AlphaTec®

EN 14605
EN 14126

Instructions for Use
AlphaTec® BSL4

Ansell

CONTENTS

CONTENTS

1. Safety considerations

- These instructions for use (IFU) are valid only for AlphaTec® BSL4.
- The suit may only be used by trained personnel who are familiar with the contents of this IFU.
- Use the suit only for the purposes specified herein.
- Do not use a damaged or incomplete suit, and do not modify the suit.
- For repair and maintenance, only use genuine AlphaTec® spare parts, or the function may be impaired.

1.1 Definitions of signal icons used in the instructions

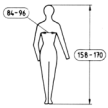
The following icons are used in this IFU to highlight the user on situations or actions that need special attention not to risk the safety of user, suit or environment.

WARNING
Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION
Indicates a potentially hazardous situation which, if not avoided, could result in physical injury, or damage to product or environment.

NOTICE
Indicates additional information on how to use the suit.

1.2 Definitions of pictograms used on the suit label

CE 0598	The suit has EU type approval and complies with the EU Regulation 2016/425 on Personal Protective Equipment. Chemical protective clothing is category III according to the regulation and 0598 is the number of the notified body that is responsible for production control. 0598 is SGS Fimko Oy.		
	The suit offers chemical protection.		This manual has to be read.
	The suit offers protection against infective agents (EN 14126).		The size of the suit (see chapter 11.1)

2. Description of suit

AlphaTec® BSL4 is
- An encapsulating chemical and biological protective suit
- Intended for use with external air-source i.e. airline. (Not to be used with mask or SCBA.)
- Re-usable

The suit is not fitted with gloves upon delivery, the users have to select and mount suitable gloves themselves (see chapter 9.6)

The suit is fitted with:
- Attached safety boots or sewn-in socks made from the suit material (no boot flap)
- AlphaTec BSL4 adjustable flow control valve and low flow alarm air-system*
- The Flow control valve has swiveling function and an adjustable belt. The accessory connection hoses include a coupling that can swivel (see chapter 11.7).
- 6 pcs AlphaTec Exhaust valves which are covered by splash protective pockets. NOTE: This pocket may be removed by the user if requested. Please refer to the instruction in chapter 9.7.

* The flow control hand wheel is adjustable by the wearer from the outside of the suit. This will give a lower or higher flow (adjustment will not effect air flows outside of the correct parameters). The low flow alarm will whistle if the flow rate goes below the minimum requirement.

The following accessories are delivered with every suit:
- 2 pcs elastic rubber band for mounting gloves
- Maintenance kit for zipper
- Suit hanger
- Instructions for use

For more information about materials, components & accessories, see chapter 11.

3. Approvals

3.1 European EU Type approval

CE 0598

AlphaTec® BSL4 is CE-marked and has EU type approval under the EU Regulation 2016/425 on Personal Protective Equipment and the following European standards:

- EN 14605:2005 + A1:2009, type 3
- EN 14126:2003 infective agent protection
- Antistatic (dissipative) garment material (as defined in EN 1149-5:2018)

AlphaTec® BSL4 has been approved (Module B) by notified body no 0200; FORCE Certification A/S, Park Allé 345, DK-2605 Bröndby, Denmark.

Continued compliance according to Module D approved by notified body no. 0598, SGS Fimko Oy, Takamotie 8, FI-00380 Helsinki, Finland.

EU Declarations of Conformity can be downloaded at www.ansell.com/regulatory.

The standards according to which the chemical protective suit is approved are marked on the suit inner label.

3.2 Air supply source

The air supply system, mobile or stationary, shall have a minimum working pressure of 3.0 bar (44 psi), maximum 5.0 bar (73 psi) - please refer to chapter 11.4. The delivered air shall fulfill the requirements for breathing air according to EN 12021 and EN 132, or any national applicable standards. Pressures slightly above 5 bar could be used but hearing protectors are recommended as of 5 bar supply pressure. The suit is not designed and has not been tested for any pressure above 6 bar.

3.3 Airline hose

The compressed air supply hose shall meet EN 14594 or EN 14593-1 or any national applicable standard.

Hose length: 10 m
Hose inner diameter: 10 mm

The suit was tested using a Sundstrom SR358 hose.

4. Proper use

4.1 Intended use

The suit was developed for use in biological laboratories and protects against infectious agents, e.g. bacteria, virus and fungi. The suit also protects against liquid and solid chemicals. See also Chapter 11 for chemical permeation data.

