

# ESSENTIAL FOR SURVIVAL

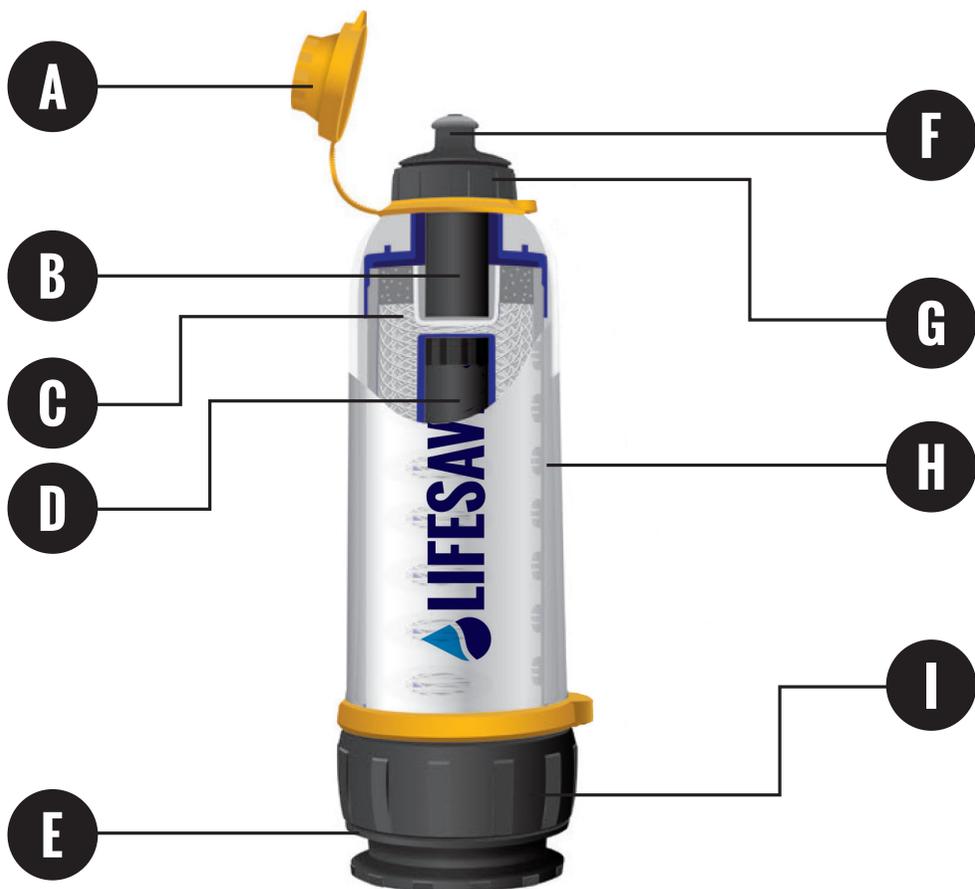
## LIFESAVER BOTTLE USER MANUAL



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# YOUR LIFESAVER BOTTLE

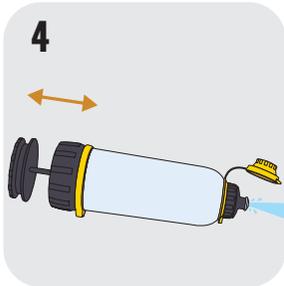
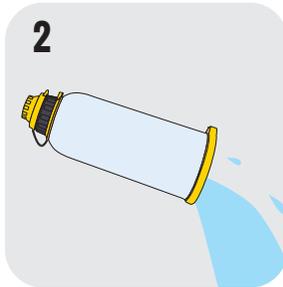


- A** Water-tight snap-fit lid
- B** Activated carbon filter
- C** Replaceable LifeSaver ultra filtration (UF) cartridge
- D** Pump tube
- E** Twist lock pump handle
- F** Chew-proof replaceable drinking nozzle
- G** Screw top
- H** Bottle shell
- I** Removable pump base with replaceable blue pre-filter sponge

# PRIMING

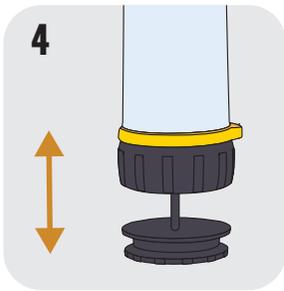
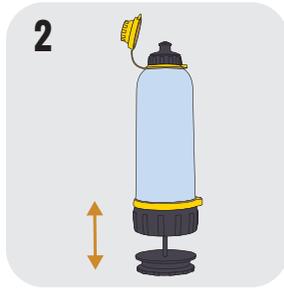
Priming is an essential step that must be performed before you start to use the Bottle to drink from.

