



## Greenseal EPDM Pond Liner





### Greenseal EPDM Pond Liner

Greenseal pond liner is a rubber membrane used as fluid barrier in lining of decorative ponds. The material is not affected by UV light, extremes of temperature or length of service life. It resists compressive loads and movements in the ground. The material reverts to its original length, thickness and shape after elongation. As the rubber does not contain any plasticizers or additives that can be leached out, it will not shrink, lose weight or become brittle.

### Storage

Store dark and dry in the original packaging. There are no limitations in shelf life.

### Features

- Synthetic EPDM rubber.
- 100 % UV resistant.
- Durable, flexible and elastic.
- High elasticity. From 300 %+ elongation
- Root resistant.
- Weather-proof in all climates from -40 °C to +150 °C
- Contains no dangerous substances.
- Has no impact on fauna and flora. Koi:s or other fishes are not affected.
- Easy and quick installation, especially suitable for DIY.
- Minimal maintenance needed.
- Exceptionally long service life.
- Instantly 100% waterproof.

### Technical information

<b>Thickness (mm):</b>	0.8 / 1.0
<b>Length (m):</b>	25
<b>Width (m):</b>	3.36 / 5.02 / 6.68 / 8.34 / 10.0 / 11.66 / 13.32 / 14.98
<b>Weight (kg/m<sup>2</sup>):</b>	0.8 mm = 0.8 1.0 mm = 1.0

### Accessories

Ecobond adhesive.  
Paste Sealant 5590.  
EPDM pipe sleeves.

### Placing and design

Start by mapping the main usage for your pond and the surrounding area. To visualize the finished result we recommend marking out the circumference of the pond outlines using a string or a hose and also to mark out the recreational area surrounding. When you are satisfied with the plan consider suitable water depth. To prevent your pond from drying out, we recommend a minimum depth of 50 cm.

### Calculating the size

Use the information below to calculate the size needed of the membrane.

#### Membrane length

= maximum length of the pit  
+ double maximum depth  
+ 10 cm

#### Membrane width

= maximum width of the pit  
+ double maximum depth  
+ 10 cm

#### Example

A pit with the following size:

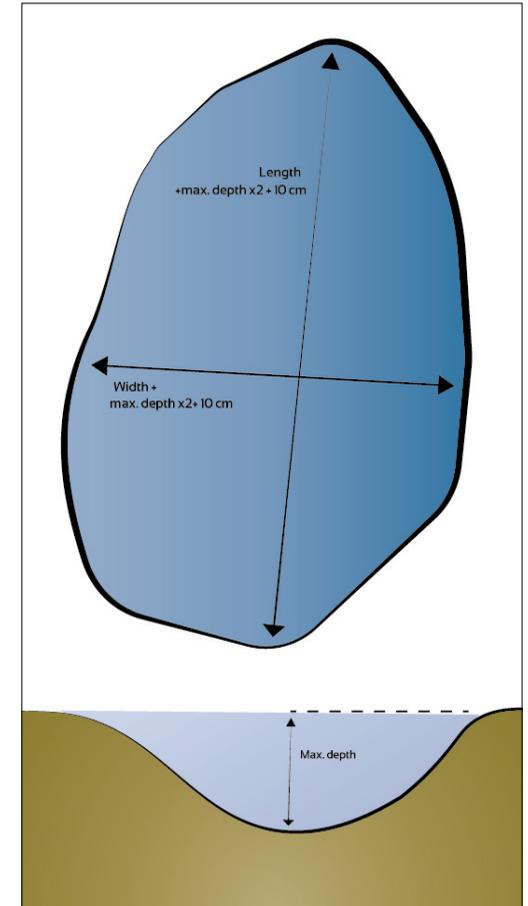
- \* Max length: 5 m
- \* Max depth: 1 m
- \* Max. width: 3 m

...results in the following dimensions of the membrane:

\* Length:  $5\text{ m} + (1\text{ m} \times 2) + 10\text{ cm}$   
= 7,1 m

\* Width:  $3\text{ m} + (1\text{ m} \times 2) + 10\text{ cm}$   
= 5,1 m

= Thus, you need a Greenseal membrane that is 7,1 m long and 5,1 m wide , in total : 36,21 m<sup>2</sup> .



