmospheres: **ZONES 1 & 2**

Tested in accordance with EN IEC 60079-32-2: (2015)
and CEN/CLC/TR 16832:2015



Permasure®
App
Compatible

GLS 300 B



The GLS 300B suit in Chemprotex™ 300 is a single use **Type 1b** gas-tight chemical protection suit designed for use with breathing apparatus worn outside the suit, a facemask and filter or airline respirator. The suit combines the benefits of a lightweight high-performance chemical barrier fabric with a gas-tight construction. It incorporates permanently attached antistatic chemical gloves, sock feet and a lightweight gas-tight zip.

- Integral hood with flexible facemask seal with a protective outer chemical barrier fabric. For a gas and liquid-tight seal the protective outer fabric should be taped to the facemask
- Lightweight gas-tight zip fitted across the shoulders in rear of suit, with double external cover flaps with a hook and loop fastener
- Chemically protective anti-static glove attached to the suit
- Integral socks in Chemprotex™ 300 material with splash-guard outer legs allowing the wearing of customer's own boots. (Boots not included)
- Must be worn with ESD footwear to ensure a conductive path to ground [when used in potentially explosive atmospheres]



Testing & Certification:



TYPE 1b, EN943-1:2015+A1:2019
Gas-Tight Chemical Protective Suits



TYPE 3, EN14605:2005+A1 2009
Liquid-Tight Chemical Protective Clothing



TYPE 4, EN14605:2005+A1 2009
Spray-Tight Chemical Protective Clothing



TYPE 5, EN13982-1:2004+A1:2010
Particulate Protective Clothing



TYPE 6, EN13034:2005+A1 2009
Limited Spray-Tight Chemical Protective Clothing

ATEX Tested for use in explosive environments:



Dust Ex atmospheres: **ZONES 20, 21 & 22**
Gas Ex atmospheres: **ZONES 0, 1 & 2**
Tested in accordance with EN IEC 60079-32-2: (2015)
and CEN/CLC/TR 16832:2015



PermaSure®
App
Compatible

GLS 300 C

The GLS 300C suit in Chemprotex™ 300 is a single use air-fed gas-tight **Type 1c** chemical protection suit for use with breathable air supplied from an external compressed air source providing positive pressure. The suit combines the benefits of a lightweight high-performance chemical barrier fabric with a gas-tight construction to method 2 of ISO 17491-1.

- Semi-rigid laminated visor
- Lightweight gas-tight zip fitted across the chest covered by double external storm flaps with hook and loop fastener
- Chemically protective anti-static glove attached to the suit
- Integral socks in Chemprotex™ 300 material with splash-guard outer legs
- Must be worn with ESD footwear when used in potentially explosive atmospheres
- The air distribution system in the hood and air permeable collar provide cooling air through the suit
- For use with Bartels & Rieger two piece air control valve (ref. RVD039W), supplied separately
- The hood design provides high protection without the need for a tight-fitting face piece, which means:
 - Can be used by wearers with facial hair or glasses
 - Training needs are reduced
 - Face-fit testing is not required



Testing & Certification:



TYPE 1c, EN943-1:2015+A1:2019
Gas-Tight Chemical Protective Suits



TYPE 3, EN14605:2005+A1:2009
Liquid-Tight Chemical Protective Clothing



TYPE 4, EN14605:2005+A1:2009
Spray-Tight Chemical Protective Clothing



TYPE 5, EN13982-1:2004+A1:2010
Particulate Protective Clothing



TYPE 6, EN13034:2005+A1:2009
Limited Spray-Tight Chemical Protective Clothing

ATEX Tested for use in explosive environments:



Dust Ex atmospheres: ZONES 20, 21 & 22
Gas Ex atmospheres: ZONES 1 & 2
Tested in accordance with EN IEC 60079-32-2: (2015) and
CEN/CLC/TR 16832:2015



Permasure®
App
Compatible

GTA



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.

- 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 CO₂ below 1%
- Gas-tight locking cuff system for changing gloves
- Airline connection fitted to the back of suit, with customer's choice of coupling
- Choice of fixed or detachable chemical safety boots or sock feet
- Five exhalation valves maintain a comfortable working pressure inside the suit
- Chemically resistant, laminated, rigid visor providing clear undistorted vision and a wide field of view
- Three-point hanging system to prevent damage during storage
- Adjustable internal support belt
- Internal pressure test based on ISO 17491-1:2012 (Clause 5.3, Method 2) conducted before despatch to confirm the suit is gas-tight

Testing & Certification:



TYPE 1c, EN943-1:2015+A1:2019
Gas-Tight Chemical Protective Suits

GTB - INDUSTRIAL TYPE 1

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

The suit is available in a range of chemically resistant fabrics, depending on the application and chemical challenge.

- Encapsulating design for Self Contained Breathing Apparatus (SCBA) worn inside the suit
- Gas-tight zip running from side of head to lower thigh
- Protection against liquid & gaseous chemicals (Type 1), infective agents and chemical warfare agents
- Gas-tight locking cuff system for changing gloves
- Gloves compatible with the choice of suit material
- Choice of fixed or detachable chemical safety boots or sock feet
- Two exhalation valves maintain a comfortable working pressure inside the suit
- Chemically resistant, laminated, rigid visor
- 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
- Internal pressure test based on ISO 17491-1:2012 (Clause 5.3, Method 2) conducted before despatch to confirm the suit is gas-tight

Testing & Certification:



TYPE 1a, EN943-1:2015+A1:2019
Gas-Tight Chemical Protective Suits



GLS SUITS

FABRIC OPTION

Chemprotex™ 300 Fabric

A lightweight and highly flexible chemical barrier material manufactured by laminating spunbonded polythene to a 5-layer barrier film with a protective outer coating.



