

# AlphaTec™

EN 943-1

## Chemical Protective Suits Instructions for Use **AlphaTec™ LIGHT type TR**



Ansell

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# 1. Safety considerations

- These instructions for use (IFU) are valid only for AlphaTec™ LIGHT type TR\*.
- AlphaTec™ LIGHT type TR has different type of seams and zipper than AlphaTec™ LIGHT type T/CV/VP1, and therefore does not offer the same permeation times - see Technical Data Package.
- 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.
- The zipper and seams do not provide protection against ammonia
- Do not use a damaged or incomplete suit, and do not modify the suit.
- For repair and maintenance, only use genuine AlphaTec™ (TRELLCHEM®) spare parts, or the function may be impaired.

 Pay attention to the chemical suitability (i.e. permeation and degradation resistance) of the full-face masks and hoses used.

## 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.

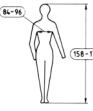


### **NOTICE**

Indicates additional information on how to use the suit.

\* Formerly known as TRELLCHEM® Light type TR.

## 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™ LIGHT type TR is

- A non-encapsulating gastight suit/type 1b
- Intended for use with a positive pressure self-contained breathing apparatus (SCBA) and a full-face mask worn outside the suit\*
- Single-skin, i.e. no overcover is needed
- Rear-entry
- Re-usable

The suit is fitted with:

- Attached safety boots
- Replaceable gloves

The following accessories are delivered with every suit:

- Comfort inner gloves
- Mini Hood
- Maintenance kit for zipper and Bayonet ring system
- Extra safety locking pins for the Bayonet ring system
- Suit hanger
- Black plastic bag
- Instructions for use

\* The suit can be used with the major brands of SCBAs, such as Interspiro, Scott, Dräger and MSA. For European users the SCBA must be certified to EN 137.

The suit has to be worn with a safety helmet.

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



AlphaTec™ LIGHT type TR has different type of seams and zipper than AlphaTec™ LIGHT type T/CV/VP1, and therefore does not offer the same permeation times - see Technical Data Package.

### 3. Approvals

#### 3.1 European EU Type approval

CE 0598

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

- EN 943-1:2015 and EN 943-1/A1:2019
- EN 14126:2003 infective agent protection
- Antistatic (dissipative) garment material (as defined in EN 1149-5:2018)
- SOLAS

Compliance with the performance requirements of the listed standards do not infer compliance with standards relating to other hazards, e.g. heat and flame.

AlphaTec™ LIGHT type TR has been tested and approved (Module B) by notified body no 0200; FORCE Certification A/S, Park Allé 345, DK-2605 Brøndby, 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](http://www.ansell.com/regulatory):



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

## 4. Proper use

### 4.1 Intended use

The suit protects against chemicals in gaseous, liquid, aerosol and solid form. It also protects against infectious agents, i.e. bacteria, virus and fungi.

### 4.2 Limitations of use

- Avoid extensive heat and open flames
- The suit is not intended for firefighting
- Avoid explosive environments
- The zipper and seams do not provide protection against ammonia

### 4.3 Temperature of use

- 40°C to +65°C

Short-term use in lower temperatures is possible, but great caution must be taken with regards to frost bite for the user.



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

## 5. Pre-use

Before use, make sure:

- The suit is pressure tested/leak tight and undamaged (see chapter 9)
- The suit and gloves have the correct size (see chapter 11.1)
- The elastic band is properly adjusted and installed (see chapter 5.1.1)
- To wear undergarments suited for the situation, e.g. station wear or fire turn-out gear.  
If cold weather or risk of contact with cold chemicals, wear insulating underwear.
- An additional overglove can be appropriate in case thermal and mechanical protection are insufficient.



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

## 5.1 Donning

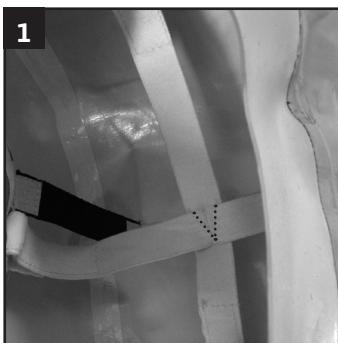
### 5.1.1 Hood adjustment



The elastic band shall be attached before the suit is donned.

The suit is delivered with a separate elastic band intended to be used inside the hood to get a tight fit of the face seal around the face. It is optional to use but it is recommended if the wearer has a small or narrow face. When fitted in the hood the elastic band makes it possible to adjust the fit of the face seal.

- 1) The elastic band is shaped as a cross. Place the cross “upside down” inside the hood (sewn arrow pointing down).



