SEAL

SEAL SL:01

Drysuit

User's Manual

Revision 2 | 31 — 07 — 2020 | English

1 → Basic information

SEAL SL:01 drysuit
is manufactured in Poland by:

MPW sp. z o.o. sp. k.
ul. Tenczyńska 6
32-566 Nieporaz

Polska

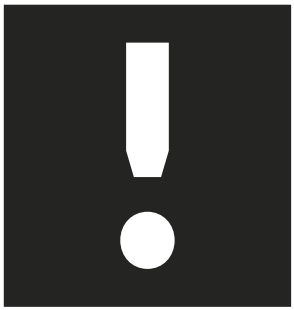
Tax ID 628-227-04-68

WWW: http://www.sealdrysuits.eu
e-mail: office@sealdrysuits.eu

SEAL SL:01 drysuit was manufactured in accordance with the requirements of the Regulation of the European Parliament and of the Council (EU) 2016/425 of March 9, 2016, on personal protective equipment and repealing Council Directive 89/686 / EEC and the PN-EN-14225-2: 2018 standard. Conformity assessment was carried out by the notified body 1463, Polski Rejestr Statków S.A.

Attention!

This manual is intended as a guide for trained and certified divers, who are qualified to dive with a drysuit. This manual does not act as a substitute for professional diver training or for relevant dive training courses. It covers the use of the products herein in an appropriate way for certified and trained divers. Before you start using any of the products described in this manual, ensure that you have relevant qualifications issued by a registered diving organization.



ATTENTION! THE SEAL SL:01 DRYSUIT SHOULD ONLY BE USED BY A DIVER WHO HAS RECEIVED RECOGNISED AND RELEVANT TRAINING IN ITS USE, OR, WHO IS UNDER THE SUPERVISION OF AN APPROPRIATELY QUALIFIED, LEGALLY RECOGNISED AND IN STATUS DIVING INSTRUCTOR.

If any of the information contained in this manual or if any information label placed on the drysuit label is not clear, contact the manufacturer for information or an explanation.

2 → Textile care symbols

Inside the drysuit, you will find two labels containing the information required by the standard PN-EN 14225-02:2018:

- Information on compliance with the standard
- Manufacturer's name, trademark, e-mail address
- Designation of the drysuit type
- Drysuit serial number
- Year of production
- Size
- Information on the maintenance of the drysuit

Drysuit care guide:


Hand wash
40° C / 104 F


Hang to dry /
line dry


Do not iron


Do not dry clean


Do not ring


Dry in the shade


Do not tumble dry


Do not bleach

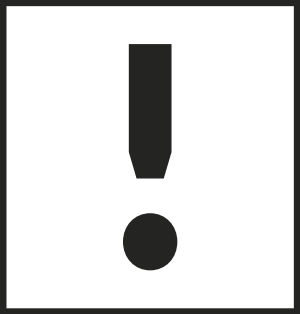
3 → Warnings

In this manual, you will find information or warnings that may be important for your health and life. You should read them carefully, as failure to observe them may result in damage to the equipment, a dangerous situation, or even a severe accident resulting in injury or death:

ATTENTION! INFORMATION OR WARNING.

3 → Warnings

- Drysuit diving is significantly different from wetsuit diving and requires mastery of knowledge, skills and specific procedures. Before making your first drysuit dive, ensure that you have passed the proper drysuit diving course and that you have the relevant skills and knowledge to dive safely.
- Never dive in a drysuit that shows signs of wear, malfunction, or damage. Do not use the drysuit until an authorized SEAL service technicians has inspected it.
- Never use a drysuit in conjunction with equipment with sharp edges (especially a low quality backplate/harness). It may cause the drysuit to be damaged by chafing or could even cut through the suit.
- Diving in an improperly fitted drysuit can result in poor comfort, restrict freedom of movement, and/or significantly increase your effort. This can lead to dangerous situations on the surface and underwater. Before diving, be sure to check the proper fit of the drysuit.
- Before diving, make sure you correctly conduct weight check procedures. Consider the configuration of your equipment and the type of water. You should perform weight checks with any change of equipment configuration or undergarments.
- Wearing a drysuit with thick undergarments at higher temperatures may cause overheating of the body (hyperthermia). In extreme cases this can be fatal. If using the drysuit in hot conditions, avoid exercise, minimize time spent on the surface, avoid going out in the sun, and cool yourself by pouring water onto the drysuit.
- During the dive, you and your buddy should check each others equipment frequently, paying attention to possible leaks or other irregularities. Before diving, establish proper procedures for checks and communication underwater with a buddy and rehearse the diving signals.
- Avoid overinflating the drysuit, as it may increase hydrodynamic drag. A large volume of gas can cause buoyancy and problems with trim control. A drysuit should not be the primary source of buoyancy, especially when using multiple cylinders