Flex



Tear



Puncture



>480mins



Permasure®



GTB INDUSTRIAL & GTA SUITS

FABRIC OPTION

Butyl Fabric

A double faced Polyester fabric with a coating of olive green Bromobutyl on both sides.



Flex



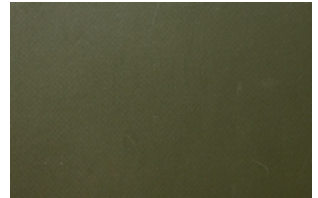
Tear



Puncture



>480mins



Neoprene Fabric

A double faced Polyester fabric with a coating of Polychloroprene rubber on both sides. Available in yellow or high visibility orange.



Flex



Tear



Puncture



>480mins



C2 PVC Fabric

Plasticised PVC coated onto both sides of a nylon substrate. Available in yellow or green.



Flex



Tear



Puncture



>480mins



SUIT OPTIONS GTB INDUSTRIAL & GTA



Suit ID

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



Fall Arrest

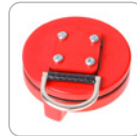
For use with an internal fall arrest harness with a back D ring fixing and used in conjunction with a retractable type fall arrester

ADDITIONAL SUIT OPTIONS FOR GTB INDUSTRIAL



Anchor Hook

External equipment attachment point



Torch Ring Attachment

External equipment attachment point



DSU Attachment

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



Personal Line Attachment

External equipment attachment point



Pass-Through

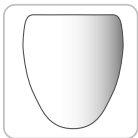
Allows connection of a second cylinder or air-line to the second man attachment on the SCBA



Suit Ventilation (GTVB)

Adjustable ventilation system for the arms and legs of the suit, fed from the wearers BA set.

ACCESSORIES



Disposable Outer Visor

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



Suit Care & Maintenance

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



Three-Point Hanger

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



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

LIQUID-TIGHT SUITS



BACKGROUND:

Limited-life **Type 3** liquid tight chemical splash suits provide an economical solution for dealing with a wide range of chemical and CBRN hazards. Particularly suitable for applications where suits are needed infrequently, where the type of hazard is unknown, or where decontamination facilities are limited - they are widely used by fire brigades, police, civil defence, transport and shipping companies.

APPLICATIONS:

- HAZMAT Incidents
- CBRN Incidents
- Chemical Manufacture, Handling & transport
- Shipping
- Decontamination

SC1 SPLASH SUIT

Lightweight, **Type 3** liquid-tight chemical splash contamination suit, designed for use with breathing apparatus worn outside the suit, or with a face mask and filter.

- Compatible with the Permasure® Toxicity Modeller for calculation of safe working time with a given chemical based on real world conditions
- One-piece construction in **Chemprotex™ 300**
- Integral hood, with Neoprene rubber face grommet, to seal around the wearer's face mask
- 91cm (36") Nylon zip, fitted across the shoulders in the rear of the suit, with double external zip-flaps sealed with double-sided tape
- Kemblok™ chemically protective laminated glove, welded to the suit material
- Supplied with separate neoprene outer gloves for mechanical protection
- Integral socks, with plain outer leg, allowing the wearing of customer's own safety boots (boots not included)



Testing & Certification:



TYPE 3, EN14605:2005+A1 2009
Liquid-Tight Chemical Protective Clothing



TYPE 4, EN14605:2005+A1 2009
Spray-Tight Chemical Protective Clothing



TYPE 5, EN13982-1:2004+A1:2010
Particulate Protective Clothing



TYPE 6, EN13034:2005+A1 2009
Limited Spray-Tight Chemical Protective Clothing



FINABEL 0.7.C
Chemical Warfare Agents



EN 14126:2003
Protective Clothing Against Infective Agents



EN 1073-2:2002
Protective clothing against radioactive contamination



EN1149-1:2006
Antistatic protective clothing



SOLAS 1974/1988
Reg. II-2, 19.3.6.1



Permasure®
App
Compatible

SPLASHMASTER™ COVERALL



Permasure®
App
Compatible

Lightweight, **Type 3** liquid-tight, limited-life coverall, designed for use with a face mask and filter or appropriate face and head protection.

- Compatible with the Permasure® Toxicity Modeller for calculation of safe working time with a given chemical based on real world conditions
- One-piece construction in blue **Chemprotex™ 300**
- Integral elasticated hood
- Adjustable throat flap for improved seal around the base of the facemask
- Nylon zip, fitted vertically from groin to neck with twin flaps and hook and loop fastener to seal
- Unique zip-flap arrangement ensures liquid tight performance without the need for taping the flap
- Elasticated legs
- Elasticated wrists with thumb loop

Testing & Certification:



TYPE 3, EN14605:2005+A1 2009
Liquid-Tight Chemical Protective Clothing



TYPE 4, EN14605:2005+A1 2009
Spray-Tight Chemical Protective Clothing



TYPE 5, EN13982-1:2004+A1:2010
Particulate Protective Clothing



TYPE 6, EN13034:2005+A1 2009
Limited Spray-Tight Chemical Protective Clothing



EN 14126:2003
Protective Clothing Against Infective Agents



EN1149-5:2018
Antistatic protective clothing

REUSABLE ONE-PIECE SIREN SUIT

Type 4 one-piece siren suit in Butyl, Neoprene or PVC, with a choice of collar. Nylon zip fitted from throat centre to right hand thigh, plain inner zip flap and single outer zip flap with hook and loop fastener.

Collar Options: Mandarin, 2" collar, squared collar

Cuff Options: Single elasticated, double elasticated, Soft cuffs and cones, locking cuff.

Leg Options: Plain leg with hook and loop fastener for adjustment, elasticated inner with plain outer, double elasticated, detachable Hazmax™ boots.