The flow rate will improve over the first 24 hours following the priming.



- Unscrew base, fill Bottle with clean water, replace base and leave for 10 minutes. **1**
- Unscrew base and discard water. **2**
- Fill with clean water and replace base. **3**
- Open cap and pull drinking nozzle up. Hold Bottle over sink, turn pump handle and pump x4 times. Water will flow from the nozzle.
- Continue pumping until empty. **4**
- Repeat steps 3 and 4.
- Leave at least 1 inch of water in Bottle when finished.

# ROUTINE USE

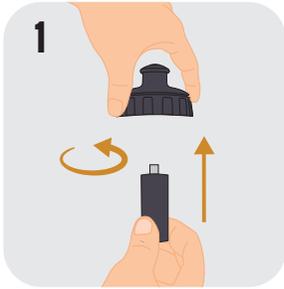


- Keep snap-fit lid closed to protect drinking nozzle from contamination. Remove base and fill with water. The blue sponge acts as a pre-filter for larger particles. Replace base. **1**
- Open snap-fit lid and pump 4–6 times. **2**
- Open nozzle with clean hands or teeth to allow clean drinking water to flow. **3**
- As flow rate reduces, pump to maintain flow. **4**

## IMPORTANT

Always leave at least 1 inch of water in your Bottle. Ensure base is screwed back on tightly.

# ACTIVATED CARBON FILTER



The activated carbon filter improves the palatability of water by removing chlorine, taste and odour. Your Bottle will arrive without the activated carbon filter installed. See below for installation and replacement instructions.

- Remove pump base, leaving it to one side, then empty any water from Bottle.
- Open snap-fit lid.
- Hold Bottle shell firmly at base, unscrew cap at the top, removing it from Bottle shell. This will release the filter cartridge inside which you should catch with the fingers already holding the Bottle shell at the base. Leave the Bottle shell and cartridge to one side.
- If needed, unscrew and discard existing activated carbon filter from the underside of the screw top. Screw new activated carbon into place on the underside of the screw top. **1**
- Reassemble Bottle. Turn the Bottle shell to the vertical down, position with the screw top facing downwards and insert the Bottle cartridge. Twist the cartridge until you feel the cartridge engage in the 4 locators in the neck of the Bottle shell. Hold the cartridge in place with one hand and screw the screw top into place. Close the snap-fit lid.

# ACTIVATED CARBON FILTER

- Re-screw the pump base into the Bottle.
- You may notice that the water flowing out of the Bottle contains grey/black particles. This is harmless carbon dust and once the activated carbon filter has been used 2–3 times, this will disappear.
- When fitted, the water flowing from the Bottle may contain grey/black particles. This is harmless carbon dust and will disappear after 2–3 uses.

## CAUTION

- Do not over tighten the activated carbon filter as this risks damage.
- Leaving the activated carbon filter inside the Bottle whilst in long-term storage may cause microbiological growth to occur. Always remove and discard the activated carbon filter when storing the Bottle long-term.

# CAUTION THIS IS A PRESSURE VESSEL

- The Bottle should not require more than 4–6 pumps to work effectively. If you need to pump more to induce water flow, always do so with the nozzle open to gauge whether you need to re-pump the Bottle. If the Bottle requires more pumping than expected, the Bottle may need to be cleaned (see page 10 for how to clean the Bottle). Alternatively the cartridge may be reaching the end of its service life (see page 20 for Failsafe™ Technology).
- Do not pump if water is not flowing from the Bottle; this will overpressurise the Bottle, which will result in the product becoming overstressed. To release pressure from the Bottle unscrew the pump base slowly by  $\frac{1}{4}$  turn until you hear a hiss sound. Hold on to the pump base and Bottle firmly whilst unscrewing.
- Keep the membranes of the cartridge hydrated by storing at least 1 inch / 2.5 cm of water in the Bottle at all times whilst keeping the Bottle sealed with the pump, nozzle and snap-fit lid in place. Failure to do so will cause the membranes to dry out, the nano-filter pores to close and the system to shut down. This is not covered under your warranty and you will need to purchase another cartridge (see page 16 for storage instructions).
- Do not operate the pump whilst the Bottle is empty.