4.2 Limitations of use

- Avoid extensive heat and open flames
- The suit is not intended for firefighting
- The suit does not protect against radiation i.e. alfa, beta, gamma or X-ray radiation
- Avoid explosive environments

4.3 Temperature of use

0 °C to +40 °C

Short-term use in higher or lower temperatures is possible, but great caution must be taken with regards to heat stress/burn injuries and frost bite for the user.

Most performance properties of the protective suit or individual element cannot be tested by the user in the field.

5. Pre-use

Before use, make sure:

- Suitable gloves have been selected and mounted on the suit (see Chapter 9.6)
- The suit is pressure tested/leak tight and undamaged (see chapter 9)
- If required, fit the Adapter for the HEPA filter (see chapter 5.1) and/or fit the connection hose.
- The source of breathing air is at the specified pressure range 3.0 - 5.0 bar (44 - 73 psi) (see chapter 11.4)
- The minimum air flow rate, 250 l/min, is achieved
- To maintain < 80 dB(A) sound level inside the suit, the supply pressure should not exceed 5 bar.
- The suit is the correct size (see chapter 11.1)
- To wear undergarments suitable for the situation, e.g. scrubs. If cold weather or risk of contact with cold chemicals, wear insulating underwear.

Pressures slightly above 5 bar (44 psi) could be used but hearing protectors are recommended as of 5 bar (44 psi) supply pressure. The suit is not designed and has not been tested for pressures above 6 bar (87 psi).

Never use a suit which is not passing the pressure test or is damaged.

5.1 Fitting adapter or connection hose to suit pass-through

The adaptor or connection hose is fitted to the pass-through using Loctite 542 thread sealant. It is recommended to use Loctite Activator SF7649 as a pre-treatment as it helps to provide a superior seal, however only using Loctite 542 is also acceptable.

Proceed as follows:

1) Apply Loctite Activator SF7649 spray onto the pass-through female thread and the adaptor or connection hose male therad. Allow to dry.
2) Apply Loctite 542 to the adaptor or connection hose male therad, fit it on the pass-through and carefully tighten to 3 Nm (2.2 lb-ft or 26 lb-in).

5.2 Donning the suit

Always have an assistant to help you while donning and try to find a clean area to stand on.

1) (Sit on a chair). If attached boots: Place both legs into the suit and into the boots.
2) If sewn-in socks: Don the separate silicone over socks and then the separate boots.
3) Adjust and fasten internal waist belt around your waist.
4) (Stand up). Connect the compressed air supply hose to the compressor so that the suit is supplied with air.
5) Insert your right arm into the right sleeve into the right sleeve & glove.
6) Pull the hood over your head.
7) Insert your left arm into the left sleeve into the left sleeve & glove.
8) Close the zipper. Pull the zipper straight, using two hands. Never force it! If it jams, gently pull it back and try again. Make sure the zipper is fully closed.
9) If gloves has not already been mounted, now mount the gloves (see chapter 9.6). 9) Put on gloves, pulling them up onto the suit cuff ring. Put the enclosed elastic rubber bands on top of the glove to secure it on the cuff ring.

Handle the zipper with care. A damaged zipper can cause serious injury or death.

6. In use

During use, make sure to:
- Minimize the exposure to chemicals and biological agents/organisms
- Avoid direct contact with chemicals and biological agents/organisms as far as possible

7. After use

7.1 Initial decontamination

After use in hazardous environment, the suit must be decontaminated before taking it off, to protect the wearer from contamination.
- Make sure to have an assistant for the decontamination.
- The assistant also needs to wear suitable protective clothing and possibly respiratory protection.
- Rinse the suit with plenty of water, preferably with added detergent.

7.2 Doffing the suit

After decontamination, take off the suit in reverse order of that described for donning above, and have someone assist you.

7.3 Final decontamination

If the initial decontamination is not enough, a second decontamination is necessary.
- Use protective clothing/equipment when handling the contaminated suit.
- Acids and Alkaline chemicals can be decontaminated using large amount of water. When the rinsing water has pH 7 the suit is clean.
- Inorganic chemicals can often be decontaminated using large amount of water and detergent.
- Volatile chemicals can be aired out of the suit. Hang the suit outdoors or in a well-ventilated area with the zipper fully open. Check the air for residual chemicals by using simple gas detecting tubes.
- For chemicals such as oil/petroleum and other organic chemicals, special decontamination agents may be needed. The type of agents available differ between countries and regions. Contact a local supplier.
- Biological agents (i.e. bacteria, viruses) can be decontaminated using e.g. 3% hydrogen peroxide water solution or other similar disinfectants.