Testing & Certification:



TYPE 3*, EN 14605:2005+A1 2009

Liquid-Tight Chemical Protective Clothing



TYPE 4, EN 14605:2005+A1 2009

Spray-Tight Chemical Protective Clothing

**N.B. Certified to Type 3 when used with a Simclair Hood - Requires taping at ankles (depending on leg option) and zip*

REUSABLE ONE-PIECE COWL SUIT

Type 3 one-piece cowl suit in yellow Neoprene with hood, Nylon zip fitted from throat centre to right hand thigh, plain inner zip flap and single outer zip flap with hook and loop fastener.

Hood Options: Elasticated or draw string

Cuff Options: Single elasticated, double elasticated, Soft cuffs and cones, locking cuff.

Leg Options: Plain leg with hook and loop fastener for adjustment, elasticated inner with plain outer, double elasticated, detachable Hazmax™ boots.



Testing & Certification:



TYPE 3*, EN 14605:2005+A1 2009

Liquid-Tight Chemical Protective Clothing

**N.B. Taping required at ankles (depending on leg option), zip and facemask for Type 3.*

REUSABLE JACKET



Type 3[PB]* jacket in Butyl, Neoprene or PVC and available with a choice of collar or hood. Nylon zip, fitted from throat centre to waist with plain inner zip flap and single outer zip flap with hook and loop fastener. For full protection, wear with an appropriate helmet with a Neoprene neck flap.

Collar Options: Mandarin, 2" collar, squared collar

Hood Options: Elasticated or draw string

Cuff Options: Single elasticated, double elasticated, Soft cuffs and cones, locking cuff.

Testing & Certification:



TYPE 3 [PB]*, EN 14605:2005+A1 2009
Liquid-Tight Chemical Protective Clothing



TYPE 4 [PB], EN 14605:2005+A1 2009
Spray-Tight Chemical Protective Clothing

**N.B. Certified to Type 3 when used with a Simplair Hood - Requires taping at ankles (depending on leg option) and zip*

REUSABLE TROUSERS



Type 3[PB]* bib-trousers in yellow Neoprene with red webbing braces and buckles at the front.

Leg Options: Plain leg with hook and loop fastener for adjustment, elasticated inner with plain outer, double elasticated, detachable Hazmax™ boots.

Testing & Certification:



TYPE 3 [PB]*, EN 14605:2005+A1 2009
Liquid-Tight Chemical Protective Clothing



TYPE 4 [PB], EN 14605:2005+A1 2009
Spray-Tight Chemical Protective Clothing

**N.B.: Jacket and trousers individually meet Type PB[3] and PB[4] but meet Type 3 and 4 when worn in combination. Jackets with a hood must be worn with a facemask to meet Type 3, Jackets with a collar must be worn with a protective hood (e.g. Simplair hood or Anti-splash hood).*

Taping required at ankles (depending on leg option), zip and facemask/hood for Type 3.



AIR-FED HOODS & SUITS

BACKGROUND:

Reusable air-fed chemical suits and hoods are typically used in petrochemical and chemical applications and in pharmaceutical applications where there is no risk of cross-contamination. Suits are certified to EN 943-1:2002 Type 2 (non-gas-tight chemical protective suits), while hoods are approved to EN 14594 (respiratory protective devices)

APPLICATIONS:

- Chemical industry
- Petrochemical
- Pharmaceutical
- Tank/Silo cleaning

SIMPLAIR REUSABLE TANK SUIT



Type 2 non-gas-tight reusable tank suit available in a range of chemically resistant materials with rigid visor and outer disposable visor.

- 122cm (48") Heavy-duty gas-tight zip, positioned down the right hand side of the suit, closing at the top
- Respirax™ locking cuff system with reinforced cuffs
- Leg options: elasticated inner and outer legs with elasticated stirrups, sock foot or detachable Hazmax™ boots
- Audible warning device designed to activate if the airflow drops below the minimum required to maintain CO₂ below 1%
- Adjustable waist-belt supports the air system and is fitted with a foam back pad for increased comfort
- Air distribution block with twin breathing hoses to either side of the hood and cooling hoses to wearer's arms and legs
- Three-point hanging attachments
- Pigtail yellow PVC $\frac{3}{8}$ " bore air-hose, terminating in a $\frac{1}{4}$ " BSP male thread
- Exhalation valves ensure that the suit maintains a comfortable working pressure
- Available in Butyl, Neoprene or C2 PVC materials
- Required airflow: 360(min) to 440(max) L/min

Testing & Certification:



TYPE 2, EN 943-1:2002

Protective clothing against liquid and gaseous chemicals, aerosols and solid particles - Non gas-tight

SIMPLAIR REUSABLE SUIT

Type 2 non-gas-tight reusable suit available in a range of chemically resistant materials.

- Air system completely contained within the suit that provides breathable and cooling air to the user
- Audible warning device designed to activate if the airflow drops below the minimum required to maintain CO₂ below 1%
- Adjustable waist-belt supports the air system and is fitted with a foam back pad for increased comfort
- Four exhalation valves ensure that the suit maintains a comfortable working pressure
- Flexible PVC visor giving a 360° field of vision, or durable rigid PVC visor (with optional removable outer visor) for undistorted vision
- Three-point hanging system which helps prevent distortion during storage
- 91cm (36") Water-tight zip or double-sided Nylon zip, fitted across the chest
- 15cm (6") Zip flap - plain or with hook and loop fastener
- Respirex™ locking cuff system
- Leg options: elasticated inner and outer legs with elasticated stirrups, sock foot or detachable Hazmax™ boots
- A wide range of approved airline couplings can be fitted to the suit, however it is recommended that large bore couplings are used
- Available in Butyl, Neoprene or C2 PVC materials
- Required airflow: 360(min) to 440(max) L/min



Testing & Certification:



TYPE 2, EN 943-1:2002

Protective clothing against liquid and gaseous chemicals, aerosols and solid particles - Non gas-tight



SIMPLAIR REUSABLE HOOD

Air-supplied hood available in yellow Neoprene material or PVC with a choice of a rigid visor and outer disposable visor or a soft 360° visor.