- Entering the water with the exhaust valve closed or closing the valve underwater may cause buoyancy problems. Check the valve position before, during and at the end of the dive and choose an appropriate open or closed position.
- When diving, insufficient gas in the drysuit may cause a compression effect (squeeze). This may reduce thermal efficiency and your freedom of movement. In extreme cases this can lead to pressure injuries or decompression sickness (DCS) due to obstructed circulation. Always add sufficient gas to the drysuit, but no more than is needed for comfort and warmth.
- Coldwater diving carries the risk of hypothermia. Potential emergencies may be caused by low temperatures and ice formation on or inside the equipment. Carefully read the information in the chapter "Emergencies".
- Diving in environments such as caves and wrecks carries a risk of damaging the drysuit. Avoid contact with the environment at all times (rocks, parts of wreck, reefs).
- Diving in overhead environments (wrecks/cave/cavern) where a physical ceiling is above you carries the risk of debris entering into the dump valve, possibly causing leakage.
- Diving in contaminated water or water with a composition significantly different from clean sea or fresh water carries addtional risk. It may lead to reactions from the body (poisoning, allergies), damage equipment, or create permanent stains on the drysuit.
- Filling the drysuit with gases other than with air, enriched air (Nitrox) with an oxygen content less than 40%, or argon, may result in hazardous situations, damage to the drysuit, or other abnormalities. Contact the manufacturer for more information on the advisability of using different gases.
- Avoid overexertion (elevated heart or breathing rate) when diving.This can lead to overheating, exhaustion, and even a dangerous rise in the level of carbon dioxide in the blood. Move slowly and effortlessly while swimming or performing any activity in a drysuit.

4 → Drysuit features

SEAL SL:01 is a trilaminate drysuit, built with unique "Double-Shell Reinforcement" technology, ensuring lightness, freedom of movement, extraordinary durability and resistance to puncture and tearing, especially in exposed areas.

The main fabric from which the drysuit is made and which ensures it's integrity is a perfect British trilaminate. In contrast, those elements of the drysuit exposed to an increased risk of damage are protected by a layer of military specification Cordura and the ultra-resistant Superfabric material.

To add gas the drysuit is equipped with a chest mounted inflation valve, suitable for connecting a low pressure BCD style hose from your first stage. The exhaust/dump valve is located on the left shoulder, enabling the release of gas from the drysuit.

4.1 → Accessories with the drysuit

When you purchase the SEAL SL:01 drysuit, you receive :

- The SEAL SL:01 drysuit as ordered
- Transport bag
- Lubricant for the zipper
- User's manual
- Additional accessories (neoprene hood, an inflation hose), if you ordered them together with the drysuit

You can order the drysuit according to your individual requirements. The list of available options is as follows:

Part ↓	Standard ↓	Available options ↓
Drysuit shell	Nylon-polyester trilaminate with a sealed butyl layer	
Elbow and Knee pads	Superfabric	
Arm and pockets reinforcement	Cordura	
Zipper	Plastic TIZIP Masterseal 10	Metal Dynat G2 CR/PU
Inflation valve	Si-Tech Skeleton	Apeks Low Profile
Exhaust valve	Si-Tech Gaude	Apeks Low Profile
Pockets	Two 3D pockets	
Neck seal	Latex	Silicone, Neoprene
Wrist seals	Latex	Silicone
Wrist/Cuff Rings	None	Si-Tech Antares
Feet protection	Trilaminate sock	Neoprene shoes

The weight of the drysuit in standard equipment is 2.8 Kg.

5 → Use of the Drysuit

The SEAL SL:01 drysuit is suitable for use in salt and fresh water, both artificial and natural environments.

5.1 → Mechanical protection

The drysuit is designed to ensure protection for the user against direct contact with water. It also provides mechanical protection for the body, both underwater and on the surface, against physical contact with flora and fauna. Care should be taken to avoid any contact in order not to damage the drysuit's shell.

The drysuit is intended to be used in recreational diving in both open and confined water. Purity, pH and the content of other water components should be within a normal range as tolerated by the body.

As the suit does not isolate the diver's bodycompletely from the environment, avoid using the drysuit in contaminated water or other harmful conditions. Using the drysuit in a polluted environment may cause negative reactions in the user (allergies, poisoning), and may also damage the drysuit.

5.2 → Thermal protection

The drysuit may be used in a wide temperature range. Trilaminate drysuits do not provide thermal insulation by themselves. To provide thermal comfort in cold water, you must use undergarments appropriate to the conditions.