**ⓘ How should the membrane be anchored?** Keep this in mind when calculating the membrane size , in order to avoid ordering a membrane of insufficient size.

## Planning

### Delivery

The Greenseal pond liner is either delivered made to measure to fit the size of your pond, or delivered as standard sized panels. Sizes up to 750 sqm can be supplied as a single panel and be installed by the building owner or a building contractor. Greenseal is spliced together using adhesive and paste sealant.

### Membrane thickness

Once you know the size needed, you also need to consider and specify the thickness of the membrane, your need for pumps, cleaning filters, fishes and vegetation to finalize the garden of your dreams.

For garden ponds thickness 0,80 mm is used.

For large aquatic, ornamental or recreational installations thickness 1,00 mm is recommended.

## Installation

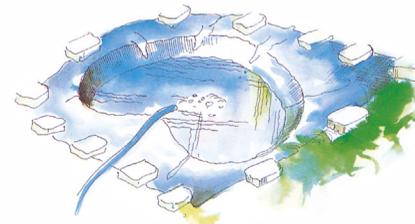


**1.** Sharp stones and roots should be removed, and a layer of sand laid on the bottom bed, alternatively a 150g/sqm thick protection layer of geotextile. To achieve varied vegetation, you can make a 25 cm deep recess all the way around.



**2.** Check that there are no sharp stones or roots in the pit. Put a layer of sand or a geotextile in the bottom. Lay out the panel over the pond and place a few stones on the edges to hold the panel in place. Fill with water.

## Installation



**3.** The weight of the water will cause the membrane to slide down into the hole and shape itself perfectly to the substrate. When the pond is filled, cut off the edges of the Greenseal membrane so that at least 20-40 cm remains. Cover the edges of the membrane with stone or concrete slabs, alternatively anchored in a trench 30 x 30 cm, which is then refilled. Leave the pond untouched for a few days prior to planting.

Installation 1



Installation 2



Installation 3

## Installation

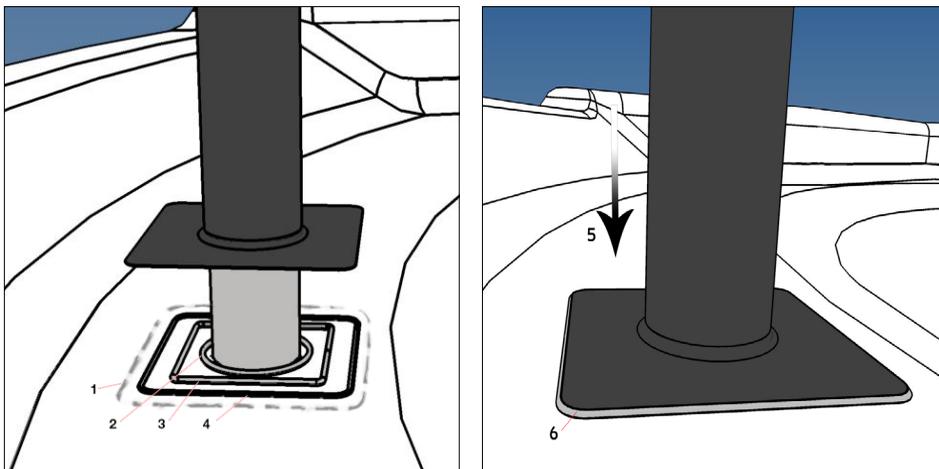
### Pipe sleeves

SealEco pipe sleeves are used for sealing against circular details such as pipe boots. The pipe sleeves are glued with Ecobond adhesive and sealed with paste Sealant 5590. The membrane should be clean and dry and the operation should be done as soon as possible after the membrane has been placed in position.

- Roll out the membrane over the entire pond area. The membrane is then folded tightly against the pipe.
- Mark the size of the hole to be cut onto the folded section of the Greenseal membrane. If possible let the hole diameter be slightly smaller than the pipes diameter, to achieve a tight fit.
- Cut the hole where marked. Try to cut as smooth as possible, to avoid notches.
- Pull the membrane over the detail.