- Drawstring neck-seal
 - PVC Hoods feature 360° soft visor; Neoprene hoods incorporate a rigid wraparound visor
 - Three-point hanging attachments
 - Adjustable waist-belt with back pad
 - Simplair air system mounted in cape incorporating low-flow warning whistle
 - Air distribution block with twin breathing hoses to either side of the hood.
 - Pigtail yellow PVC $\frac{3}{8}$ " bore air-hose, terminating in a $\frac{1}{4}$ " BSP male thread
 - Required airflow: 220(min) to 280(max) L/min
-



Testing & Certification:



CLASS 4A, EN 14594:2018 (Head-top)
Respiratory Protective Devices

CLASS 4B, EN 14594:2018 (Belt Assembly)
Respiratory Protective Devices

ACTIVEAIR API SUIT

The ActiveAir API suit is a single-use **Type 3** (liquid-tight), one-piece suit with an integral breathing and cooling air system that provides the highest level of protection against particulate and liquid chemical hazards.

Manufactured from our high-performance Chemprotex™ 300 chemical barrier fabric, the suit is designed for use with breathable air supplied from an external positive pressure compressed air source

- Front entry design with zip across chest and two protective cover flaps with double sided tape
- Choice of Kemblok™ chemical glove welded to the sleeve, Push fit cuff for customers glove choice or attached anti-static butyl gloves (see below).
- Choice of sock feet for use with external boots or Integral overshoes for shoes worn inside the suit (see below)
- Cooling air is delivered to the arms and legs of the suit
- 0.75mm PVC visor for clear undistorted vision
- External air-line coupling and comfort air-flow adjuster
- Internal low flow warning whistle and adjustable waist belt



Testing & Certification:



TYPE 3 | EN 14605:2005+A1:2009
Liquid-Tight Chemical Protective Clothing



TYPE 4 | EN 14605:2005+A1:2009
Spray-Tight Chemical Protective Clothing



TYPE 5 | EN 13982-1:2004+A1:2010
Particulate Protective Clothing



TYPE 6 | EN 13034:2005+A1:2009
Limited Spray-Tight Chemical Protective Clothing



CLASS 4A | EN 14594:2018
Respiratory protective devices



EN 1149-5:2018
Antistatic Protective Clothing

ATEX Tested for use in explosive environments:



Dust Ex atmospheres: **ZONES 20, 21 & 22**
Gas Ex atmospheres: **ZONES 0, 1 & 2**
Tested in accordance with EN IEC 60079-32-2: (2015)
and CEN/CLC/TR 16832:2015

*Assuming external metal airline fitting is earthed via connected airline
Suits with a push-fit cuff are not suitable for ATEX environments*

ACTIVEAIR AUTOFLOW SUIT



The ActiveAir AutoFlow suit is a single-use Type 3 (liquid-tight), one-piece suit with a reusable, removable air system that provides the highest level of protection against particulate and liquid chemical hazards.

Manufactured from our high-performance Chemprotex™ 300 chemical barrier fabric, the suit is designed for use with breathable air supplied from an external positive pressure compressed air source

- Front entry design with zip across chest and two protective cover flaps with double sided tape
- Breathing air and cooling airflow; air is delivered into the hood and passes through a permeable neck seal to the body
- Choice of Kemblok™ chemical glove welded to the sleeve, Push fit cuff for customers glove choice or attached anti-static butyl gloves (see below).
- Choice of Sock feet for use with external boots or Integral overshoe for shoes worn inside the suit (see below)
- Internal belt loops for use with a waist mounted AutoFlow 2-9 regulator and belt, which is easily removable for re-use
- Short air-line 'trunk' in the rear of the suit to feed through the air supply hose - this is then taped or cable tied tight around the hose



For use with the reusable ActiveAir AutoFlow Regulator

Testing & Certification:



TYPE 3 | EN 14605:2005+A1:2009
Liquid-Tight Chemical Protective Clothing



TYPE 4 | EN 14605:2005+A1:2009
Spray-Tight Chemical Protective Clothing



TYPE 5 | EN 13982-1:2004+A1:2010
Particulate Protective Clothing



TYPE 6 | EN 13034:2005+A1:2009
Limited Spray-Tight Chemical Protective Clothing



CLASS 4A | EN 14594:2018
Respiratory protective devices



EN 1149-5:2018
Antistatic Protective Clothing

ATEX Tested for use in explosive environments:



Dust Ex atmospheres: **ZONES 20, 21 & 22**

Gas Ex atmospheres: **ZONES 0, 1 & 2**

Tested in accordance with EN IEC 60079-32-2: (2015) and CEN/CLC/TR 16832:2015

Assuming connected airline is earthed

Suits with a push-fit cuff are not suitable for ATEX environments

ACTIVEAIR AUTOFLOW HOOD

The ActiveAir AutoFlow hood is a single-use Type PB [4] (partial body, spray-tight), hood with a reusable, removable air system that provides the highest level of protection against particulate and liquid chemical hazards. The hood is designed to be worn with compatible protective coveralls.