# MAINTENANCE AND CARE

Always use the cleanest water available. Dirt and debris will build up on the surface of the cartridge, reducing the cartridge's life span. The effects can be reduced with regular cleaning.

Do not allow grit, sand or other abrasive matter to enter the Bottle. If this happens it should be removed. Abrasive matter remaining in the Bottle will cause the o-ring to prematurely wear which could cause the Bottle to leak. This is not covered under your warranty and you will need to purchase replacement parts. If the o-ring situated in the pump base begins to wear, apply a thin layer of silicone grease to the outer lip edge of the Bottle shell. This will help seal the Bottle and prevent leakage. If leaking continues then you will need to replace it with a new o-ring.

## **How to clean the Bottle when outdoors**

- Half fill the Bottle with the cleanest water available through the blue pre-filter sponge and screw the pump back in place.
- Swill the water around the Bottle, turning it upside down to distribute the water around the Bottle. Continue for up to 1 minute.
- Remove the base and empty the water.
- Repeat this process until the water being tipped away is visibly clean.

## **CAUTION**

Do not attempt to touch the membranes of the cartridge through the protective mesh as this can cause damage and will void your warranty. Keep the cartridge free from dirt and debris.

Installing a new cartridge whilst outdoors causes a heightened risk of cross contamination. When changing the cartridge ensure that you have clean, dry hands and the snap-fit lid remains closed.

# MAINTENANCE AND CARE

## How to clean the Bottle when at home



- Unscrew and remove the pump base from the Bottle.
- Place your hand over the base of the Bottle and turn the Bottle to the vertical, upright position with the screw top facing upwards.

- Unscrew and remove the screw top from the Bottle shell, at the same time this will cause the cartridge to drop into your hand. Remove the cartridge from the Bottle shell and place the Bottle shell on a flat surface. **1**
- Screw the screw top directly onto the cartridge end ensuring the snap-fit lid is closed; this will prevent contaminated water from entering the sterile water area of the cartridge during cleaning.
- Soak the cartridge in a basin of warm water for 30 minutes. Gently move the cartridge through the water to dislodge any dirt or debris. **2**
- Rinse the cartridge with clean running water and leave to drain for 4 hours in cool conditions.
- Whilst the cartridge is draining, wash all of the plastic components with a mild detergent solution in warm water with a soft cloth. Rinse thoroughly under running water and drain for 1 hour.
- Now reassemble the Bottle. Remove the screw top from the cartridge end. Turn the Bottle shell to the vertically down position and insert the Bottle cartridge.
- Twist the cartridge until you feel the cartridge engage in the 4 locators in the neck of the Bottle shell. Hold the cartridge in place with one hand and screw the screw top into place. Close the snap-fit lid.
- Re-screw the pump base into the Bottle.



## How to replace the filter cartridge

- Unscrew and remove the pump base from the Bottle. Empty the Bottle of any water.
- Place your hand over the base of the Bottle and turn the Bottle to the vertical, upright position with the screw top facing upwards.
- Unscrew and remove the screw top from the Bottle shell, at the same time this will cause the cartridge to drop into your hand. Remove the cartridge and discard as recyclable plastic waste. ❶
- Wash all of the plastic components with a mild detergent solution in warm water with a soft cloth. Rinse thoroughly under running water and drain for 1 hour.
- Remove the new cartridge from its packaging. Ensure that the white, flat seal is seated on the top of the cartridge shoulder. ❷
- Now reassemble the Bottle. Turn the Bottle shell to the vertically down position and insert the new cartridge. Twist the cartridge until you feel the cartridge engage in the 4 locators in the neck of the Bottle shell. Hold the cartridge in place with one hand and screw the screw top into place. Close the snap-fit lid.
- Re-screw the pump base into the Bottle. ❸ You are now ready to prime the cartridge (see page 4 for Priming – before first use). Installing a new cartridge whilst outdoors causes a heightened risk of cross contamination. When changing the cartridge ensure that you have clean, dry hands and the snap-fit lid remains closed.

# MAINTENANCE AND CARE

## How to check your filter is working correctly

The ultra filtration membranes have been integrated into a robust cartridge and have been designed for a long service life. However, if treated incorrectly the cartridge is liable to break.