2. Attach the band in the loops inside the hood, using the Velcro closing.



There are three loop positions to be able to adjust the band in height to obtain an optimal fit, which is individual for each user.

### 5.1.2 Fitting the face piece

It is very important that the correct size of suit is selected and the fitting and positioning of the RPE (Respiratory Protective Equipment) face piece is done correctly on top of the suit/hood face seal, as described below. Please consult the RPE IFU and any RPE Selection and Use programs in place in the local workplace, regarding fitting and checking of the RPE.



Incorrect fitting may result in poor fit, reduction in protection or leakage.



Increased protection from liquid splashes may be achieved using the AlphaTec™ Mini Hood.

### 5.1.3 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 the chair) Place both legs into the suit and into the boots.
- 2) Put on the comfort gloves.
- 3) (Stand up) Insert the arms into the sleeves and gloves.
- 4) Pull the hood over your head and adjust the face seal.
- 5) Let the assistant close the zipper and then the zipper splash guard. Never force the zipper! If it jams, gently pull it back and try again. Make sure the zipper is fully closed.



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

- 6) Put on the breathing apparatus, except the mask.
- 7) Put on the face mask. Position it on top of the grey face seal. Start at the chin and make sure the face mask tightens against the face seal (not to the suit material). Pull the harness over the head and tighten the straps.
- 7) Have the assistant check the mask position and make sure there are no folds on the face seal, which can cause leakage.
- 8) If risk for splash of liquid chemicals, also put on the Mini Hood.
- 9) Put on the helmet. Ready



**Warning required by EN 943-1:** For not permanently fitted full face masks for protective chemical suits type 1b: Successful tests according to this standard should not be taken as a guarantee that a particular model of suit will perform as well on all wearers. It is recommended that such suits be individually fit-tested on wearers to ensure maximum protection.



**DISCLAIMER:** AlphaTec™ type TR suits have been tested and approved to the requirements of the EU Regulation 2016/425 on PPE, EN 943-1 and EN 943-2 using two different brands of SCBA (Interspiro and Dräger). It is impossible for Ansell to know beforehand what will be the resulting protection factor of the RPE plus suit system for different brands and types of RPE, different face masks, different users, different work operations and various work place conditions and scenarios of use etc.



**Specific notice to users in the United Kingdom:**

In addition to the EU Regulation 2016/425, and in addition to any local workplace program that may be in place for selection and use of RPE, the approved code of practice for the Control of Substances Hazardous to Health Regulations 2002 (as amended) and the OC 282/28 guidance on the carrying out of fit tests, require face fit testing to be carried out with other personal protective equipment in place. This testing should be carried out to ensure a device fits adequately before the device is first worn, and thereafter if there is a change in circumstances, such that there could be alteration to the wearers face shape.

## 6. In use

During the intervention, make sure to:

- Minimize the exposure to chemicals
- Avoid direct contact with the chemicals as far as possible

## 7. After use

### 7.1 Initial decontamination

After a response 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/Taking off the suit

After decontamination, take off the suit in reverse order of that described for donning above, taking care to avoid contamination of the user and the inside of the suit. 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.
- Chemical Warfare Agents (CWA) can be decontaminated using e.g. 30% calcium hypochlorite water solution.
- 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.

## 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 box, make sure the box is large enough to easily accommodate the suit without pushing, pressing or squeezing it. Please refer to the boxes listed in the AlphaTec™ Gross Price List.
- If stored hanging, suits with boots should have the boots on the floor to avoid excess strain on the shoulders
- If stored folded, the face seal should be as flat as possible, avoiding sharp folds
- The zipper should be almost closed with approximately 10 cm 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 (see also Chapter 10.1 Retirement). 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 to the middle.



- 4) Fold the boot to the waist.



- 5) Fold the suit on the middle.
- a) Make sure to place the face seal as flat as possible.



- 6) Place the suit in the storage bag or storage box.

## 9. Maintenance

### 9.1 Maintenance schedule

The specified intervals below are Ansell recommendations. For auxiliary equipment (SCBA, full-face mask, 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 11.6.

Area (chapter)	Upon Delivery	After Use	After Repair	Annually	Every 5 years	If Broken
Visual inspection (9.2)	X	X	X	X		
Test of gas-tightness (9.3)	X	X	X	X		
Cleaning (9.4)		X				
Lubricate zipper (9.5)		X		X		
Lubricate Bayonet O-Rings (9.6)		X		X		
<b>Repair &amp; Replacements</b>						
Patching suit material (9.11)						X
Rubber gloves (9.7)		X (*)				X
Rubber cuff (9.8)					X	X
Face seal					X	X
Bayonet O-rings (9.6)					X	X
Bayonet locking pins (9.6)					X	X
Diaphragm in AlphaTec™ Exhaust valve (9.9)					X	X

(\*) Rubber gloves to be replaced after use, if chemically contaminated.