Manufactured from our high-performance Chemprotex™ 300 chemical barrier fabric, the suit is designed for use with breathable air supplied from an external compressed air source providing positive pressure

- Breathing air and cooling airflow; air is delivered into the hood and escapes through an air permeable neck seal
- Front & rear cape panels provide protection to the wearer's chest area
- 0.75mm PVC visor for clear undistorted vision
- For use with a waist mounted AutoFlow 2-9 regulator and belt which is easily removable for re-use



Testing & Certification:



TYPE PB [4] | EN 14605:2005+A1:2009
Spray-Tight Chemical Protective Clothing



TYPE PB [6] | EN 13034:2005+A1:2009
Limited Spray-Tight Chemical Protective Clothing



CLASS 4A | EN 14594:2018
Respiratory protective devices



For use with the reusable ActiveAir AutoFlow Regulator

ACTIVEAIR AUTOFLOW REGULATOR

The AutoFlow 2-9 regulator is a reusable belt mounted breathing air regulator for use with the ActiveAir AutoFlow Range of suits and hoods. The regulator operates from a working inlet pressure between 2 and 9 bar (29 to 130 psi) and maintains a consistent, comfortable airflow into the suit or hood, while minimising noise.

The regulator includes a low-flow warning whistle, to alert the wearer if the inlet pressure drops below the Manufacturers Minimum Design Flow (MMDF) and is mounted to a removable decontaminatable waist belt.



Testing & Certification:



CLASS 4A | EN 14594:2018
Respiratory protective devices

POWERED AIR SUITS



BACKGROUND:

Powered air systems provide continuous filtered air to the user increasing wearer comfort and allowing the user to work for longer due to the reduced physical burden.

The loose-fitting hood design of powered respirator suits (and hoods) provides high protection without the need for a tight-fitting face piece, which means:

- Many wearers feel less constricted
- They can be used by wearers with facial hair
- Training needs are reduced
- Face-fit testing is not required
- The unobstructed view of the wearers face provides reassurance to casualties and aids communication

APPLICATIONS:

- CBRN Incidents
- Casualty Triage & Decontamination
- Infectious Diseases

PRPS³ SUIT

The Powered Respirator Protective Suit (PRPS) is a one-piece gas-tight chemical protective suit for use by emergency response personnel after a CBRN incident. The suit was developed in conjunction with the UK National Health Service and is now widely used in the UK and overseas.

- Manufactured from DuPont™ Tychem® TK, a high performance, multi-layer chemical barrier material
- Respiratory system comprising a battery powered **CleanAir® Chemical 2F powered respirator** fitted with a visual display unit mounted inside the suit at the base of the visor, and audible alarm
- Battery pack provides 1 hour operational use, plus 15 minutes for decontamination
- **Two CleanAIR® CBRN (A3B2E2K2P3) filters** provide protection against chemical and biological warfare agents
- Heavy duty gas-tight zip fitted across the chest enclosed by double external storm flaps with hook and loop fastener
- Dual glove system comprising protective outer gloves bonded to inner Kemblok™ laminate gloves
- Gas-tight locking cuff mechanism
- Highly chemically resistant Hazmax™ FPA safety boots permanently attached to suit
- Improved operational duration over gas-tight SCBA suits
- Pressure test every three years or after each use



Options:

- Reusable PVC training suit - PRPS(T)
- Choice of lightweight dexterity gloves for medical tasks or heavy-duty gloves for increased physical protection

Testing & Certification:



TYPE 1c*, EN 943-2:2019

Protective clothing against liquid and gaseous chemicals, aerosols and solid particles



FINABEL 0.7.C

Chemical Warfare Agents



EN 14126:2003

Protective Clothing Against Infective Agents



EN12941:1998+A2:2008

Respiratory protective devices

**The Powered Respirator Protective Suit (PRPS) has been assessed by a notified body as satisfying Annex II of the PPE regulation (EU) 2016/425 using technical standards EN 943-2 'Protective clothing against liquid and gaseous chemicals, including liquid aerosols and solid particles Part 2: Performance requirements for "gas-tight" (Type 1) chemical protective suits for emergency teams (ET)' and EN 12941 'Respiratory protective devices - Powered filtering devices incorporating a helmet or a hood - Requirements, testing, marking'.*

RJS SUIT



The RJS Chemical Respirator Suit in **Chemprotex™ 300** is a single-use one-piece Type 3 chemical protective suit designed to protect the wearer against a broad range of industrial chemical and particulate hazards.

Air drawn through the filters enters through a breathing tube in the hood and exits through exhaust valves in the knees, providing a cooling air stream across the body

- Chest zip with double storm flap and hook and loop fastener - no taping is required to seal
- Head-up display in the hood and rear status display window indicate powered respirator status, hours used and any warnings
- Suit achieves a Type 3 classification without the need for taping at the zip flap, sleeves or ankles, simplifying the donning & doffing process
- Attached Kemblok™ chemical barrier gloves with separate neoprene outer gloves
- Integral sock foot with outer splash guard leg for use with safety boots worn outside the suit

Testing & Certification:



TYPE 3, EN14605:2005+A1 2009
Liquid-Tight Chemical Protective Clothing



TYPE 4, EN14605:2005+A1 2009
Spray-Tight Chemical Protective Clothing



TYPE 5, EN13982-1:2004+A1:2010
Particulate Protective Clothing



TYPE 6, EN13034:2005+A1 2009
Limited Spray-Tight Chemical Protective Clothing



FINABEL 0.7.C
Chemical Warfare Agents



EN 14126:2003
Protective Clothing Against Infective Agents



EN12941:1998+A2:2008
Respiratory protective devices



CleanAir® Chemical 2F
Powered Respirator

CLEANAIR® CHEMICAL 2F POWERED RESPIRATOR

Worn inside the RJS suit, with the filters mounted externally the Chemical 2F powered respirator combines sophisticated electronics with a durable easy-clean construction. The auto-closing inlets prevent contamination entering the suit while the filters are being changed, while the smart flow control system maintains a constant airflow regardless of filter loading or battery charge.