The construction of the SEAL SL: 01 drysuit allows you to choose undergarments of varying thickness as well as the use of diving specific electrical heating products.

ATTENTION ! USING INAPPROPRIATE UNDERGARMENTS FOR UNDERWATER OR SURFACE TEMPERATURES, AND/OR EXCESSIVE EXERTION OR DIVE TIME, CAN IN EXTREME CASES LEAD TO HYPOTHERMIA (DANGEROUS CHILLING OF THE BODY) OR HYPERTHERMIA (DANGEROUS OVERHEATING OF THE BODY).

5.3 → Buoyancy control

The drysuit is an significant influence on buoyancy during a dive and careful control of the gas content of the suit is essential for proper buoyancy control, especially during ascents and descents. Ensure an appropiate and adequate gas supply source is connected to the chest input valve and verified as working before entering the water. Ensure the dump/exhaust valve is open and operable before, during and especially during the ascent phase of the dive.

A drysuit should never be the primary source of buoyancy. A suitable primary buoyancy control system should be used (wing, jacket, sidemount system).

Many diving organizations allow the use of a drysuit as a backup source of buoyancy in the case of an emergency. When using the SEAL SL: 01 drysuit as a backup source of buoyancy, it is essential to conduct a check dive with the configuration and equipment to be used. This dive in controlled conditions should determine whether the buoyancy provided by the drysuit would be sufficient.

5.4 → The dive depth

The SEAL SL:01 drysuit does not limit depth of use. Diving to great depths carries an increased risk. A trilaminate drysuit, depending on the type of undergarment and underwear used may change buoyancy characteristics with changes of depth or trim position.

Some types of undergarment may also compress with increasing depth, changing buoyancy and thermal properties, often negatively. We recommend using diving specific undergarments made of compression-resistant fibers.

Please take the above information into account when planning your dive and setting up your equipment. Never make deep dives in a drysuit without first being skilled and familiar with all operational and emergency procedures. You should develop these skills in shallow and/or in confined water, ideally under supervision of a suitably qualified instructor. Do not exceed the depth limit of your certification.

6 → Fitting the drysuit

The SEAL SL:01 drysuit is available in a number of standard sizes.
It is also available in 'made to measure' where it is tailored to the individual dimensions of the user. By correctly selecting the size, the drysuit can be used by all genders. The SEAL SL:01 drysuit braces can be adjusted as required by the user but no other user adjustments are possible.

ATTENTION! NEVER DIVE IN A BADLY FITTED DRYSUIT (TOO TIGHT OR TOO LOOSE).
RISK OF ACCIDENT, ILLNESS OR DROWNING MAY RESULT FROM LIMITED MOVEMENT, RESTRICTED CIRCULATION, HYPOTHERMIA, DECOMPRESSION SICKNESS (DCS), BUOYANCY AND TRIM PROBLEMS.

6.1 → Size tables

SEAL drysuit sizes are given in height (cm), width (S, XL, 2XL, etc.), and shoe or sock size.

The size is written as:
height / width / shoe size, e.g. 188 / XL / 40-43.

Please note that there is a tolerance 'range' in the size of the drysuit. For example, a drysuit designed for a height of 180 cm should work for people with a height range of 175-183 cm.
Of course this depends on the body structure of each person.

Size* ↓	Measures in cm ↓						
	XS	S	M	L	XL	2XL	3XL
Chest	106	112	118	124	130	136	142
Waist	99	104	110	116	122	128	134
Hips	106	112	118	124	130	136	142
Thights	60	64	68	72	76	80	84
Calf	30	43	46	48	51	53	56

* Please take the measurement in the widest part.

Size* ↓	Measures in cm ↓						
	S23	S25	S26	S28	S29	S30	S31
Feet lengths in cm	23.5	25	26.5	28	29	30	31
Floor to crotch in cm	21	22	23	24	25	26	27
Shoe size EU	36-39	38-41	40-43	42-45	44-47	46-49	48-51

6.2 → Check how the drysuit fits

The drysuit must not restrict movement whilst diving. Conversely it should not be excessively large either. Poor fit will negatively affect the comfort and safety of diving.

Particular attention should be paid to the correct width of the legs and sleeves. Too tight will make it difficult for you to reach valves or move freely. The drysuit must not be too tight at the chest or neck as difficulty breathing may result, a dangerous situation for the user.

A well-chosen size means that you can easily move. Check by bending and straightening the torso, lunging, squatting, bringing the knees to the chest, and raising the arms. The drysuit may be slightly resistant to these exercises due to the natural properties of trilaminate, but the movements should be performed without much effort.