For repair or replacement of face seal, boots and zipper, 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, face seal, boots, 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 function of the Bayonet glove ring system
- Check the function of the exhaust valves and, if fitted, suit ventilation regulating valve/passthrough. 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 gas-tightness according to ISO 17491-1

ISO 17491-1 replaces EN 464.

Test equipment: AlphaTec™ (Trelltest) test equipment, see chapter 11.6.

Other equipment i.e. LabTech tester with adapters for AlphaTec™ suits can also be used.

### 9.3.1 Testing non-encapsulating suit type TR

#### **Procedure:**

- 1) Place the suit on a clean surface, preferably a table.
- 2) Remove outer exhaust valve cover (see chapter 9.9) and insert the sealing plug.
- 3) Add the retaining collar (1 pce) on the sealing plug and tighten clockwise.
- 4) Install the face plate in the face seal: • Unscrew the nuts on the face seal plate and detach the top ring. • Place the plate under the face seal (insert from inside). • Adjust the face seal so that it covers the outer part of the plate without being in contact with the screws. • Put the top ring back and tighten the nuts.
- 5) Close the zipper.
- 6) Connect the pressure gauge via the nipple on the face seal plate.
- 7) Inflate the suit with an air pistol to 1750 Pa/17.5 mbar.
- 8) Lower the pressure to 1700 Pa/17.0 mbar using the valve on the face seal plate/adapter. This is the pre-test expansion pressure. Maintain this pressure for 10 minutes, adding air if necessary.
- 9) Adjust the pressure to 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.

- 10) Note the pressure after 6 minutes. If this pressure is 1350 Pa/13.5 mbar or more, the suit has passed the test. Note the final pressure in the suit log.
- 11) After the pressure test is completed, disconnect the pressure gauge from the face plate, remove the face plate and remove the sealing plug from the exhaust valve.
- 12) Re-fit the cover of the exhaust valve.

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

## 9.4 Cleaning

For decontamination guidelines, see chapter 7.

### 9.4.1 Hand wash

Ansell recommends hand washing the suit:

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

 Care should be taken not to scratch or damage the material.

- 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.

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. 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 Bayonet ring

### 9.6.1 Function

The AlphaTec™ (TRELLCHEM®) Bayonet ring system consists of the following parts:

**Sleeve ring** – glued to the suit sleeve

**Glove ring** – where the glove is mounted

**Inner ring**\* – goes inside the shaft of the rubber glove

**Rubber O-rings** – one in the sleeve ring and one in the glove ring. Together with the rubber glove they provide a triple sealing of the system.

**Safety locking pin** – prevents the system from unintentional opening



#### Closed position

Green marks opposite white marks.

To open the system and detach the glove assembly, remove the red locking pin, push the two rings together and twist counter-clockwise until the white marks meet.



#### Open (detach/attach) position

White marks opposite white marks.

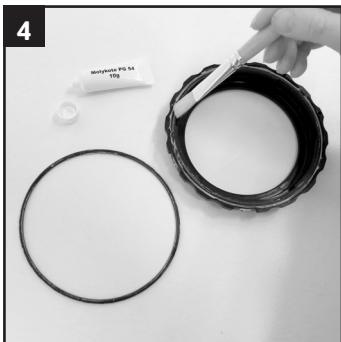
To attach the glove ring, match the white marks, push the two rings together and twist clockwise until the white marks meet the green marks. Insert the red locking pin.

\* If the suit is fitted with a 2 or 3-part glove assembly that includes the inner barrier glove, then the inner ring is welded to the barrier glove shaft.

## 9.6.2 Maintenance

### Procedure:

- 1) Open the Bayonet ring and take out the two O-rings.
- 2) Apply Molycote all around the groove.
- 3) If replacing the O-rings: Put the two new O-rings into place.
- 4) Use a small paintbrush to spread the grease evenly.



When functioning properly, the safety locking pin “snaps” into place when pushing it with a finger. The pin may after repeated use become too easy to push into place, i.e. it gets worn out, and must then be replaced.



! The two O-rings are different size:  
The one with larger diameter goes into the glove ring and the smaller diameter into the sleeve ring.

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

## 9.7 Replacing gloves

### Procedure:

- 1) Take out the Safety locking pin.
- 2) Push the rings towards each other, then turn clockwise, to open the ring system.