Rechargeable or primary (single-use, 10 year shelf life) batteries are available and a remote audio and visual alarm fitted in the suit hood indicates when safe working time has elapsed or if there is an issue with the respirator. A wide range CleanAIR® particulate, chemical and combination filters are available to suit your particular application.



BENEFITS OF POWERED RESPIRATOR SUITS



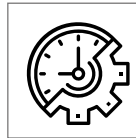
Can be used by wearers with **facial hair and/or glasses**



Improved operational duration over gas-tight suits with SCBA



No requirement for **face-fit testing**



Up to six times the resource efficiency compared with gas-tight SCBA suits thanks to the lower physiological loading and increased duration



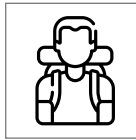
Training needs are reduced



Significantly **lighter and more comfortable**, with easier breathing and less equipment in body contact than with a gas-tight suit with SCBA



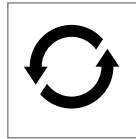
Powered respirator provides **cooling air over the head** and through the suit, making the wearer more comfortable and better able to focus on tasks



The lower weight and increased user comfort results in a **lower physiological load** than a conventional gas-tight suit



A **Large visor** provides reassurance to casualties and victims by maintaining non verbal communication through facial expression and aids speech recognition.



Uncontaminated or fully decontaminated **suits can be re-used** following a gas-tight re-test and re-certification



PROTECTIVE FOOTWEAR

BACKGROUND:

Workmaster™ boots from Respirex are manufactured at our state of the art production facility in the UK and incorporate a number of significant innovations.

Our boots are available with a high-grip vulcanised rubber soles which significantly improves the slip resistance and the durability of the sole compared to conventional materials. It is also fuel and oil resistant and resistant to contact with hot surfaces.

We have a range of specialist materials including the highly chemically resistant Hazmax™ compound and our HV3 Dielectric compound for boots certified for live working up to 26,500 Volts.

Our full range of boots (including food and construction industry footwear) can be found at www.workmasterboots.com

APPLICATIONS:

HAZMAX™ BOOTS

- Hazmat Incidents
- Spill clean-up
- Chemical Handling
- Decontamination

DIELECTRIC BOOTS

- Electric Vehicles
- Shipping

HAZMAX™ BOOT

A chemically protective anti-static boot with an integral steel toe cap and vulcanised rubber sole for superior slip resistance. Applications include petrochemical, pharmaceutical, chemical waste handling and aluminium processing.

- Green Hazmax chemically resistant compound shaft certified to EN 13832-3 (see page 30 or visit workmasterboots.com for full chemical permeation data)
 - Black vulcanised rubber sole for maximum grip - 30% better than a conventional safety boot sole
 - Durable cut resistant sole provides two to three times the wear resistance of conventional soles
 - Machine washable at 40°C
-

Testing & Certification:



EN20345:2011 S5 SRC CI HRO FO LG
Safety Footwear



EN13832-3:2018 A K O P Q R T
Footwear protecting against prolonged contact with chemicals.



HAZMAX ESD BOOT

A chemically protective Electro-Static Discharge (ESD) version of the Hazmax™ that is suitable for applications such as pharmaceutical electro-protective areas.

- For use in EPA areas conforming to EN 61340-5 (ESD 99.6 MΩ dry, 11.8 MΩ wet EN ISO 20345)
-

Testing & Certification:

As Hazmax above.

HAZMAX OVERBOOTS

Chemically protective anti-static overboots in a choice of two styles; Maxi Overboots for use over safety boots, Compact Overboots for use over safety shoes/trainers.

- Green Hazmax chemically resistant compound shaft certified to EN 13832-3 (see workmasterboots.com for chemical permeation data)
- Machine washable at 40°C



HAZMAX™ FPA BOOT



Hazmax™ FPA boots offer the same performance as Hazmax™ boots but provide increased heat resistance and conforms to the EN 15090:2012 HI₃F3A Fire fighter boot standard.

- Resistant to flame and radiant heat (20kW/m²)
- Heat insulation of the sole (250°C for 40 minutes)
- Green Hazmax chemically resistant compound shaft certified to EN 13832-3
- Black vulcanised rubber sole for maximum grip - 30% better than a conventional safety boot sole

Testing & Certification:



EN20345:2011 S5 SRC CI HRO FO LG
Safety Footwear



EN13832-3:2018 A K O P Q R T
Footwear protecting against prolonged contact with chemicals.



EN 15090:2012 Type F3A
Footwear for Firefighters

ISOTEC BOOT



A heat-resistant safety boot conforming to the EN 15090 HI₃F3A fire boot standard for flame resistance, radiant heat (20kW/m²) and heat insulation of the sole (250°C for 40 minutes). These boots are designed for use in areas where there is a risk of sparks from welding or grinding or for close proximity fire fighting.

- Certified to the **Marine Equipment Directive** (MED) 2014/90/EU Item 3.4 - Fire-fighter's outfit: Boots
- Chemically resistant boot certified to EN 13832-3 level 5
- Black vulcanised rubber sole for maximum grip - 30% better than a conventional safety boot sole

Testing & Certification:



EN20345:2011 S5 SRC CI HRO FO LG
Safety Footwear



EN13832-3:2018 K N Q
Footwear protecting against prolonged contact with chemicals.



EN 15090:2012 Type F3A
Footwear for Firefighters

DIELECTRIC HV3 BOOT

A Class 3 AC (EN 50321-1:2018) electrically insulating dielectric boot with an integral steel toe cap and slip resistant moulded rubber sole. The Workmaster™ Dielectric HV3+ boot allows high-voltage live working at up to 26.5kV with every boot tested at 30kV.