Some versions of wrist and neck seals (e.g. latex) allow the user to adjust their diameter by careful cutting to a preferred size. Latex seals have special lines that facilitate trimming. Carefully cut in small stages along these lines and measure after each cut. The cut must be straight, smooth and no nicks or tears must be left which would present a high risk of failure. If you are not sure if the wrist and neck seals in your suit can be cut to size, or do not know how to do this, please contact the seller or the manufacturer of the drysuit.

7 → Before the first use

Before the first use, make sure you have received all the items listed in this manual. Check for correct fit. Check all valves are tight on the suit. The drysuit should be checked with the undergarment to be used being worn also.

ATTENTION! A WRONGLY FITTED DRYSUIT MAY BE THE CAUSE OF DISCOMFORT AND DANGER. IT IS IMPORTANT TO CHECK THE SUIT FIT BEFORE THE FIRST DIVE.

ATTENTION! BEFORE THE FIRST DIVE IN A NEW DRYSUIT OR AFTER CHANGING THE CONFIGURATION, MAKE SURE TO CHECK IF YOU CAN MOVE FREELY IN CONTROLLED CONDITIONS.

ATTENTION! IF YOU PLAN TO USE THE DRYSUIT ON HOLIDAY, WE STRONGLY SUGGEST TO CHECK FIT AND FUNCTION BEFORE YOU LEAVE BY MAKING AT LEAST ONE DIVE (POOL / CONFINED WATER).

7.1 → Allergic reaction

Although we are using excellent quality materials, manufactured by the best producers in the world, proven in many reputable products, the synthetic materials of the drysuit in rare cases may cause allergic reactions.

Before buying, make sure that you are not allergic to the materials the drysuit is made of. Additionally, before the first dive, you should put on the drysuit for several minutes to make sure that there is no allergic reaction.

ATTENTION! BEFORE THE FIRST DIVE, PUT ON THE DRYSUIT FOR SEVERAL MINUTES, THEN TAKE IT OFF AND CHECK IF THERE IS ANY ALLERGIC REACTION.

7.2 → Equipment compatibility

The SEAL SL:01 drysuit was designed to be fully compatible with standard and commonly used diving equipment. Before the use, check if the purchased drysuit is compatible with the rest of your equipment, e.g., if the inflation hose is of the required length and connection type.

When choosing undergarments, pay special attention to the free movement of gas inside the drysuit. Any obstructed flow may make it harder to control buoyancy, and in extreme cases could cause dangerous loss of buoyancy (uncontrolled ascent)

8 → Putting on the drysuit

Before putting on the drysuit, take off your watch, jewelry, and any other items that may damage the drysuit fabric, wrist, or neck seals. Avoid actions that stress the suit such as stretching and pulling actions that can damage the seams, zipper, wrist, or neck seals.

Sprinkle the wrist or neck seals with the talcum powder supplied with the drysuit. Check the condition of the zipper, ensuring there is no dirt in the teeth, then lubricate it with the grease supplied. For instructions on how to lubricate the zip, see the "Maintenance and Service" chapter.

ATTENTION! IF POSSIBLE, AVOID PUTTING ON YOUR DRYSUIT BELOW 0 DEGREES CELCIUS LOW TEMPERATURES NEGATIVELY AFFECT TO THE STRENGTH OF WRIST AND NECK SEALS.

To put on the drysuit, follow the steps below:

- [ ] Make sure the drysuit zipper is fully opened.
- [ ] Put both your hands through the zipper opening and grab the drysuit from the inside around the waist. The braces should be on the outside of your arms and the suit.
- [ ] Put your right leg into the right suit leg and pull it up to the middle of your thigh.
- [ ] Put your left leg in and pull the drysuit up to waist level.
- [ ] Put the braces on.
- [ ] Grab the drysuit near the waist (from the outside) and pull up the bottom of the drysuit as high as possible.
- [ ] Put your left hand into the left sleeve, passing your hand through the wrist seal. Then right hand into right sleeve, passing hand through the wrist seal.
- [ ] Grasp the neck seal firmly in two hands gently stretching open to pull it over your head. Position the neck seal carefully. Make sure that there is no hair, undergarments or other items trapped under the seal.
- [ ] If necessary, adjust the length of the braces.
- [ ] Carefully close the zip making sure that the undergarment does not get caught between the teeth of the zipper. Ensure the zip is fully closed and then fasten the protective zipper.
- [ ] Pull up the lower part of the drysuit, position the telescopic part of the torso for comfort and movement and fasten the crotch strap.
- [ ] Check the drysuit fit and that you feel comfortable in it.
- [ ] Open the exhaust valve.
- [ ] Crouch down and let excess air out of the drysuit.
- [ ] Complete kitting up according to your checklists.