- 3) Pull the gloves out of the ring.
- 4) Take the new glove and place the black inner ring approximately 5 cm/2 inches into the rubber glove.

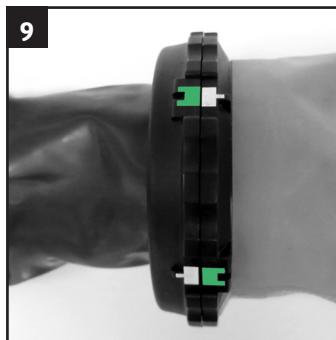


5) Lubricate the O-rings with Molycote.

- 6) Push the glove through the glove ring and align the thumb of the glove with the green mark on the glove ring. Push it firmly into place using your thumbs.



- 7) Fold the glove shaft into the glove ring.
- 8) Position the glove ring and the sleeve ring so that the two white marks are opposite each other.
- 9) Now push the two rings towards each other and turn counter-clockwise, so that the white and the green marks meet.



- 10) Attach the safety locking pin.

## 9.8 Replacing rubber cuff

The rubber cuff is an optional accessory, which adds safety if the outer glove is punctured.

### Procedure:

- 1) Pull out the old cuff from inside the suit sleeve.



- 2) Push the new cuff ring assembly into the sleeve ring from inside the suit.



- 3) Make sure the cuff is aligned straight. Push it firmly into place. Make sure no suit material gets caught between the cuff and the sleeve ring.



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

## 9.9 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.



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

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



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.

## 9.10 Patching

Minor damage, e.g. tears, punctures, scratches, can be patched using the AlphaTec™ (TRELLCHEM®) Repair Kit, which also contains instructions (see chapter 11.6).

## 9.11 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.

Special labels for marking of the suit are available as an option.

## 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 chemical 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 Suit sizes

<b>SUIT SIZE</b>	<b>HEIGHT (cm)</b>	<b>CHEST/BUST GIRTH</b>
XXS	158-170	80-88
XS	164-176	84-92
S	170-182	88-96
M	176-188	92-100
L	182-194	96-104
XL	188-200	100-108
XXL	194-206	104-112
XXXL	200-212	108-116

NOTE: The data refers to a wearer without SCBA or any other equipment.

### 11.2 Suit weight

Approx. 5.0 kg / 11 lbs.

### 11.3 Suit colour

Orange-red.

## 11.4 Materials

<b>Suit part/Component</b>	<b>Description</b>
<b>Suit material:</b>	Polyester fabric coated on both sides with PVC
<b>Face seal material:</b>	Natural rubber/Chloroprene rubber
<b>Glove materials:</b>	Rubber glove: AlphaTec™ 08-354 made from Neoprene (chloroprene) rubber Rubber cuff: Chloroprene rubber
<b>Footwear material:</b>	Attached boot: PVC
<b>Zipper material:</b>	Gastight zipper protected by an outside splash guard, closing with Velcro.  Length: 850 mm  Tape: Polyester fabric coated with PVC on both sides Chain: White copper alloy Slide: Bronze (copper/tin alloy)
<b>Exhaust valves:</b>	1 pce/suit, placed on the chest  <b>Construction:</b>  Valve seat/washer/ nut/cover: Glass-fibre reinforced polypropylene Valve/Suit gasket: Chloroprene rubber Diaphragm (membrane): Silicone

## 11.5 Seam types & attachments

Seam/Attachment	Description
<b>Suit material seam:</b>	The seams are welded.
<b>Face seal attachment:</b>	The face seal is glued to the suit and sealed both inside and outside.  Inner tape: Textile reinforced rubber coated tape, glued to the seam Outer tape: Chloroprene tape, glued to the seam
<b>Glove attachment:</b>	Gloves are attached with a Bayonet ring system (see chapter 9.6). The ring is glued to the suit.
<b>Boot attachment:</b>	Boots are attached with a metal band/plastic ring system.
<b>Zipper attachment:</b>	The zipper is welded to the suit.
<b>Exhaust valves:</b>	Attached to the suit with a screw and nut