Never leave the suit immersed for more than 2 hours.

8. Storage

When stored the suit should be unfolded and inspected once a year (see chapter 9).

8.1 Storage conditions

- Dry, humidity 50 ± 30%
- Room temperature, 5 - 30 °C
- Away from direct sunlight
- Away from ozone-generating sources, for example electrical engines, fluorescent lamps and air-conditioners

8.2 Storage methods

The suit should be stored:

- Folded as upon delivery or hanging
- In the plastic bag delivered with it or in another tight bag or box
- If stored in a soft bag, never store suits on top of each other, as too much weight or high pressure may damage the visor
- If stored in a box, make sure the box is large enough to easily accommodate the suit without pushing, pressing or squeezing it
- If stored hanging, suits with boots should have the boots on the floor to avoid excess strain on the shoulders
- The zipper should be almost closed with approximately 10 cm/4 in open

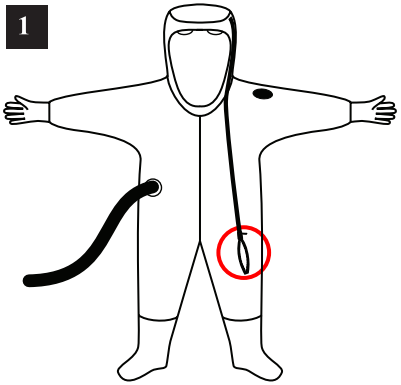
If storing the suit on vehicles or containers, abrasion through permanent friction with the contact surface has to be avoided.

8.3 Shelf life

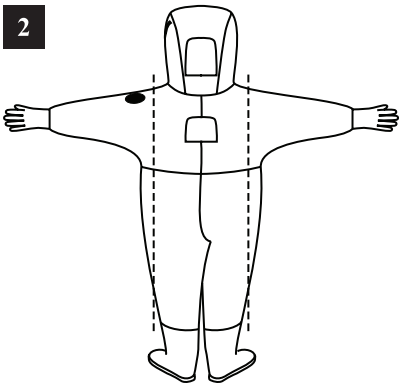
Shelf life refers to suits in storage, without being used. The storage/shelf life applies under optimal storage conditions (see above) and does not form a guarantee. The recommended Shelf life is 7 years from date of manufacture but this may be exceeded or be less, however maximum 15 years. Therefore the condition of the suit needs to be checked regularly to evaluate whether it is in good condition or not (see chapter 9).

8.4 Folding the suit

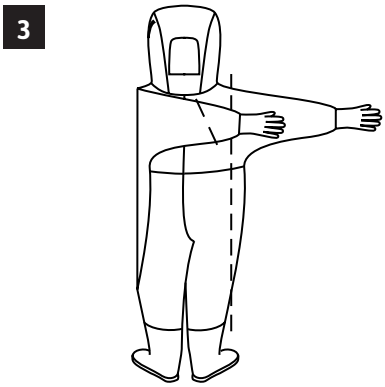
1) Close the zipper with approx. 10 cm open.



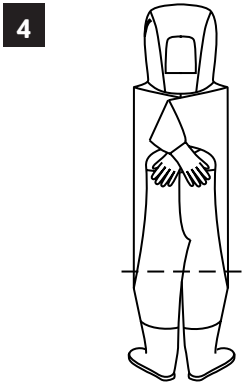
2) Turn suit upside down.



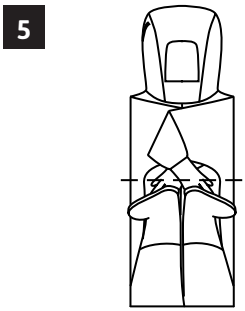
3) Fold the sleeves as follows...



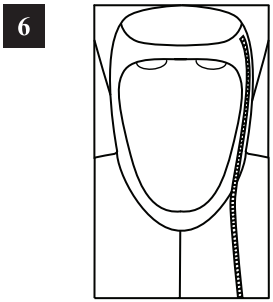
4) ...and then to the middle.



5) Fold the boots to the waist, and then fold the suit on the middle.



6) Place the suit in the storage box.



Make sure the tubes inside the suit are not kinking when folding the suit.

9. Maintenance

9.1 Maintenance schedule

The specified intervals below are Ansell recommendations. For auxiliary equipment (helmet etc.), refer to the relevant Instructions for Use.