8.1 → Connecting the inflation hose

The inflation valve in the drysuit is equipped with a standard connection in accordance with EN 14225-2: 2017. Before connecting, make sure that the connector and the hose nipple are clean, and especially that no sand or dust has penetrated the inside of the hose nipple. The hose is connected by pulling its collar backwards and then inserting the connector onto the valve connector.

Releasing the collar will lock the hose to the connector. When connecting a pressurized hose, hold the hose fully on the connector while releasing the collar otherwise gas pressure may disconnect the hose.

After connecting, check the connection security whilst pressurised by gently pulling the inflation hose. Then add a small amount of gas to the suit to ensure the gas feed is working.

9 → Taking off your drysuit

Before taking off the drysuit, take off the rest of the diving equipment (remembering to unfasten the inflation hose). The drysuit should be removed standing on a clean surface, free of sand and other impurities, as they easily stick to the wet fabric and zipper during removal.

To take off the drysuit, follow these steps:

- Remove the hood and gloves.
- Unfasten the protective zip and then the main zip.
- Unfasten the crotch strap
- Gently put your fingers under the neck seal from either side, slightly stretching it, tilt your head forward and pull back the neck seal.
- Take out your arms. First right, then left.
- Lower the top of the drysuit to the hip line.
- Take off the braces.
- Take the legs out of the drysuit in turn.

ATTENTION ! WHEN TAKING OFF THE DRYSUIT, ESPECIALLY REMOVING WRIST AND NECK SEALS, DO NOT ALLOW THE SEALS TO CONTACT WITH YOUR FINGERNAILS, THIS MAY LEAD TO TEARING OF THE SEALS.

10 → Using the drysuit while diving

ATTENTION! THE DRYSUIT MAY ONLY BE USED BY A DIVER, WHO HAS UNDERGONE SPECIALTY DRYSUIT TRAINING OR WHO IS UNDER THE DIRECT SUPERVISION OF AN INSTRUCTOR DURING A RECOGNISED DRYSUIT DIVING COURSE.

10.1 → Inflating the drysuit

To maintain buoyancy, freedom of movement, and thermal comfort, you must inflate the drysuit with the appropriate amount of gas. We recommend using air as the inflation gas. There is an increased risk when using mixtures enriched with oxygen, helium, or argon. If you prefer to use argon or mixed gases of any sort, make sure you have passed the appropriate course and have the required knowledge.

We strongly advise against using helium-containing blends to fill the drysuit (Trimix, Heliox). Helium has a high thermal conductivity, which will significantly deteriorate thermal comfort. There is also an increased risk of decompression related problems with helium mixes next to the skin.

10.2 → Check before the dive

Before each dive, complete the following checklist:

- ☐ Check that the drysuit is complete and that no drysuit parts show signs of excessive wear or punctures.
- ☐ Check the tightening of the addition and dump valves.
- ☐ After putting on the drysuit and connecting the inflation hose, check the inflation valve feed (by injecting gas into the suit) and the exhaust/dump valve (by causing gas to be released from the suit, eg by crouching or pressing on the shoulder).
- ☐ If you are using a drysuit for the first time, check fit, freedom of movement and safe and complete access to all your equipment.
- ☐ Perform a weight and trim check when changing configuration -including undergarments, equipment or the type of water (Salt / Fresh).
- ☐ Before entering the water, re-check the correct connection and operation of the inflation hose.
- ☐ If possible, stay on the surface after entering the water and watch for any leakage. Use a buddy to 'bubble check' at the surface and again on descent while in shallow water (3m or less)

ATTENTION! CLOSED, FAILED OR DISCONNECTED VALVES REPRESENT A SERIOUS DANGER OF ACCIDENT OR DROWNING TO A DIVER . BEFORE ENTERING THE WATER ENSURE ADDITION VALVES ARE CONNECTED AND FULLY OPERATIONAL - DELIVERING GAS TO THE SUIT; ENSURE DUMP VALVES ARE OPEN AND OPERATIONAL.

10.3 → During diving

You should not use the drysuit as the primary source of buoyancy during a dive. Add enough gas for thermal, comfort and movement purposes only

To increase suit buoyancy if needed, inflate the drysuit by pressing the button on the inflation valve on the chest. Add slowly and in small amounts, avoid adding large amounts of gas with a single press.

To reduce the buoyancy, release gas from inside the drysuit by lifting the left arm so that the exhaust valve is at the highest point of your body. You may need to change body position to achieve this. Depending on the type of undergarment, the speed of gas flow may vary. This may mean you need to anticipate buoyancy changes some time in advance. Be sure to take this into account when adjusting buoyancy.

