

SIMPLAIR A.2. SUIT

REUSABLE AIR-FED CHEMICAL PROTECTION SUIT



RESPIREX™

Description

A reusable air-fed **Type 2** 'non-gas tight' suit with integral cooling designed for use with breathable air supplied from an external positive pressure compressed air source.

The revised Simplair A.2. design features an air distribution system that brings air into the hood above the wearers head, which allows the use of larger radio headsets and, improves wearer vision and comfort over previous versions.

Available in a range of chemical resistant fabrics the suit includes a number of options for legs endings, visor, zips and zip flaps allowing the suit to be tailored to a specific application or process.

Applications

Pharma-
ceuticalPetro-
Chemical

Performance



Type 2* | EN 943-1:2002
Non-Gas-Tight Chemical Protective Clothing

**The Simplair A2 suit has been assessed by a notified body as satisfying Annex II of the PPE regulation (EU) 2016/425 using technical standard EN 943-1:2002 'Protective clothing against liquid and gaseous chemicals, including aerosols and solid particles - Part 1: Performance requirements for ventilated and non ventilated "gas-tight" (Type 1) and "non-gas-tight" (Type 2) chemical protective suits'.*

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. In the event that partial contamination may exist in the factory ring main from which the suit draws its air supply, a Respirex in-line filter unit should be fitted to the air system; this will prevent the ingress of contamination down to 5 microns in size from entering the garment.

Fabrics

- Viton®/Butyl/Viton® (VBV) - Orange
- Viton®/Butyl/Polyester (VBP) - Yellow
- Butyl - Olive
- Neoprene - Yellow or fluorescent orange
- PVC - Yellow or Green
(yellow PVC pictured above)

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.

Features

Internal air system providing **breathing and cooling air** to the user

Choice of **durable rigid PVC visor** (with optional outer cover) which minimises visual distortion, or **flexible transparent PVC hood** providing 360° vision

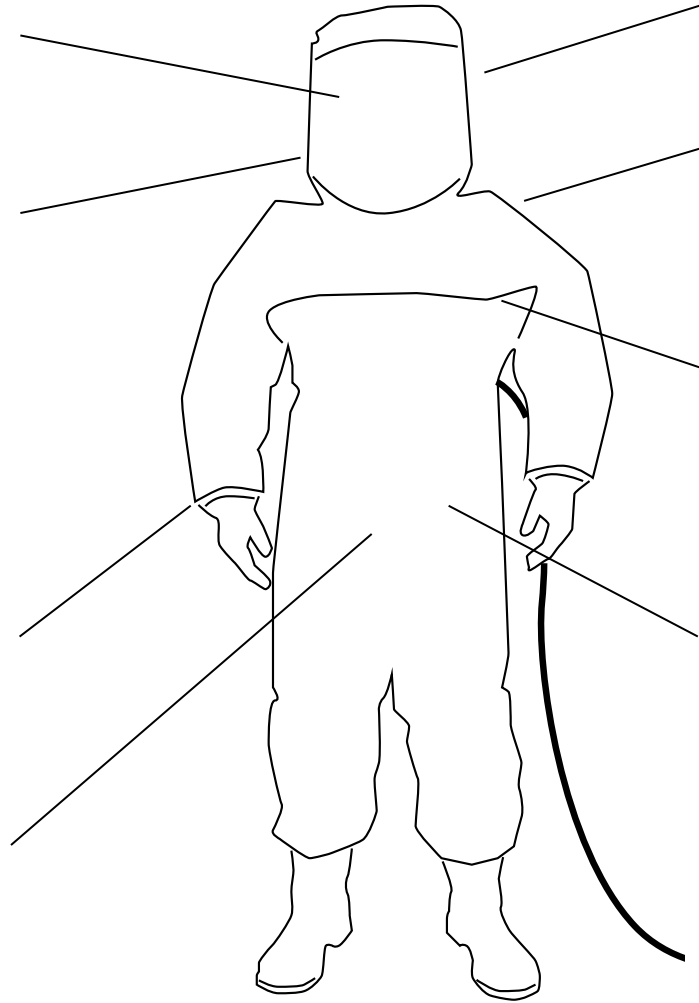


Rigid Visor

Transparent Hood

Gas-tight tight **Locking cuff system** for easy glove changes (other systems available on request)

Adjustable waist belt with a foam back pad comfortably supports the air system



Exhalation valves maintain a comfortable working pressure in the suit

Three-point hanging system helps prevent distortion during storage

Horizontal zip across the chest covered by a **zip flap**. Zip and flap type determined by fabric choice.