The maintenance described below can be done by personnel without formal training, provided the instructions in this IFU are followed. For a list of spare parts & accessories, see chapter 11.7.

Area (chapter)	**Upon Delivery**	**After Use**	**After Repair**	**Annu-ally**	**Every 5 years**	**If Broken**
Visual inspection (9.2)	X	X	X	X		
Test of gas-tightness (9.3.1)	X	X	X	X		
Air-flow & Whistle test (9.3.2)	X	X (before use)		X		
Cleaning (9.4)		X				
Lubricate zipper (9.5)		X		X		
Repair & Replacements						
Mounting or Replacing gloves (9.6)						X
Replacing Diaphragm in AlphaTec Exhaust valve (9.7)					X	X
Replacing Exhaust valve/s (9.8)						X

For repair or replacement of boots, contact an Ansell Service Center, or take a Training course provided by Ansell.

9.2 Visual inspection of suit

The inspection shall consist of the following steps:

- Visual inspection of both inside and outside.
- Look for surface damages on material, seams, visor, boots (if fitted), inner and outer gloves.
- Look for changes in the material properties such as brittleness, stiffness, swelling, stickiness or other phenomena which could be evidence of chemical degradation or aging.
- Check function of zipper and zipper fitting.
- Check glove sleeve ring.
- Check the function of the exhaust valves, AlphaTec BSL4 air-system, inside tubing and diffusors. Make certain that they are firmly mounted and not damaged.

If any defect/malfunction is found, the suit must be taken out of service.

Note any remarks, found during the inspection, in the inspection log.

9.3 Test of air leak tightness

9.3.1 Test of air leak tightness according to ISO 17491-1 method 2

Test equipment: AlphaTec Manual Pressure Test Kit, see chapter 11.7.
Other equivalent test equipment with adapters for AlphaTec suits can also be used.

Make sure gloves are fitted before pressure testing.

Procedure:

1) Place the suit on a clean surface, preferably a table.
2) Exhaust valve no 1-5: Remove the outer exhaust valve covers (see chapter 9.6) and insert the sealing plugs.
3) Add the retaining collar (1 pce) on the sealing plugs and tighten clockwise.
4) Exhaust valve no 6: Remove the outer exhaust valve cover and the diaphragm (see chapter 9.6).
5) Put the retaining collar (1 pce) on the black adapter.
6) Screw the black adapter onto the grey test adapter, ensuring a tight connection.
7) Push the black adapter into the exhaust valve, then tighten the retaining collar.
8) Close the zipper.
9) Connect the pressure gauge via the nipple on the test adapter.
10) Inflate the suit with an air pistol to 7 inches / 177 mm water gauge (1750 Pa / 17.5 mbar).
11) Lower the pressure to 1700 Pa / 17.0 mbar using the valve on the adapter. This is the pre-test expansion pressure. Maintain this pressure for 10 minutes, adding air if necessary.

12) Adjust the pressure to 6 inches / 150 mm water gauge (1650 Pa / 16.5 mbar). This is the test pressure. Set and start the timer and wait for 6 minutes.

Do not touch the suit during the test period of time.

13) Note the pressure after 6 minutes. If this pressure is 5.4 inches / 1137 mm water gauge (1350 Pa / 13.5 mbar) or more, the suit has passed the test. Note the final pressure in the suit log.
14) After the pressure test is completed, disconnect the pressure gauge from the test adapter and remove the test adapter and the sealing plug from the exhaust valves.
15) Before re-fitting the diaphragm, ensure it is free from dust.
16) Re-fit the covers of both exhaust valves.

If the suit does not pass this test, the suit shall be removed from service.

9.3.2 Air-flow & Whistle test

Check the Air-flow and the function of the whistle by connecting the source of air via a pressure reducer and reducing the pressure. Alternatively, reduce the airflow by kinking the hose.

If working correctly, the whistle will sound when the pressure goes below 3 bars or less than 250 liters/min.

9.4 Cleaning

For decontamination guidelines, see chapter 7.

9.4.1 Hand wash

General

Ansell recommends hand washing the suit:

- Use warm water (40 °C) with added mild detergent.
- Use a piece of soft rag or a smooth brush to clean the suit.

External

- Close zipper
- Hang the suit by the boots or the loop on top of the hood.
- Use a mild detergent and warm water gently sprayed or applied by a cloth.

Internal

Washing of the inside of suit must be done manually by wiping with a clean cloth and detergent or disinfectant gently applied. No jets or power hosing.