## 11.6 List of spare parts & accessories

<b>Description</b>	<b>Size</b>	<b>Article no</b> Regions EMEA & APAC	<b>SKU</b> Regions NA & LAC
<b>Gloves:</b>			
AlphaTec™ 08-354 Neoprene rubber glove	8 9 10	K72 250 140 K72 250 160 K72 250 170	846775 846776 846777
AlphaTec™ 58-800 Overglove	11	K72 252 215	836248
AlphaTec™ Rubber cuff assembly on ring		K72 900 102	836253
Comfort glove Hyflex 11-300, 12 pairs	7 8 9 10 11	K72 254 007 K72 254 008 K72 254 009 K72 254 010 K72 254 011	
<b>Footwear:</b>	<b>EU</b>		
PVC Safety boots	40 41 42 43 44 45 46 47 48	K72 203 510 K72 203 520 K72 203 530 K72 203 540 K72 203 550 K72 203 560 K72 203 570 K72 203 580 K72 203 590	
<b>Face seal accessories:</b>			
Face seal		K72 502 000	836309
<b>Storage:</b>			
AlphaTec™ Storage Bag		487 100 600	836315
Suit hanger		K72 400 100	
Storage box, plastic		K78 700 120	
<b>Test equipment:</b>			
AlphaTec™ Manual Pressure Test-kit*	T/TR	487 090 076	836283

<b>Description</b>	<b>Size</b>	<b>Article no</b> Regions EMEA & APAC	<b>SKU</b> Regions NA & LAC
<b>Maintenance &amp; Repair:</b>			
Zipper wax kit		K70 000 410	836318
Lubrication for Bayonet ring system, 5 pcs		K69 095 006	836260
Rubber O-rings for Sleeve ring, 10 pcs		K72 000 606	836258
Rubber O-rings for Glove ring, 10 pcs		K72 000 611	836259
Safety locking pin for Bayonet ring system, 10 pcs		K73 103 586	836261
AlphaTec™ Exhaust valve, complete		K73 103 000	836311
AlphaTec™ Exhaust valve diaphragm, 5 pcs		K73 102 051	836312
Repair kit for AlphaTec™ LIGHT, orange*		487 080 075	836267
<b>Tools:</b>			
3-pin tool, for Exhaust valve replacement		K77 704 040	836293
Palette knife, for Exhaust valve membrane replacement		K77 709 015	846790

\* Instructions included.

## 11.7 EU type approval data

See EU type approval on page 8. Tests and classification according to EN 14325:2004, EN 14325:2018 and EN 14126:2003.

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.

<b>SUIT MATERIAL AND SEAM - MECHANICAL DATA</b>			
<b>PROPERTY</b>	<b>TEST METHOD</b>	<b>CLASS REQUIREMENT</b>	<b>CLASS</b>
Abrasion resistance	EN 14325:2018, EN ISO 12947-2	> 2000 cycles	6
Flex cracking resistance	EN 14325:2004, ISO 7854:B	> 100000 cycles	6
Flex cracking resistance	EN 14325:2018, 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 1149-5:2018	$t_{50} < 4$	Pass
Seam strength	EN ISO 13935-2	> 500 N	6
Zipper strength	EN ISO 13935-2	> 500 N	6

\* These tests have been performed on the suit material.

SUIT MATERIAL AND SEAM - RESISTANCE TO PERMEATION BY CHEMICALS		
CHEMICAL	SUIT MATERIAL	SEAM
Formaldehyde solution	6	6
Hydrochloric acid, 37%	6	6
Sodium hydroxide, 40%	6	6
Sulphuric acid, 50%	6	6

Tested according to EN 374-3, breakthrough criteria 1.0 µg/min/cm<sup>2</sup>.  
NOTE: AlphaTec™ LIGHT type TR is not suited for continuous exposure to solvents.

COMPONENTS - RESISTANCE TO PERMEATION BY CHEMICALS			
CHEMICAL	PVC BOOTS	PVC ZIPPER	AlphaTec™ 08-354 GLOVES
Formaldehyde solution	6	6	6
Hydrochloric acid, 37%	6	6	6
Sodium hydroxide, 40%	6	6	6
Sulphuric acid, 50%	6	6	6

Tested according to EN 374-3, breakthrough criteria 1.0 µg/min/cm<sup>2</sup>.  
NOTE: AlphaTec™ LIGHT type TR 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



The zipper and seams do not provide protection against ammonia.

<b>SUIT MATERIAL – RESISTANCE TO PENETRATION BY INFECTIVE AGENTS</b>	
<b>CHEMICAL</b>	<b>SUIT MATERIAL</b>
Synthetic blood (ISO 16603:2004)	6
Phi-X174 bacteriophage (ISO 16604:2004)	6
Penetration by biologically contaminated aerosols, using <i>Staphylococcus aureus</i> ATCC 6538 (ISO/DIS 22611:2003)	3
Dry microbial penetration, using <i>Bacillus subtilis</i> (ISO 22612:2005)	3
Wet bacterial penetration, using <i>Staphylococcus aureus</i> 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.

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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