Internal **low-flow warning whistle** indicates if airflow into the suit drops below the required level

A wide **range of approved airline couplings** can be fitted to the suit, but large bore couplings are recommended

Accessories



HAZMAX™ Boots

A chemically-protective anti-static safety boot with an integral steel toe cap and mid sole, vulcanized rubber sole for superior slip resistance and kick off lug for hands free removal.



Three-Point Hanger

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



Suit Care Accessories

Cleaning agent, deodoriser, anti-fogging spray and zipper lubricant are available for maintaining your re-usable garment

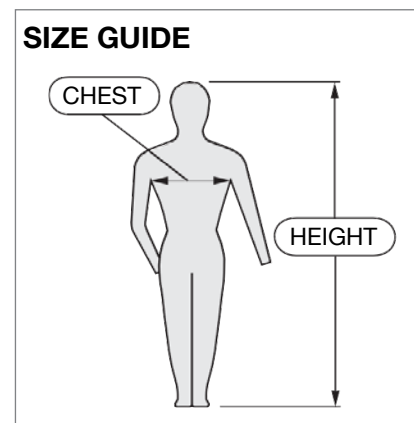


5 Micron Filter

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

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	VBP	Butyl	Neoprene	PVC C2
Abrasion Resistance	EN 530 Method 2	> 2,000	> 2,000	> 2,000	> 2,000	> 2,000
Flex Cracking Resistance	EN ISO 7854 Method B	> 100,000	> 40,000	> 15,000	> 5,000	> 100,000
Tear Resistance	EN ISO 9073-4	> 100 N	> 40 N	> 60 N	> 40 N	> 100 N
Tensile Strength	EN ISO 13934-1	> 500 N	> 500 N	> 500 N	> 500 N	> 500 N
Puncture Resistance	EN 863	> 100 N	> 50 N	> 50 N	> 10 N	> 50 N
Resistance to Ignition	EN 13274-4 Method 3	Pass	Pass	Pass	Pass	Pass
Seam Permeation Resistance	EN ISO 6529	> 240 min	> 480 min	> 480 min	> 240 min	> 480 min
Seam Strength	EN ISO 13935-2	> 500 N	> 500 N	> 300 N	> 500 N	> 500 N