The exhaust/dump valve allows you to block the outward flow of gas even in an overpressure situation. This allows you to keep the drysuit full of gas say at the surface. You should only dive with the dump valve in the open position. To open the valve, turn it counterclockwise as far as it will go, and to close it, turn it clockwise.

While diving, carefully monitor changes in buoyancy, thermal comfort, and freedom of movement. Add or release suit gas as needed using the inflation and exhaust valves. You should be skilled and familiar with these procedures from your drysuit diving course.

Avoid compensating for poor buoyancy control by holding lines or other supports during ascent and descent unless needed in an emergency or unexpected loss of control (eg flood or freeflow of gas into the suit) or to combat tides/currents.

10.4 → After the dive

After the dive , dry your drysuit thoroughly, first on the outside, and then on the inside, turning the sleeves and legs inside out. The drysuit should be dried hanging, with the zipper three quarters open in a well-ventilated and shaded place, away from heat sources and sunlight.

After drying, sprinkle the latex seals and the neoprene collar with talcum powder and check for damage or wear. If your drysuit is equipped with a silicone wrist and neck seals, do not apply talcum powder to those.

ATTENTION ! DO NOT LEAVE A WET DRYSUIT IN AN UNVENTILATED ENVIRONMENT. TIME STORED WET MAY CAUSE AN UNPLEASANT AND DIFFICULT TO REMOVE SMELL, POSSIBLY ALLOWING MILDEW AND FUNGUS STAINS TO FORM. BEFORE STORING CAREFULLY CHECK ALL DRYSUIT PARTS ARE FULLY DRIED.

11 → How to stay dry

The main goal of this drysuit is to isolate the diver from the water - to keep you dry, warm and comfortable. The vast majority of leaks/water ingress result from improper use or damage. Almost all issues can be easily eliminated by following our recommendations. Below we have included some helpful tips that will help you avoid these issues when using your drysuit.

11.1 → Damage prevention:

- Use talcum powder for latex wrist and neck seals. Sprinkling the seals with talcum powder before each wearing of the drysuit will extend their life. Use talcum powder before storage.
- When putting on the drysuit, pay attention that the sleeves do not touch the ground. Contaminants such as dust and sand adversely affect the seals and can lead to problems with the sealing of dry gloves.
- Take care of the main zipper. Clean and lubricate regularly. Check that no sand or other debris gets between its teeth when closing and opening, move the slider gently, slowly, and without jerking.
- Never use the drysuit in water contaminated with petroleum substances, oils, or other chemicals. Many such liquids can cause irreversible damage to the sealing layer of butyl rubber inside the trilaminate, these issues may take days or months to manifest.
- Immediately after diving, take off your equipment, keeping the drysuit fastened. Wash the entire drysuit with fresh water. Wait for the water to drain from the surface of the drysuit and only then start taking it off.
- Always remove the drysuit on a clean surface free of sand and sharp stones. If your drysuit is equipped with trilaminate socks, avoid walking without shoes on.
- Dry the drysuit hanging on a long hanger with the zipper three quarters open. Never expose the drysuit to full sunlight and do not dry it near sources of fire or high temperature (heaters, stoves).
- Store the drysuit hanging in a shaded, dry, and ventilated place, away from sharp objects, with the zipper three quarters open. Storage of the drysuit in a humid area or in the sun for long periods may cause discoloration or damage to the seals (especially latex ones).
- When transporting, fold the drysuit as instructed and transport it in a bag. The drysuit should be dry before transport. Do not put hard and sharp objects to the same bag.
- If you use the services of a dive center, before and after diving, pay close attention to how the dive center staff transport the equipment. Do not let your drysuit end up on the floor or allow it to be covered with other equipment, especially a transport box/basket. We strongly recommend that you keep and transport the drysuit yourself.

11.2 → Before each dive:

- [ ] Carefully check the wrist and neck seals for any sign of damage. When checking, gently stretch the material of the seal as small holes are often invisible without stretching them.
- [ ] Check that both valves are tightly screwed on. Loosening of the valves does not happen often, but when it does, it causes flooding to the inside of the drysuit.
- [ ] Immediately before putting on the drysuit, sprinkle talcum powder on latex wrist and neck seals. Avoid contact with your fingernails nails when putting them on. The wrist and neck seals should be snug and comfortable to provide a good seal. They are delicate elements and can be easily damaged.
- [ ] After putting on the drysuit, check that no hair or any part of the undergarment is under the wrist and neck seals. If you are using a neoprene collar, check that it is tucked correctly. If you use latex or silicone seals, check they are smooth and without any creases. Even a small tuck or fold can cause a leak.
- [ ] If you are using dry gloves, check that the O-ring is clean and undamaged just before putting them on. O-rings are sensitive to all types of contamination, which often causes slight but very troublesome flooding to the inside of gloves and the drysuit sleeves.
- [ ] Before entering the water, carefully check the zipper is firmly closed and that none of the fabric of the liner or undergarment is caught between the teeth. Catching the lining fabric in the zipper is one of the most common causes of flooding the inside of the drysuit.

