## **User Manual**





# **SEASKIN Undersuit High Wick Thinsulate and Thermal Accessories**

## **Aqualand Ltd**

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Congratulations on purchasing a Seaskin Diving Thermal product! Therse products have been carefully manufactured from the best available materials, and with reasonable care it will give you many years of service. Please read the care, maintenance and use information in this manual and follow the suggestions and warnings carefully.

## **INFORMATION**

#### 1.1 Manufacturer

Aqualand Ltd

Unit 4X, Hill Top Commercial Centre,

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Tel: 0113 2361776

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## 1.2 Undersuit type

Diving undersuit, shorty and socks for recreational and professional use

#### 1.3 Standard

PPE REGULATION (EU) 2016/425 ANNEX II

1.4 N/A

1.5 N/A

#### 1.6 Undersuit variations

Seaskin Undersuit High Wick Thinsulate 250 - SSUSHWTHIN250

Seaskin Undersuit High Wick Thinsulate 150 – SSUSHWTHIN150

Seaskin Shorty Undersuit - Thinsulate 150 - SSSHTUSTHIN150

Seaskin Knee High Sox – Thinsulate 150 - SSKNHISOXTHIN150

All undersuits are built to the customers specification and sizing, this includes options which can be selected during the ordering process. Full suits are available in in two types, one using 250gsm CS Thinsulate and one 150gsm. Shorty undersuits are only available in 150gsm and are deigned to worn OVER a full suit. The knee high sox are available in standard shoe sizes

#### 1.7 Pictogram explanation

Pictograms on the internal label of the suit indicate washing and drying procedure:

See 2.9 for washing instructions.



Wash on gentle cycle at 40 deg.C.

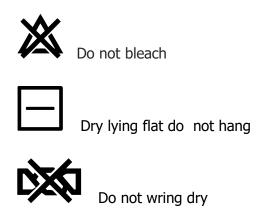


Do not dry clean





Tumble dry on low heat



## **WARNINGS**

## 2.1 Usage

The Undersuit is intended for use with all types of other known diving equipment than can provide gas to inflate the drysuit within the required pressure range.

Divers must ensure that they have the necessary knowledge, qualifications, gas mixture, thermal protection, and technical security when using an undersuit under a drysuit.

## 2.2 Construction and components of the Undersuit

The diving undersuit is manufactured according to the PPE REGULATION (EU) 2016/425 ANNEX II standard. The exact components used are specified during the ordering process.

## 2.3 Warnings

#### **Buoyancy Changes**

Changing thermal protection under a drysuit affects buoyancy. Incorrect weight for your suit and insulation can be uncomfortable or unsafe. Perform a buoyancy check when insulation is changed, following your training or with a qualified instructor.

#### **Temperature range**

A drysuit can operate within a range of temperatures. The manufacturer suggests that thermal protection should be chosen based on following conditions: water temperature, season of the year, diving depth, length and level of activity under water. Temperature might influence diving comfort and diving length, in extreme situations may affect your health and safety.

#### Thermal protection

Safety and comfort during a dive depends on the right undersuit and thermal underwear selection. Lack of right thermal protection might cause hyperthermia and hypothermia.

#### The effects of high work rate when diving

While using the drysuit the user should remember about not reaching the dangerous rate of work activity which could lead to hyperthermia (over heating).

#### **Diving conditions**

The undersuit is designed for recreational and professional diving. When worn under the correct drysuit it can be used in natural and artificial water reservoirs. Factors such as: water purity, pH, chlorine etc. should be within the range tolerated by the human skin. The undersuit does not isolate diver's skin from water if the drysuit is not functioning correctly. Diving in contaminated waters can cause allergic reactions.

Pay attention to undersuit selection, matching to the water temperature and meteorological conditions. The drysuit protects the diver's body against abrasion and underwater flora and fauna within a reasonable range. Excessive and careless operation may damage the drysuit material, this can lead to water entering and reducing the performance of the undersuit.

Pay special attention to abrasions during dives on reefs, wrecks and caves.

#### **Buoyancy and depth**

Your buoyancy should always be neutral if not intentionally descending or ascending in the water column. You should always the BCD system together with a drysuit. While descending you should control the amount of gas in your drysuit with the inlet valve by adding the air to your drysuit together with depth change to avoid reduced the thermal efficiency of the undersuit, mobility and discomfort caused by hydrostatic pressure.

While ascending the increase in volume of air should be released by the dump valve on an arm to prevent an uncontrolled assent. Ensure that undersuit does not interfere with gas being vented from the drysuit due the placement of the valves.

#### Thermal insulation and depth

Thermal insulation is reduced due to hydrostatic pressure, which is increases with depth. The user must be aware that thermal capacity of the undersuit might be reduced.

#### **Undersuit and compatible equipment**

The undersuit is compatible with all standard diving equipment, such as: drysuits, mask, fins, BCD, tanks, regulator, or other equipment designed to use with drysuits/undersuits. The user should be trained and familiar with the use of the equipment used for drysuit diving.

#### **Enriched gases**

Use of any gas for inflation of the drysuit other than normal air may reduce the thermal performance of the undersuit.

#### **Allergic reaction**

Every synthetic material including those to construct the undersuit might cause allergic reactions. Before using under a drysuit, please make sure that the user is not allergic to material which the undersuit is made of, as well as the other elements included in the drysuit, such as: neck and wrist seals, warm neck and seal covers if fitted.