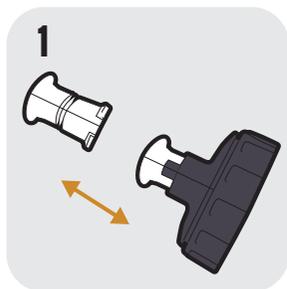
The membrane integrity check should be performed every time the Bottle has been subjected to shock or when you suspect damage may have occurred to the Bottle cartridge.



## Membrane integrity check

- Remove pump from Bottle and fill with water.
- Replace pump and hold in an upright position.
- Open the snap-fit lid and pump 4–6 times to pressurise the Bottle.
- Open nozzle and continue to pump as required to maintain flow rate.
- If the Bottle spits water from the nozzle 1 and does not flow freely then air is being expelled from the tap along with water. This means that the filter is damaged. Stop using the Bottle and replace the filter (see page 11 for how to install a new filter).
- If water flow is normal but very slow, despite the Bottle being full, clean the Bottle as dirt and debris maybe causing slower water flow. If the Bottle has been cleaned and water flow remains slower than normal, the cartridge may be reaching the end of its life (see page 20 for Failsafe™ technology).

# MAINTENANCE AND CARE



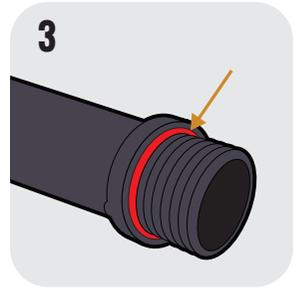
## How to replace the nozzle

The Bottle's nozzle has been designed to be non-tasting, replaceable and chew-proof.

- Open the snap-fit lid.
- Pull out the nozzle and discard as recyclable plastic waste. **1**
- Remove the new nozzle from its packaging and make it wet.
- Align the position dot on the nozzle with the seam on the screw top and insert the nozzle firmly.

### HELPFUL TIP

Apply a small amount of silicone grease to the outside of the nozzle before fitting, this will make the nozzle easier to fit and use.



## Maintaining the pump

The Bottle's pump has been designed for high workloads. Over time it is possible for the pumping action to become stiff. To maintain the pump:

- Unscrew and remove the pump base from the Bottle and empty the Bottle of any water.
- Hold the pump tube in one hand and with the other hand unscrew the pump base, pull away and remove from the pump tube. **1**
- Place a small amount of silicone grease around the black o-ring, which sits on the top of the pump shaft. **2**
- Ensure that the red o-ring is correctly seated on the pump tube at the base of the thread. **3**
- Place the pump tube over the top of the pump shaft and re-screw the pump base.
- Do not over tighten.

# STORAGE

## **The Bottle**

Before first use, the Bottle should be kept in a cool, dry place. To make water more palatable it is suggested to keep it in the shade. Protect the Bottle against extreme temperatures at all times.

Keep the membranes of the cartridge hydrated by storing at least 1 inch/2.5 cm of water in the Bottle at all times whilst keeping the Bottle sealed with the pump, nozzle and snap-fit lid in place. Failure to do so will cause the membranes to dry out, the nano-filter pores to close and the system to shut down. This is not covered under your warranty and you will need to purchase another cartridge.

To ensure the Bottle remains in the best condition, use on a regular basis.

## **Activated carbon filter**

After opening a pack of activated carbon filters ensure that you store the additional, spare activated carbon filters within the foil zip lock bag or within a sealed container. This will preserve their shelf life for up to 3 years. If left unsealed, the activated carbon filters will expire within 2 months.

When storing the Bottle for a period of 1 month or more, the activated carbon filter should be removed and discarded. Replace with a new carbon filter before next use.

# LONG-TERM STORAGE

## 1 MONTH OR MORE

### **Before storing the Bottle:**

- Remove and discard the activated carbon filter from the Bottle and clean the Bottle (see page 10 for how to clean the Bottle).
- Release pressure from the Bottle by unscrewing the pump slowly by  $\frac{1}{4}$  turn until you hear a hiss sound. Hold on to the pump firmly whilst unscrewing. After pressure is released screw the pump back into place.
- Store at least 2 inches/5 cm of water in the Bottle at all times.
- Ensure the pump and tap are sealed.

### **Before re-using the Bottle:**

- Clean the Bottle before re-use (see page 10 for how to clean the Bottle).
- Fit a new activated carbon filter before re-use (see page 6 for how to install an activated carbon filter).
- If the Bottle has been stored for 12 months or more without use, fit a new blue pre-filter sponge and wash the nozzle in warm detergent solution before re-use.