**1)** Mark the size of the pipe sleeve collar on the pondliner. **2)** Apply a continuous, homogeneous line of Ecobond adhesive on the pondliner around the pipe sleeve. **3)** Apply the second line of Ecobond adhesive on the pondliner with a distance of approx. 5 cm from the outer edge of the collar. **4)** Apply a string of Sealant 5590 on the pondliner, 1 cm from the outer edge of the collar. **5)** Pull the pipe sleeve over the pipe and fasten the pipe sleeve using a roller. Do not put too much pressure on the seam; optimal is if the beads of Ecobond adhesive and Sealant 5590 do not mix up with each other. Otherwise, the curing time will be slightly drawn-out. **6)** In a correct performed bonding procedure, a small bead of Sealant 5590 should protrude along the edges of the pipe sleeve.

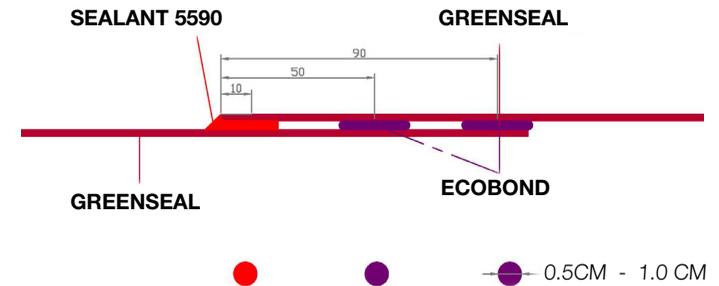
**NOTE! The curing time for the Ecobond adhesive and Sealant 5590 is three to four days. Until the adhesive and sealant are dry and cured, the pond should remain untouched. Do not walk on it or fill it up with water.**



## Splicing

### Panel splicing

It is important to use panels with as close fit to pond size as possible. If not, the panels can be spliced together with adhesive Ecobond and Sealant 5590. The overlap between the panels to be joined together shall be 100 mm. The membrane surface should be clean and dry. Adhering must be performed as quickly as possible after the panels have been placed in the correct position.



Place the panels overlapping each other and make a mark along the edge. Fold the top panel to the side, and apply Ecobond adhesive onto the underlying panel. First string of adhesive should be placed about 10 mm from the edge of the underlying panel. The second string about 50 mm from the underlying edge of the panel. Finish by applying a string of Sealant 5590 about 90 mm from the underlying edge of the panel.

Fold back the top panel and secure it with a roller or a stiff brush. Do not use too much pressure when rolling, since it is favourable if strings of Ecobond adhesive and Sealant 5590 is not mixed up. Otherwise, the curing time can become somewhat prolonged. To ensure a tight, waterproof seam, a small bead of Sealant 5590 should protrude along the edge.

**NOTE! The curing time for the Ecobond adhesive and Sealant 5590 is three to four days. Until the adhesive and sealant are dry and cured, the pond should remain untouched. Do not walk on it or fill it up with water.**

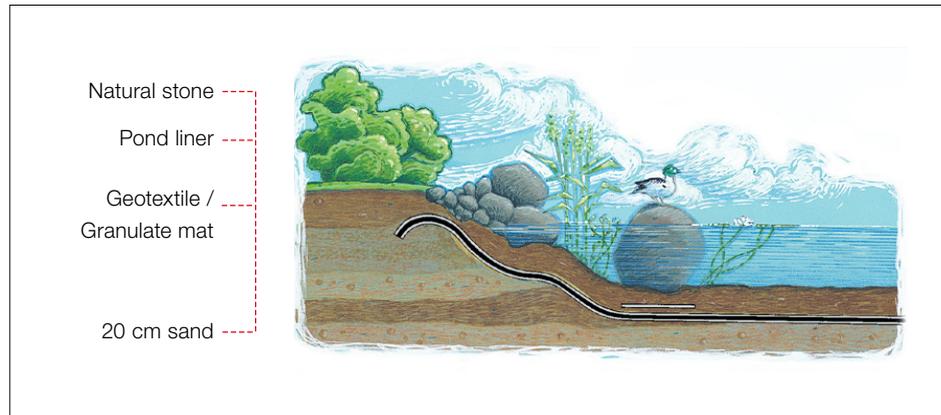
### Repair

If the membrane gets damaged during installation, for instance a small hole, it could be repaired with Ecobond adhesive and Sealant 5590. Please contact SealEco for a detailed instruction.