Care should be taken not to scratch or damage the material. Do not use jets or power hosing for internal cleaning.

Drying

- Let the suit air-dry or use a fan (alternatively a cleaning system such as the TopTrock® may be used).
- Stains of oil or other substances may be washed off carefully with white spirit, after which the suit should be rinsed with lukewarm water with a mild detergent followed by water.

Do not use garments that are not thoroughly cleaned and dried.

Disinfection can be done using liquid disinfectant according to the instructions above. The suit material will withstand most commercial disinfectants. Your AlphaTec dealer or Ansell Protective Solutions AB may be contacted for advice.

9.4.2 Machine wash

If the customer uses washing machine, the machine should be specially designed for washing chemical protective suits:

- Large diameter of the drum
- Using extra amounts of water
- No rotating drum but only oscillating drum
- Mild washing powder

Machine washing the suit is the customer's choice and responsibility. Machine washing of the suit is not part of the EU type examination. AlphaTec dealer or Ansell Protective Solutions AB may be contacted for advice.

9.5 Zipper

9.5.1 Function

The zipper is an important part of the suit and also a delicate piece of equipment, that has to be handled carefully.

A damaged zipper can cause serious injury or death.

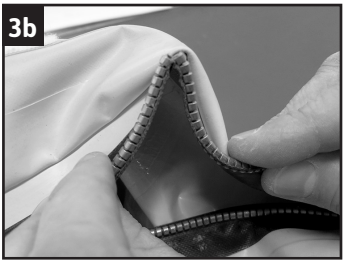
- Pull the slide using two fingers in the loop attached to the slide.
- Always pull the slide parallel and straight along the zipper. A pull sideways may seriously damage the zipper.
- When closing, make sure that neither suit material nor undergarment material is caught in the zipper.
- If the slide gets jammed or is hard to pull, then pull it back, trace the reason (e.g. dirt or clothing material caught in the chain) and solve the problem. Then slowly try to pull it again.
- Never try to overcome a problem by pulling harder as this will damage the zipper.

9.5.2 Maintenance

Procedure:

1) Make sure the metal elements are clean.
2) Open the zipper.
3) Check along each side of the chain for damage by carefully bending the chain:
   a) A healthy zipper has a rounded bend.

   b) A broken zipper has a V-shaped bend.



4) Close the zipper.
5) Lubricate the metal elements, inside and outside, with the wax stick.

The suit must be pressure tested before it is used again.

9.6 Mounting gloves

The suit is not fitted with gloves upon delivery, but the user selects and mounts suitable chemical protective gloves certified to EN ISO 374 or equivalent standard.

The selected glove must not have a textile inner liner, as this may not seal to the sleeve ring, causing a leakage of liquid and/or gas.

The suit is fitted with a rigid plastic sleeve ring (picture 1), which has a “bulky” outer edge, intended for mounting and securing a glove. Each suit is packed with 2 pcs elastic rubber band but can be used with other, similar as well.

1) Mount the glove by pulling it over the plastic ring, so the glove shaft covers the ring.
2) Secure the glove by the mounting the elastic rubber band on top of the glove, in the area between the “bulky” outer ring end and the end of the glove shaft (picture 2).

Picture 1

Picture 2

9.7 Replacing rubber diaphragm in AlphaTec Exhaust valve

Follow these instructions to remove the cover from the AlphaTec exhaust valve.

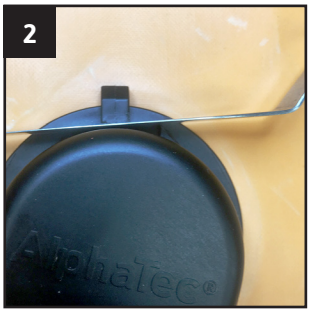
Lay the suit out on a flat surface and locate the exhaust valve on the chest.

When removing the valve cover, do not hold the inner valve retaining collars, as this may loosen the valve from the suit.

Procedure:

1) To remove outer valve cover, first rotate cover clockwise so the cover lug is 6-8 mm past the valve body stop.

2) Carefully insert a thin blade (do not use a knife) between the "cover lug and the body stop.



Do not try to lever the lug and valve body stop apart, as this could damage the exhaust valve.

3) Slowly turn valve cover anti-clockwise over the blade, this allows the cover lug to move past the body stop.
Repeat this action until the valve cover is unscrewed from the valve body.

4) Remove the old diaphragm and scrap it.

5) Check that the new diaphragm is clean before mounting it.