### **How to prevent hardness salts building up on the cartridge during long-term storage**

Prolonged storage in areas of hard water will result in the crystallisation of calcium, magnesium and salts on and within the membranes of the cartridge. To prevent this from happening, change the storage water on a regular basis, every 4-6 weeks. Failure to do so will cause the membranes to fill up, the nano pores to block and the system to shut down. This is not covered under your warranty and you will need to purchase another cartridge.

# SHELF LIFE

## **Standard packaged cartridge**

Product can be stored as a minimum for 3 years from the point of purchase (from authorised resellers) further shelf life after the initial 3 years is dependent on storage conditions.

## **Aluminium barrier foil heat sealed product**

Heat sealed products provide the lowest moisture transition rate available and are ideal for long-term storage. If still sealed in the condition it was purchased, the shelf life of the product will be up to 10 years from the date of purchase.

# EXTREME TEMPERATURES

## **Cold temperatures**

After first use the Bottle should be protected from freezing. Freezing can compromise the integrity of the cartridge. If you suspect the Bottle has been frozen, perform a membrane integrity check (page 13).

## **Hot temperatures**

Do not leave the Bottle in direct sunlight for long periods of time.

For minimum and maximum operating and storage temperatures refer to Performance and Technical data (page 21).

## **Transporting your LifeSaver Bottle on a plane**

When taking the Bottle on a flight ensure that you:

- Release pressure from the Bottle by unscrewing the pump slowly by  $\frac{1}{4}$  turn until you hear a hiss sound. Hold on to the pump firmly whilst unscrewing.
- Remove the pump and completely drain the Bottle of water.
- After draining the Bottle screw the pump back into place.
- Ensure the pump, screw top and snap-fit lid are correctly sealed.
- Pack the Bottle securely in the hold or within hand luggage.
- When destination is reached pour 1 inch/2.5 cm of water into Bottle.
- Perform a membrane integrity check before re-use (page 13).

# **FAILSAFE™** **TECHNOLOGY**

The Bottle incorporates Failsafe™ technology which stops you drinking contaminated water. As the filter is used to purify water, the pores in the membranes will be getting blocked up by contaminants and the flow rate will slow down.

There will come a point at which despite completing the recommended number of pumps, water will not flow. At this point you should replace the filter.

# PERFORMANCE AND TECHNICAL DATA

Minimum operating temperature	>0°C (32°F)
Maximum operating temperature	50°C (122°F)
Minimum storage temperature*	-10°C* (14°F)
Maximum storage temperature	50°C (122°F)
Initial flow rate**	4000UF - 2L/min 6000UF - 2.5L/min
Cartridge service rating**	4,000 litres (1056 US gallons) 6,000 litres (1585 US gallons)
Dry weight of product inc. cartridge	635 grams approx (approx 22 oz)
Product storage capacity	750ml (1.6 US pints)
Product materials and water effluent	BPA and BPS free

## MICROBIOLOGICAL FILTRATION EFFICACY

### Exceeds EPA Guidelines for microbiological purifiers:

Bacteria retention***	>99.9999% (Log 6)
Virus retention***	>99.99% (Log 4)
Cysts retention***	>99.99% (Log 4)

Chemical retention	Optional activated carbon filter improves the palatability of water by removing chlorine, taste and odour from water
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\* After first use the product should be protected against freezing

\*\* Flow rates and service rating dependent on the composition, temperature and turbidity of the feed water

\*\*\* Tested by BCS laboratories issued 05/01/15 based on an adaption of NSF/ANSI P231 Protocol

# LIFESAVER BOTTLE TEST COMPLIANCE

Testing is based on a suitable adaption of NSF/ANSI P231. These units are tested with two different types of water to challenge the filtration capability beyond the standard use. All figures quoted are taken from the stressed challenge phase of the test imitating sewage contaminated water.

## DISCLAIMER

The information and data contained in this document are based on our general experience and are believed to be correct. They are given in good faith and are intended to provide a guideline for the selection and use of our products. Since the conditions under which our product may be used are beyond our control, this information does not imply any guarantee of final product performance and we cannot accept any liability with respect to the use of our products.

The quality of our products is guaranteed under our conditions of sale.

Existing industrial property rights must be observed.

All details given on this data sheet are believed to be correct at the time of creation. We reserve the right to make improvements and/or modifications to the equipment herein.

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# ESSENTIAL CONTACT DETAILS

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