## Construction examples

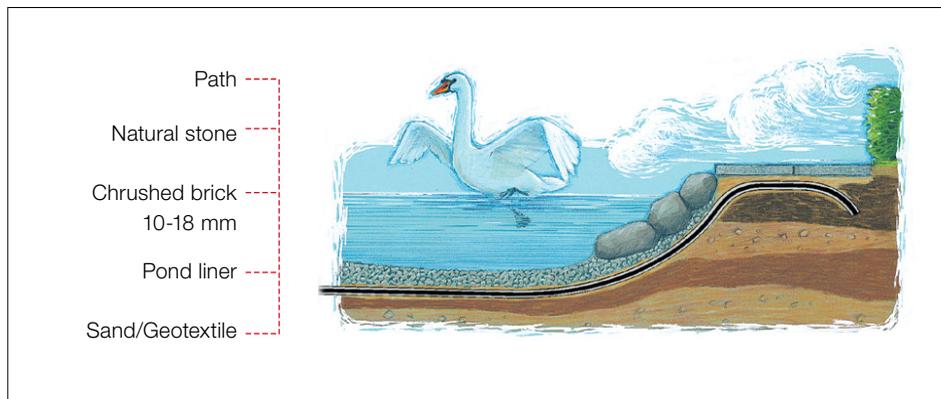
### Natural stone

Natural stone makes a natural beach, at the same time as forming a stable anchorage and capillary barrier. A granulate rubber mat or geotextile is placed under large stone blocks as protection.



### Path

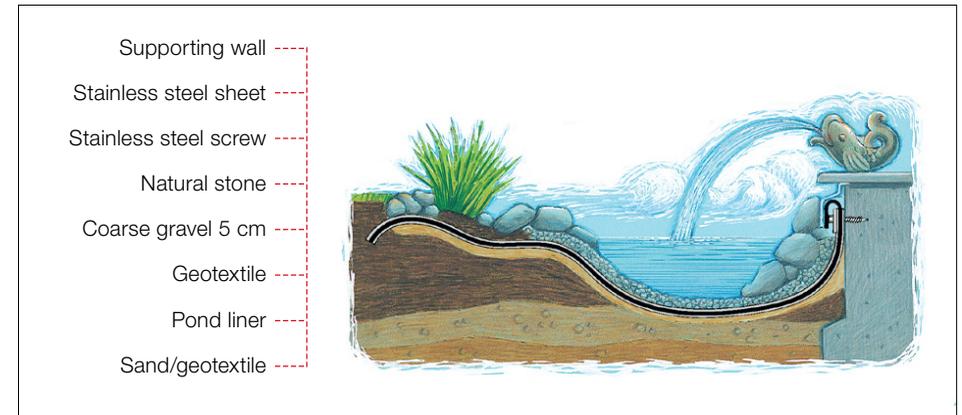
When the beach is directly adjacent to a path, there is a risk of considerable wear. The membrane is anchored and completely covered with large natural stones from the beach down to the bottom.



## Construction examples

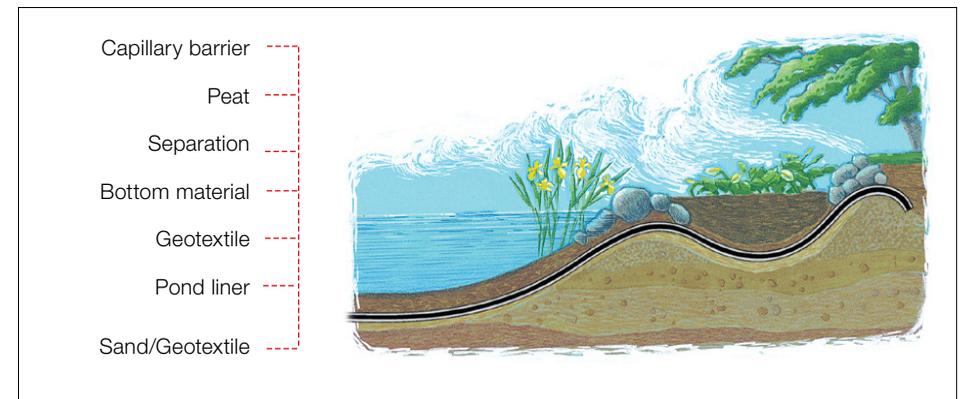
### Supporting wall

If the pond is installed against a supporting wall, the membrane should be secured by screwing it into the wall approx 50 mm above the water level. The attachment is then covered with a plate of stainless steel material. Below the water level the membrane is anchored with natural stone.