12 → Procedures in emergency situations

Drysuit diving carries its own specific risks. Training and skills practice may prevent almost all of these risks through proper procedures and behaviours. Humans will make mistakes and the unexpected can also occur during a dive. Be prepared.

It is essential to complete and pass the drysuit course/specialty from one of the recognized diving agencies or federations and regularly practice the emergency procedures learned.

Below we have described the most common problems and provided recommendations to eliminate them or reduce their effects. The list below contains only selected emergency situations, and reading it cannot replace a proper drysuit course.

12.1 → Puncture of the drysuit shell during a dive

This may happen most often to wreck and cave divers, but it can occur for example on a coral reef. Large tears and punctures are rare. Most common are small punctures, leading to small leaks.

A large tear and flood should cause the diver to initiate an immediate controlled surface using the primary buoyancy device. When diving in cold water, stop the dive immediately thermal protection is compromised

12.2 → Tearing the neck seal up during the dive

Damage to the neck seal occurs most often when putting on / taking off the drysuit. There have been rare cases of rupture of a neck seal reported from different manufacturers during diving. This can result in a severe flood of the drysuit. The likelihood of this failure is significantly decreased by not overinflating the suit / using it for primary buoyancy.

A neck seal failure that results in a suit flood should cause an immediate controlled ascent to the surface to be carried out using the primary buoyancy device. Avoid this failure by not overinflating the suit or using the suit as the primary buoyancy device. If you have decompression obligations, surface as soon as you can clear these obligations using your primary buoyancy device to manage stops

12.3 → Freezing and Freeflowing gas supply

Freezing of the drysuit gas supply regulator may occur during dives in cold water. This may result in a freeflow of gas.

If you use a dedicated suit gas tank to fill the drysuit it is essential to install an overpressure valve to prevent an unwanted increase in intermediate pressure whihc can lead to an excess of gas being supplied to the suit.

Freeflows from primary or backup regulators will not stop you adding gas to the drysuit until the supply tank is empty - unless the suit addition valve has also failed. See 12.4 below.

If either a dedicated suit supply tank or your primary / backup supply is adding air uncontrollably to the suit, dump gas from both suit and bcd/ wing whilst disconnecting the suit low pressure feed. Follow your training agency procedures for a controlled ascent to the surface.

12.4 → Freezing inflation valve

Freezing of the inflation valve may occur during dives in very cold water, especially if the drysuit was in freezing temperatures before the dive.

When this happens, several different problems can occur, each of which requires you to stop your dive immediately.

If the addition valve has failed in the open position, dump gas from suit and bcd to control buoyancy, quickly disconnect the inflation hose and initiate a controlled ascent to end the dive. If the valve is failed closed, initiate a controlled ascent using your primary buoyancy device to end the dive.

Take care not to descend at this point as compression or suit squeeze may cause severly restricted movement and reduce to dangerous levels your ability to use your equipment.

12.5 → Blocked exhaust/dump valve (undergarment or frozen closed)

The exhaust valve may become blocked by ice or the fabric of the undergarments, preventing or restricting the ability to release air from the drysuit. This situation may result in a loss of buoyancy and an uncontrolled ascent to the surface.

If this happens, control the ascent by releasing air from your primary buoyancy device. If this is insufficient perform an emergency air release procedure (e.g., by using your fingers to open the neck seal) following the protocols taught in your training. You should practice all methods of emergency gas release from a suit with your instructor during your drysuit certification course.

12.6 → Uncontrolled ascent - head down/feet first

An uncontrolled ascent in a head-down position is a very dangerous event, consequences worsening with depth. It is usually due to diver error. During a dive remain in a horizontal position, avoiding a head down and/or feet up orientation where gas in the drysuit can flow up towards the feet. A common cause is failure to drop the feet occasionally during ascent, not allowing expanding gas to flow towards the dump valve.Ensure the dump valve is always at the highest point and do not allow expanding gas to collect in the lower half or feet of the suit.

If gas accumulates in the feet of the suit and you are forced into a head down position, before an uncontrolled ascent occurs, follow the procedures laid down by your dive training agency and practiced on your drysuit certification course.

Should an uncontolled ascent begin, dump gas from your primary bcd and again follow the recovery/emergency procedures for which you have been trained.