- Meets the requirements of ASTM 1117 (20kV)
 - Lightweight design for increased wearer comfort
 - Low temperature flexibility down to -40°C
 - Slip resistant moulded sole
 - Energy absorbing tunnel system in heel and ergonomic cushioned insole (removable and machine washable) for greater wearer comfort
-



Testing & Certification:



EN20345:2011 SB SRA E
Safety Footwear



Class 3 AC, EN13832-3:2018
Electrically Insulating Footwear

DIELECTRIC BOOT

An electrically insulating Class 2 AC (EN 50321-1:2018) dielectric boot with an integral steel toe cap and vulcanised rubber sole for superior slip resistance. This high voltage boot is suitable for use by electricians, utility engineers and live working up to 17kV.

- Every boot tested to 20kV (AC testing as standard, DC testing available on request)
 - Leakage current < 5mA at 5kV and < 18mA at 20kV
 - Meets the requirements of ASTM 1117 (20kV)
 - Blue vulcanised rubber sole for maximum grip - 30% better than a conventional safety boot sole
 - Twice the wear resistance of conventional soles
-



Testing & Certification:



EN20345:2022 SB SR CI HRO FO E LG
Safety Footwear



Class 2 AC, EN 13832-3:2018
Electrically Insulating Footwear

DIELECTRIC MAXI OVERBOOTS



Dielectric Maxi Class 1

Available as a **Class 1** (for 7.5 kV Live Working) and **Class 3** (for 26.5 kV Live Working) electrically insulating dielectric overboot the Workmaster™ Maxi Dielectric overboot is designed to be worn over safety boots. As an option boots are available tested for Class 1 DC use, making them ideal for use in electric vehicle maintenance and recovery.

- Injection moulded for a seamless boot with excellent electrical insulation properties
- Ingenious rear entry design ensures the boot is quick and easy to fit and remove
- Class 1 overboots include a Vulcanized rubber fuel and oil resistant sole for improved slip resistance in wet and oily conditions (SRC)



Dielectric Maxi HV3 Class 3

Testing & Certification - Dielectric Maxi



EN20347:2022+A1:2024 OB I SR HRO FO
Safety Footwear



Class 1 AC, EN 13832-3:2018
Electrically Insulating Footwear

Testing & Certification - Dielectric Maxi HV3



EN20347:2012 OB I SRC
Safety Footwear



Class 3 AC, EN 13832-3:2018
Electrically Insulating Footwear

DIELECTRIC COMPACT OVERBOOTS



A **Class 2** electrically insulating dielectric overboot designed to be worn over safety trainers. The Workmaster™ Compact Dielectric overboot allows high-voltage live working at up to 17.5kV, with every boot tested at 20kV

Injection moulded for a seamless boot with excellent electrical insulation properties

Testing & Certification - Dielectric Maxi HV3



EN20347:2022+A1:2024 OB I SR FO
Safety Footwear



Class 2 AC, EN 13832-3:2018
Electrically Insulating Footwear

FOODLITE



An exceptionally lightweight food industry boot designed for wearer comfort and low-temperature performance.

- Resistant to common food industry chemicals, including cleaning, disinfecting and sanitising agents
- Slip resistant moulded sole (SRC)
- 200 Joule epoxy coated steel toe cap
- Ergonomic cushioned insole (removable & machine washable) for greater wearer comfort
- Environmentally friendly PVC and Halogen free construction
- Available in white or blue

Testing & Certification



EN ISO 20345:2011 SB CI SRC E
Safety Footwear



EN 13832-3:2018 N, O, R
Chemical Protective Footwear

FOODLITE+



A new exceptionally lightweight food industry boot designed for superior grip, wearer comfort and low temperature performance.

- Features as Foodlite, with the addition of a hardwearing high-grip vulcanised rubber sole

FOODMAX



Designed to be resistant to the chemicals used in the food processing industry and maintain its flexibility in temperatures as low as -40°C, the Foodmax boot features an integral steel toe cap and vulcanized rubber sole for superior cut and slip resistance.

- Chemically resistant boot certified to EN 13832-3:2018 (footwear protecting against chemicals)
- Resistant to common food industry chemicals, including cleaning, disinfecting and sanitising agents
- Excellent resistance to oil and animal fats
- Blown mid-sole reduces weight and increases cushioning, significantly reducing wearer fatigue and risk of injury to joints and spine
- Superb low temperature flexibility down to -40°C

HAZMAX CBRN BOOT



Specifically developed for CBRN response, the Hazmax™ CBRN S5 anti-static safety boot provides the same comfort and chemical resistance as our popular Hazmax™ chemical safety boots, but with enhanced protection against chemical warfare agents.

- Manufactured from our proprietary Hazmax™ CBRN compound, providing significantly better chemical resistance than PVC or PU materials
- Resistant to Chemical Warfare agents and decontamination solutions (see website for test data)
- Quick & easy to decontaminate
- Also available with a composite toecap and midsole (sizes 8-13 UK / 42 - 47 EU only)

Testing & Certification:



EN 20345:2022+A1:2024 S5 SR HRO CI FO LG
Safety Footwear



EN 13832-3:2018 A K O P Q R T

Footwear protecting against prolonged contact with chemicals.

CBRN OVERBOOT



A chemically protective anti-static overboot with an ambidextrous quick-don design. Tested against a broad range of hazardous chemicals and chemical warfare agents, the boot design allows it to be fastened single-handedly in less than five seconds.