6) To refit the exhaust valve cover, screw the cover clockwise onto the valve body, turning the cover until there has been 3 clicks on the cover lug and valve body stop.

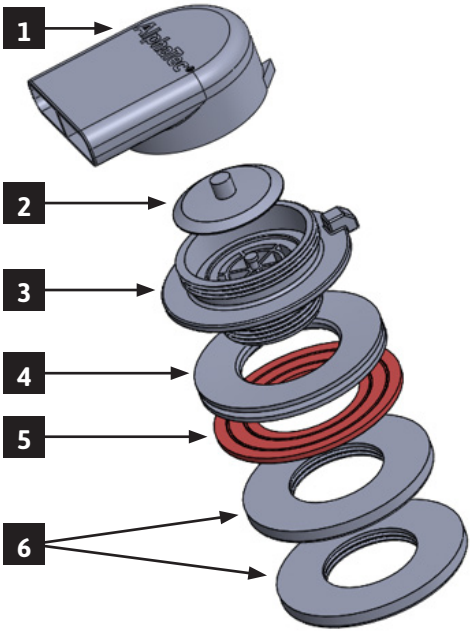
Take care not to cross thread.

The suit must be pressure tested before it is used again.

9.8 Replacing Exhaust valve/s

(Including how to remove the splash pocket)

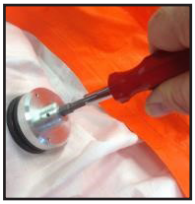
9.8.1 Valve parts

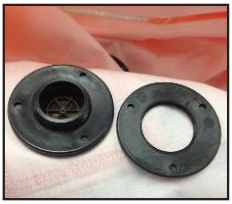


1) Valve cover
2) Diaphragm
3) Valve seat/body
4) Rubber gasket
5) Slip washer
6) Retaining collar, 2 pcs

9.8.2 Remove old Exhaust valve

1) Attach the 3-pin tool to the hex key screwdriver, then position the pins into the holes of the first retaining collar. Unscrew the collar anti-clockwise.





2) Repeat step 1 for the second retaining collar and remove along with the slip washer.

3) Remove the damaged exhaust valve by pulling it out of the rubber gasket, from the outside of the suit.

9.8.3 Install new Exhaust valve

1) Remove the two retaining collars and the slip washer from the new exhaust valve.

2) Check that the rubber gasket is not damaged. If damaged, replace with a new.

3) Position the new exhaust valve into the hole of the rubber gasket and make sure that the opening of the exhaust valve is facing downwards.

4) Fit the slip washer and one retaining collar.

5) Set the torque driver to 3 Nm and fit onto the 3-pin tool. Tighten the retaining collar clockwise until the driver clicks 3 times.

6) Fit the second retaining collar and tighten to 3 Nm.

The suit must be pressure tested before it is used again.

9.8.4 Remove Splash pocket

The splash pocket which covers the exhaust valves may be removed, if required.

Procedure:
1) Follow the instructions in chapter 9.7.2 to remove all 6 pcs exhaust valves.
2) Remove the splash pocket.
3) Reinstall the 6 pcs exhaust valves according to instructions in chapter 9.7.3.

The suit must be pressure tested before it is used again.

9.9 Patching

Minor damage, e.g. tears, punctures, scratches, can be patched using the AlphaTec Repair Kit, which also contains instructions.

9.10 Marking on the suit

Marking on the suit can be made by a “permanent marker” type of pen.

Make sure the ink has dried before folding/packing the suit for storage.

10. Disposal

Worn out suits should be disposed of according to local regulations for rubber/plastic waste. Incineration is recommended.

Suits that are not completely decontaminated must be disposed of in a safe manner, taking local regulations for the specific contaminant into account.

10.1. Retirement consideration

A suit should be retired when fulfilling one or more of the below criteria:

CRITERIA FOR RETIREMENT	EXPLANATION
Age	Regardless of how the suit has been used, and although it may still pass inspection and pressure test, it must be retired when reaching 15 years of age.
Beyond repair	The damage is too big and therefore not possible/not safe to repair.
	The suit has already been patched 10 times.
	The cost for repair is higher than to buy a new suit.
Chemically degraded	Chemical degradation cannot be stopped or repaired.

A suit that is being retired due to age can still be used for training.

Clearly mark the training suit “TRAINING”, so it is not mistaken for a real/active suit.