13 → Maintenance and service

The correct care of your drysuit coupled with the recommended periodic service will result in longer life and fewer failures. Some maintenance activities you can and should do yourself (lubrication of the zipper, maintenance of latex and neoprene cuffs with talcum powder, cleaning). Some should be handled only by an authorized service technician.

13.1 → Cleaning of the drysuit

Every dozen or so dives, you should clean the drysuit by hand, inside and out, in water at 30-40 Celsius, using a mild detergent. You can use a soft brush to remove larger pieces of dirt.

We recommend that you first clean the inside of the drysuit after carefully turning it inside out. Rinse with clean water and dry thoroughly. Clean the outside in the same way. Never use heating sources (Stove/radiator) or a centrifuge/ tumble dryer to dry a drysuit.

After cleaning, allow the drysuit to dry naturally, hanging with the zipper three quarters open, in a well-ventilated and shady place, away from heat sources. If your drysuit is equipped with a neoprene or latex neck and wrist seals, sprinkle talcum powder on them after drying. If your drysuit is equipped with a silicone collar or seals, do not apply talcum powder to them.

13.2 → ZIP maintenance

In zip maintenance, it is crucial to remove all dirt from its surface with a soft brush or a moist sponge (water only) and lubricate before each dive. Use only the lubricant provided by the drysuit manufacturer.

When lubricating the zipper, lubricate both the zipper teeth on the inside and outside including the zipper tape on the outer side of the drysuit.

Experience shows us that regular lubrication of the zipper can double its life.

13.3 → Stubborn stain removal

Some of the dirt, such as petroleum based substances, rust, etc are very difficult to remove. In these cases, you must not scrub the drysuit with a brush or use solvents.

If your drysuit is dirty with substances that are difficult to remove, please contact us for information on the most effective way to remove specific dirt.

ATTENTION! THE DRYSUIT CANNOT BE CLEANED IN A WASHING MACHINE OR USING DRY CLEANING.

ATTENTION! DO NOT USE ANY KIND OF CHEMICALS (E.G SOLVENTS) OR STRONG DETERGENTS (ANZYMATIC WASHING POWDERS) TO CLEAN THE DRYSUIT.
SUCH DETERGENTS CAN EASILY AND PERMANENTLY DAMAGE THE DRYSUIT.

13.4 → Maintenance schedule

Due to the various factors influencing the durability of a drysuit (e.g., frequency of use, method of use, water composition, etc.), it is impossible to determine exact service intervals reliably.

To maintain safety and esnure optimal durability, the maintenance of the drysuit should be carried out at least once a year or every 200 dives. Whichever comes sooner. Maintenance should be only be carried out by the manufacturer's service center or by authorized service technician.

13.5 → Repairs

In the SEAL SL: 01 drysuits, there are no parts that can be repaired by the user. Any failures may be repaired only by trained technicians, who have personal certificates issued by the manufacturer (authorized service).

During repairs of the SEAL SL: 01 drysuits, only the elements and spare parts supplied by the manufacturer must be used. Components and spare parts from other suppliers, although apparently identical, may have slightly different parameters, which may have a negative impact on the safety or durability of the drysuit.

14 → Drysuit disposal

The SEAL SL:01 drysuit is made of synthetic fabrics that are not biodegradable. If a suit is worn out / damaged to the point that it cannot be repaired, it should be disposed of in accordance with local regulations and guidelines for waste consisting of plastics (polyamide, polyester) and rubber.

15 → Warranty conditions

We provide a warranty for the SEAL SL: 01 drysuit and its components, provided that the drysuit is used following its intended use and the conditions of use described in this manual.

During the warranty period, the manufacturer will, at its discretion, either repair or replace the drysuit with one that is free from defects.

The warranty is granted for the following period from the date of purchase of the drysuit at an authorized SEAL dealer:

- Drysuit shell – 3 years
- Neck and wrist seals – 6 months
- Air-tight zipper– 1 year
- Shoes – 1 year
- Valves – 1 year

The warranty does not cover:

- Damage caused by the usage of the drysuit in conditions and in a way other than described in this manual, including damage caused by failing to follow the recommendations, warnings, and prohibitions contained in this manual.
- Mechanical damage caused by external factors (punctures, cuts, abrasions).
- Damage to a drysuit that has been altered or repaired by someone other than the manufacturer.
- Color changes due to exposure to sunlight, contaminated or chlorinated water.
- Signs of wear corresponding to the average degree of wear expected during the period in which the drysuit is used.

In the event of a complaint, the customer is obliged to provide the drysuit manufacturer with a copy of the proof of purchase.
If the complaint is accepted, the manufacturer will repair or replace the drysuit and send it back to the customer at its own expense.
If the complaint is found to be unfounded, the customer is obliged to cover the costs of repair and return of the drysuit.