- Single ambidextrous design allows the boot to be worn on either the right or left foot to speed donning & doffing
- Manufactured from black chemically resistant Hazmax™ FPA compound and certified to EN 13832-3:2018 (Footwear protecting against chemicals)
- Quick & easy to decontaminate
- Designed to fit and completely cover standard military issue combat boots
- Available in olive green or combat black



Testing & Certification:



EN 20347:2012 OB A FO SRA
Occupational Footwear



EN 13832-3:2018 A K O P Q R T

Footwear protecting against prolonged contact with chemicals.

KEMBLOK™ GLOVES



BACKGROUND:

Kemblok™ gloves use multiple layers of chemical barrier materials to provide excellent protection against a broad range of chemicals. They are ideal as glove liners to provide enhanced chemical protection for heavier gloves providing mechanical protection, or as a chemical protective glove in applications where only a chemical barrier is required (e.g. laboratories or spill clean up).

APPLICATIONS:

- Transferring chemicals and loading process equipment
- Filling, blending & charging of raw materials
- Opening & draining pumps, valves or lines
- Handling application and cleaning tools
- Chemical Testing
- Degreasing
- Emergency response
- Spills & leakages

KEMBLOK™ GLOVES



PermaSure®
App
Compatible

Manufactured using a seven-layer chemical barrier laminate material, Kemblok™ gloves provide excellent protection against a wide range of chemicals, viruses and micro-organisms.

- Protection against chemicals and micro-organisms to EN ISO 374-1:2016
 - Can be worn as a liner under heavier gloves providing mechanical protection
 - Lightweight & comfortable
 - Compatible with the PermaSURE® toxicity modelling smart-phone app which calculates safe working times for over 4,000 chemicals
 - Ergonomic ambidextrous design
 - Working temperature -40°C to 70°C
 - Silicone and latex free
 - REACH compliant
 - Available in three sizes (Small, Medium & Large)
-

Testing & Certification:



EN ISO 374-1:2016 - Type A



Protective gloves against chemicals & micro-organisms.

Permeation Level 6 with reagents A, D, E, G, H & L



EN ISO 374-5:2016



Protective gloves against chemicals & micro-

organisms. With EN ISO 374-2:2014 AQL

Performance Level 3 including Viral Penetration

EN 420:2003+A1:2009

Clause 5.2, Finger Dexterity Level 5

SELECTED CHEMICAL PERMEATION DATA

| CHEMICAL | CAS NO. | EN 374 & EN 13832 LETTER CODE | CHLOROTEX | VITON®/BUTYL/VITON® | DUPONT® TYCHEM® TK | CHEMPROTEX™ X | CHEMPROTEX™ 400 | CHEMPROTEX™ 300 | KEMBLOK™ | HAZMAX™ |
|------------------------------|-----------|-------------------------------|-----------|---------------------|--------------------|---------------|-----------------|-----------------|----------|---------|
| Acetic acid (Glacial) | 64-19-7 | N | | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Acetone | 67-64-1 | B | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 4 |
| Acetonitrile | 75-05-08 | C | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 5 |
| Ammonia 33% | 1336-21-6 | O | | | 6 | 6 | 6 | 6 | 6 | 6 |
| Ammonia Gas | 7664-41-7 | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Carbon Disulphide | 75-15-0 | E | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 3 |
| Chlorine Gas | 7782-50-5 | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 4 |
| Dichloromethane | 75-09-02 | D | 6 | 3 | 6 | 6 | 6 | 6 | 6 | 3 |
| Diethylamine | 109-89-7 | G | 6 | 3 | 6 | 6 | 6 | 1 | 6 | 4 |
| Ethyl Acetate | 141-78-6 | I | 6 | 5 | 6 | 6 | 6 | 6 | 6 | 5 |
| Formaldehyde 37% | 79-11-8 | T | | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| n-Hexane | 110-54-3 | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 5 |
| Hydrofluoric Acid 48% | 7664-39-3 | S | | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Hydrogen Chloride Gas | 7647-01-0 | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Methanol | 67-56-1 | A | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Nitric Acid 50% | 7697-37-2 | M | | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Sodium Hydroxide 40% | 1310-73-2 | K | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Sodium Hypochlorite 16% | 7681-52-9 | R | | | | 6 | 6 | 6 | 6 | 6 |
| Sulphuric Acid 50% | 7664-93-9 | L | | | | 6 | 6 | 6 | 6 | 6 |
| Sulphuric Acid 96% | 7664-93-9 | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Tetrahydrofuran | 109-99-9 | H | 6 | 2 | 6 | 6 | 6 | 2 | 6 | 4 |
| Toluene | 108-88-3 | F | 6 | 6 | 6 | 6 | 6 | 4 | 6 | 5 |

Normalised breakthrough results for each material are given with the EN Class number (EN 16523), see key below for breakthrough times. Permeation data for a far greater range of chemicals can be found on our website respirex.com

| | | | |
|--------------------------|-------------------------|-------------------------|------------|
| Class 6 >480 mins | Class 5 >240mins | Class 4 >120mins | <10mins |
| Class 3 >60 mins | Class 2 >30 mins | Class 1 >10 mins | Not tested |

Chemicals in **bold** are the 15 standard test chemicals defined in EN943-2:2019

PERMASURE® TOXICITY MODELLER



PermaSURE® is a toxicity modelling app for Respirex™ Kemblok™ gloves and chemical protective suits made from Chemprotex™ fabrics. Using the latest modelling techniques, the PermaSURE® app calculates your safe working time based on the chemical you are working with, the PPE you are using and the working temperature.

The advantages of PermaSURE® are:

- It models low-level, but potentially-significant, permeation before breakthrough
- It takes account of the toxicity of the substance when calculating a safe working time

Full details on PermaSURE® are available at respirex.com





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+44 (0)1737 77 86 00 or visit our website:

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