#### 2.4 How to check the undersuit

#### **Prior to use**

Before each dive the following should be checked:

- The undersuit is complete and in working order
- The undersuit is clean and dry, there is no sand, insects, plant pieces or other things which may cause discomfort after donning

#### After diving

After each dive, if the undersuit is dirty, you can use the steps outlined in 2.9 and User Manual. Do not store for long periods if wet or damp.

## 2.5 Undersuit usage

The undersuit is extremely versatile in its usage, making it possible for use with a variety of drysuits to match a given activity. It is necessary to match suitable underwear and undersuit to the conditions. The undersuit may become damp during a dive without any water entering the drysuit. This water comes from condensation due the temperature and perspiration due to physical effort.

In case of any allergic reactions due to drysuit material, please seek medical advice.

#### **Fitting of the Undersuit**

Check the fit of the undersuit with each combination of thermal garments beneath the drysuit to be worn. Ensure that the full range of movements undertaken when diving can be performed.

All Undersuits are made to the measurements provided by the use so provide the ideal fit.

#### **Donning the Undersuit**

Make sure the area around you is clean and free of any sharp object that may damage the suit. Ideally use a change mat or change mat bag opened out. Remove any jewellery or watches that may snag the seals of the drysuit being worn. Ensure you wearing the correct level of thermal undersuits for the dive and conditions. Check the zip is fully open.

- Insert legs and position the neoprene foot strips.
- Pull the crutch of the suit as far as it will go.
- If using a pee valve route tubing through pee valve hole
- Insert arms and make sure the thumb loops are accessible.
- Arrange collar to fit flat on neck.
- Position zip flap so it will lay flat behind zip.
- Close zip, taking care not to trap suit fabric.
- Position the elasticated back in the small of back sop it stops the crutch of the suit from dropping.

#### **Doffing the undersuit**

- When removing the undersuit ensure the crutch is up as far as it will go (this will aid getting the suit over your shoulders).
- Unzip the front zip fully.
- Remove arms.
- Disconnect pee valve hose.
- Remove from legs

## 2.6 Using the Undersuit

#### Warning!

A drysuit and Undersuit should only be used by trained person, who has completed drysuit use training and possesses a certificate or is being trained by diving instructor recognized by the local authorities.

For correct and safe use of the drysuit and undersuit it is essential to check the following:

- Prior to each dive whether the drysuit is worn correctly.
- Before diving the undersuit is suitable for the temperature of the water, the season and the type of diving activity.
- Whether the drysuit is complete and in working order.
- Adjustment of the appropriate diving weight, equipment and adequate undersuit, equipment carried, as well as instructor's recommendation and local regulations.

#### 2.7 Maintenance

#### **Maintenance**

Undersuits require little maintenance if dried, stored and laundered correctly.

#### **Minor repairs**

Small tears in the outer nylon shell can be repaired with Tenacious Tape or even hand sewing.

#### 2.8 Undersuit usable lifetime

Because of the variety of storage conditions and use, it is impossible to specify the life cycle of a undersuit but it should last many years. The undersuit should be checked before each dive. Check for:

- Tears in the outer fabric
- Zips operating smoothly
- The internal Thinsulate layer is in place with no tears
- The undersuit has been cut to your body size at that time. If your body changes dramatically you may find your range of body movement impaired.

## 2.9 Drysuit Cleaning

#### Warning!



## CARE INSTRUCTIONS FOR UNDERSUITS OR THERMAL ACCESSORIES WITH Thinsulate™ **INSULATION**

If cared for properly, your Undersuit with Thinsulate Insulation will provide years of service. Please read the following instructions carefully. If directions are not followed, breakdown of the insulation can occur.

We recommend wearing thermal underwear beneath your Undersuit. This liner will absorb odours and perspiration from the body. Avoid using cotton underwear because it saturates with sweat easily and conducts heat away from the body when wet. Thermal underwear can also be washed as often as it is necessary.

#### LAUNDERING RECOMMENDATIONS

Machine-wash in cold or at the temp. of 40 deg. C. Hand washing is not recommended since it is difficult to work the water into and through the Undersuit to flush away dirt and it is also difficult to remove the water by hand without damaging the insulation. The Undersuit should be washed separately to avoid crowding in the machine and to maximize the cleaning action. Add detergent for the first washing, then wash the Undersuit again - this time without any detergent.

Warning: Spinning is not recommended!!

Warning: Do not hang to dry!! The weight of the water in the garment could cause the Thinsulate™ Insulation liner to separate in shoulders area. Do not wring!! This will tear the internal Thinsulate Insulation.

To dry, lay the undersuit flat or tumble dry using a delicate cycle (very low temperature) or air only. For the first drying cycle, turn the undersuit inside out. Repeat, if the lining is still wet, but for the second drying cycle - turn the undersuit right side out.

## 2.10 Undersuit storage

The manufacturer is concerned about the long term and correct functioning of the product, consequently the user should follow some precautions regarding the storage. The undersuit between dive trips should be stored dry and hanging on a wide hanger or folded loosely. The place of storage should be a dry environment distant from intensive sun light, chemicals, open fires, heating devices and electrical equipment which produce ozone.

Always thoroughly dry an undersuit before storage.

## 2.11 Undersuit Disposal

The drysuit is made from polyester and nylon. After the suit is no longer usable, it is necessary to reprocess in accordance with local regulations regarding the disposal of articles made from synthetic substances.

## 2.12 Undersuit guarantee/warranty

All Seaskin products are fully guaranteed for one year. This warranty in no way affects your statutory rights. The guarantee starts the date of invoice.