11. Technical Data Package

11.1 Sizes

11.1.1 Suit sizes

SUIT SIZE	HEIGHT		CHEST/BUST GIRTH	
	cm	in	cm	in
S	170-182	67-72	88-96	35-38
M	176-188	69-74	92-100	36-39
L	182-194	72-76	96-104	37-41
XL	188-200	74-79	100-108	39-43
XXL	194-206	76-81	104-112	41-44
NOTE: The data refers to a wearer without SCBA or any other equipment.				

11.1.2 Footwear sizes

The following matrix shows which footwear (boot or sock) sizes are available for the different suit sizes.

SUIT SIZE	BOOT/SOCK SIZE (US)								
	6	7	8	9	10	11	12	13	14
S	X	X	X						
M		X	X	X	X				
L				X	X	X	X		
XL						X	X	X	X
XXL							X	X	X

11.1.3 Cuff sizes

Sleeve ring inner diameter is 92 mm in suit size S & M.
Sleeve ring inner diameter is 102 mm in suit size L, XL & 2XL.

11.2 Suit weight

Approx. 3.8 kg / 8.4 lbs for a suit size L with welded-in socks.
Attached boots or separate safety boots add approx. 2 kg / 4.5 lbs.

11.3 Suit colour

Orange.

11.4 Air supply system

COMPONENT	DESCRIPTION
Airline pass-through: Outside: Inside:	 POM POM
Breathing hose:	Polyurethane
Ventilation tubes:	PVC
Diffusors, 2 pcs:	PBT outer casing with PVFM* sound absorbing material

*Polyvinyl Formal

WORKING PARAMETER	VALUE
Working pressure range[1]	3.0 - 5.0 bar (44 - 73 psi)
Air flow range[2]	min flow rate > 250 l/min at 3.0 bar max flow rate < 515 l/min at 5.0 bar

11.5 Materials

SUIT PART/COMPONENT	DESCRIPTION
Suit material:	Polyester fabric coated on both sides with PVC
Visor material:	1 mm soft, transparent PVC
Footwear material: Attached boot: Welded-in sock:	 PVC Made from suit material
Zipper material: Length: Tape: Chain: Slide:	Heavy-duty zipper Size S-XL: 1050 mm (Small to XL) Size XXL and above: 1320 mm Polyester fabric coated with PVC on both sides Nickel silver Bronze (copper/tin alloy)
Exhaust valves: Valve seat/washer/ nut/cover: Valve/Suit gasket: Diaphragm (membrane):	6 pcs/suit: 4 placed in the back of the hood and 2 on the shoulders **Construction**: Glass-fibre reinforced polypropylene Chloroprene rubber Silicone

11.6 Seam types & attachments

SEAM/ATTACHMENT	DESCRIPTION
Suit material seam: Thread: Outer tape:	 Polyester PVC tape, heat-welded to the seam
Visor attachment:	The visor is welded to the suit
Boot attachment:	Boots are attached with a metal band/plastic ring system
Zipper attachment:	The zipper is welded to the suit
Exhaust valves:	Attached to the suit with a screw and nut

11.7 List of spare parts & accessories

DESCRIPTION & NAME	Article no (EMEA & APAC)	SKU (NA & LAC)
Storage:		
AlphaTec Bag	487 100 600	836315
Suit hanger	K72 400 200	836316
Accessories:		
Adaptor (NPT 1/2" Male to BSPP 1/4" Male) for HEPA filter	K72 102 410	846804
Connection hose CEJN 342 male	487 050 080	
Connection hose Staubli AQR06 male	487 050 081	
Connection hose Parker BSPP BH2-61 male	487 050 082	
Connection hose Hansen	487 050 083	
Test equipment:		
AlphaTec Manual Pressure Test Kit	487 090 077	836282
Maintenance & Repair:		
AlphaTec BSL4 Exhaust valve, complete	K73 103 100	846799
AlphaTec BSL4 Exhaust valve, diaphragm (orange), 5 pcs	K73 102 061	846800
Elastic rubber band (20 mm), 10 pcs	K72 800 201	853240
Maintenance kit zipper/Wax	K70 000 410	836318
Repair kit for AlphaTec LIGHT/BSL4, orange	487 080 075	836267
Tools:		
3-pin tool for replacing AlphaTec Exhaust valve	K77 709 015	836293

11.8 EU Type approval data

Tests and classification according to EN 14325:2018 and EN 14126. Also see EU type approval on page 8.

The suit has also been tested for total inward leakage of solid particles according to EN 1073-1:2016+A1:2018 and provides a nominal protection factor on the level of 50 000, class 5 of EN 1073-1:2016+A1:2018.