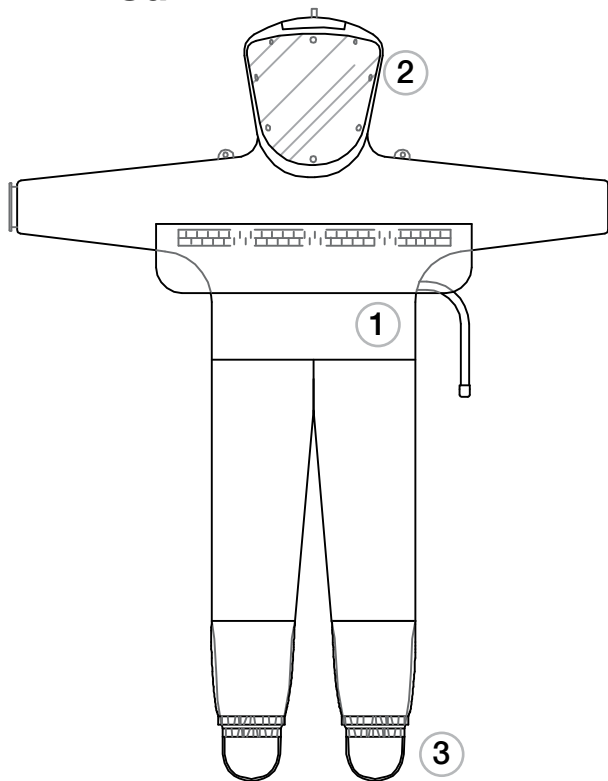
Chemical Permeation

	CAS NO.	VBV	VBP	Butyl	Neoprene	PVC C2
Hydrochloric acid, 36%	7647-01-0	> 480 mins	> 480 mins		> 480 mins	> 480 mins
Hydrofluoric acid 48%	7664-39-3	> 480 mins	> 480 mins	> 480 mins	> 480 mins	> 480 mins
Hydrofluoric acid 73%	7664-39-3	> 480 mins			> 240 mins	< 30 mins
Nitric acid, 10%	7697-37-2				> 480 mins	> 480 mins
Nitric acid, 60% - 70%	7697-37-2	> 480 mins	> 480 mins	> 480 mins	> 480 mins	< 30 mins
Phosphoric acid,85%	7664-38-2		> 480 mins	> 480 mins	> 480 mins	> 480 mins
Sodium hydroxide, 40%	1310-73-2	> 480 mins	> 480 mins	> 480 mins	> 480 mins	> 480 mins
Sulphuric acid 10% - 50%	7664-93-9		> 480 mins	> 480 mins	> 480 mins	> 480 mins
Sulphuric acid 96%	7664-93-9	> 480 mins	> 480 mins	> 240 mins	> 240 mins	> 60 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 or scan the QR code.

Specifying a Simplair A2 Suit



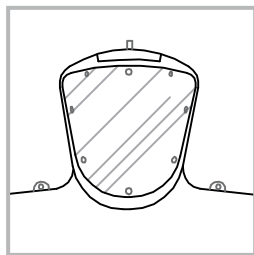
1 Choose the material

Select the material for the suit based in its permeation resistance to your challenge chemical(s) and its physical properties. Options available are Viton®/Butyl/Viton® (VBV), Viton®/Butyl/Polyester (VBP), Butyl, Neoprene (yellow or orange) and PVC

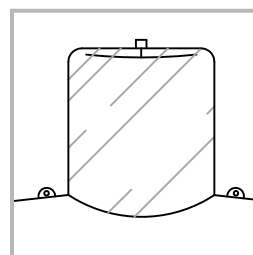
2 Choose the visor type

Choose the style of visor to suit the application; rigid visors are more durable, soft visors provide a greater field of view

Rigid visor with optional cover



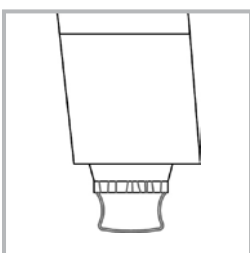
Soft PVC visor with all-round vision



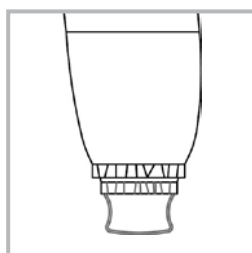
3 Choose the leg type

Choose the leg style that suits your application and risk; suits with elasticated legs with stirrup feet are more comfortable and easier to don and doff, sock feet provide a greater level of protection.

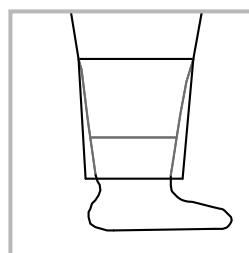
Elasticated inner ankle with stirrup, plain outer



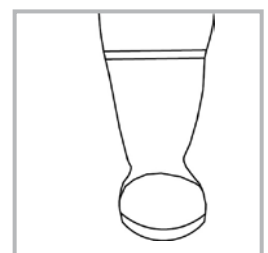
Double elasticated ankle with stirrup on inner



Sock foot with plain outer leg



Detachable Hazmax™ safety boots



4 Customisation

Finally, specify any customisation options - this includes hanging loops, lettering/ID numbers and reinforcing patches.

Typical Configuration for a Simplair A2 Suit



Model: SIMS251
Application: Pharmaceutical
Material: C2 PVC
Visor: 360° soft PVC
Legs: Detachable Hazmax Boots
Cuff System: Gas-Tight locking cuff
Zip: 91cm/36" Plastic toothed zip with plain outer zip flap
Options: Three-point hanging Loops

Specifications

Simplair A2 Suit

Carton Qty	2 (Max)
Outer Carton Size	40 x 62 x 84 cm
Outer Carton Weight (max)	11 kg
Commodity Code	39262000 (PVC), 40159000 (VBV, VBP, Butyl & Neoprene)

Specifications are based on an XL sized suit without optional accessories and are for guidance only, exact weight will vary depending on size, material and options chosen

Specifications, configurations and colours are subject to change without notice. Vitor® is a trademark or registered trademarks of E.I. du Pont de Nemours and Company



RESPIREX™

Living + Breathing Personal Protection

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