It should be noted that all chemical testing was performed on swatches of suit material under laboratory conditions, not under actual workplace environments. The user must determine the applicability of the results obtained under laboratory conditions to the actual conditions of use. Information presented is subject to change without notice.

SUIT MATERIAL AND SEAM - MECHANICAL DATA			
PROPERTY	**TEST METHOD**	**CLASS REQUIREMENT**	**CLASS**
Abrasion resistance	EN ISO 12947-2	> 2000 cycles	6
Flex cracking resistance	ISO 7854:B	> 50000 cycles	6
Flex cracking @ -30°C	ISO 7854:B	> 4000	6
Tear resistance	EN ISO 9073-4	> 60 N	4
Tensile strength	EN ISO 13934-1	> 1000 N	6
Puncture resistance	EN 863	> 50 N	3
Resistance to flame	EN 13274-4 method 3	1 sec in flame, leak tight afterwards	2
Antistatic properties, garment material	EN 1149-5:2008	$t_{50} < 4$	Pass
Seam strength	EN ISO 13935-2	> 500 N	6

SUIT MATERIAL AND SEAM - RESISTANCE TO PERMEATION BY CHEMICALS			
CHEMICAL	**SUIT MATERIAL**	**SEAM**	**VISOR SEAM**
Formaldehyde solution	6	6	6
Hydrochloric acid, 37%	6	6	6
Peracetic acid	6	6	6
Sodium hydroxide, 40%	6	6	6
Sulphuric acid, 50%	6	6	6
Tested according to ISO 6529, breakthrough criteria 1.0 µg/min/cm^2. NOTE: AlphaTec BSL4 is not suited for continuous exposure to solvents.			

COMPONENTS - RESISTANCE TO PERMEATION BY CHEMICALS		
CHEMICAL	**BOOTS PVC**	**ZIPPER PVC**
Formaldehyde solution	6	6
Hydrochloric acid, 37%	6	6
Sodium hydroxide, 40%	6	6
Sulphuric acid, 50%	6	6
Tested according to ISO 6529, breakthrough criteria 1.0 µg/min/cm^2. NOTE: AlphaTec BSL4 is not suited for continuous exposure to solvents.		

CLASSIFICATION OF PERMEATION BREAKTHROUGH TIME						
CLASS	**1**	**2**	**3**	**4**	**5**	**6**
PERMEATION TIME	> 10 min	> 30 min	> 1 hr	> 2 hr	> 4 hr	> 8 hr

SUIT MATERIAL – RESISTANCE TO PENETRATION BY INFECTIVE AGENTS	
CHEMICAL	**SUIT MATERIAL**
Synthetic blood (ISO 16603:2004)	6
Phi-X174 bacteriophage (ISO 16604:2004)	6
Penetration by biologically contaminated aerosols, using Staphylococcus aureus ATCC 6538 (ISO/DIS 22611:2003)	3
Dry microbial penetration, using Bacillus subtilis (ISO 22612:2005)	3
Wet bacterial penetration, using Staphylococcus aureus ATCC 29213 (EN ISO 22610)	6
Tests and classification according to EN 14126 - infective agents.	

12. Warranty

In case of faults or defects, if any, in the protective suits, including gloves and other accessories, the following is applicable:

If a fault or defect appears in the protective suit as a result or in the course of any use, function or state of the protective suit, the purchaser is requested to contact the company from which the suit was purchased. The terms of sale agreed upon between the purchaser and the said company shall apply in this case. Ansell Protective Solutions AB shall have no liability to purchasers of the protective suits other than when the suit in question was purchased directly from Ansell Protective Solutions AB.

The liability of Ansell Protective Solutions AB for faults or defects of a protective suit shall be subject to the Standard Warranty set forth in its General Conditions of Delivery for Industrial Rubber Products, unless otherwise stated in a separate agreement in writing between Ansell Protective Solutions AB and the purchaser. The General Conditions of Delivery are available on request and for download on https://www.ansell.com/en/legal/aps-trade-conditions.

This manual does not in any way comprise a guarantee or warranty on the part of Ansell Protective Solutions AB, and Ansell Protective Solutions AB expressly excludes any implied warranty of merchantability or fitness. Ansell Protective Solutions AB is not in any way nor under any conditions liable for compensation to the purchaser or commercial user of a protective suit for injury to (including death of) any person or loss of or damage to property of any kind or for costs, loss of profits or other damage or loss of any nature whatsoever.

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