### Capillary barrier

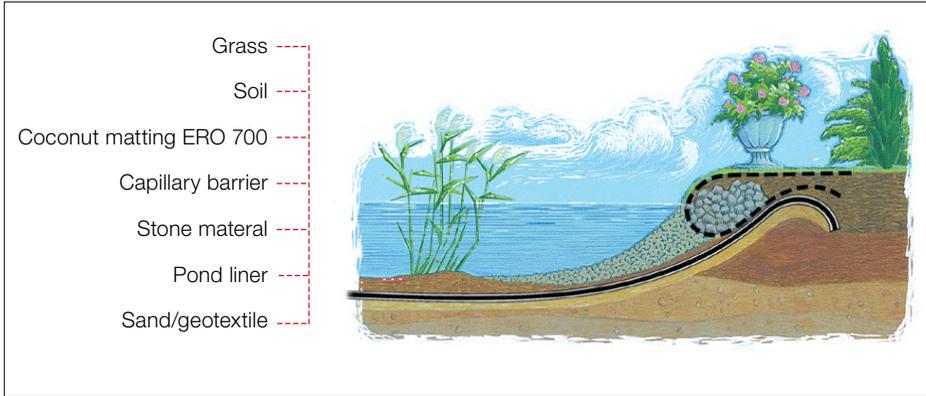
A sump zone around the pond containing aquatic plants keeps unwelcome bathers away. The sump zone is in the form of a shallow moat and is filled with planting substrate. It should be separated from the pond with stone so that the substrate does not mix with the water.



# Construction examples

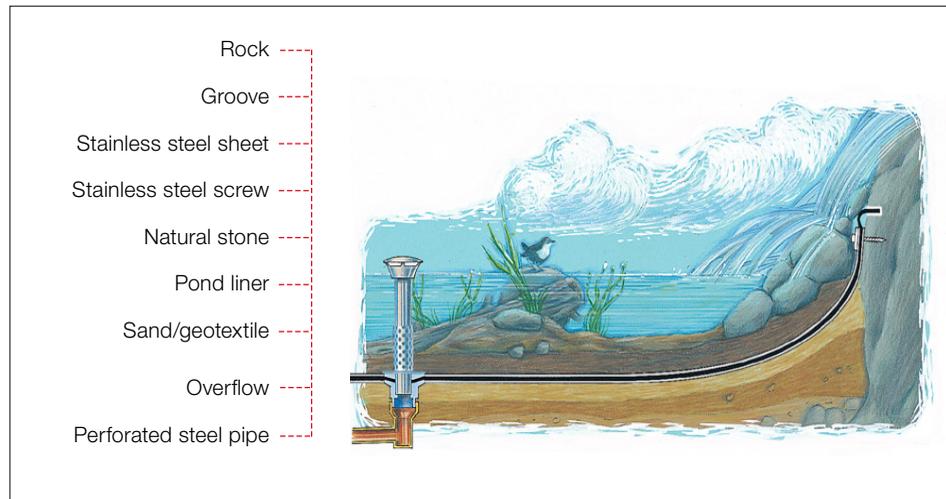
## Grass beach

A grass beach should be laid on a coconut matting. Half the mat should be laid in the water. When the ground has been levelled out, the matting is folded up on the slope to form a pocket which holds the soil in place. In a shallow pond, coarse gravel or crushed brick can be taken up to the edge of the grass.



## Waterfall

For waterfalls over stone, the liner should be secured by screwing it into the rock. A horizontal groove is made in the rock for the edge of the membrane. The overflow pipe can be lifted when the pond is to be emptied.



GreenSeal



Our operations are conducted according to ISO 9001 and ISO 14000. Products and systems are tested according to applicable standards, supervised by independent laboratories, authorities and certified to local building codes in all the markets where we are active.

## Environmental Building Envelope Solutions

SealEco offers innovative water- and weather protection solutions for increased service life of buildings and other types of constructions. Our solutions also include lining applications as geomembrane for ponds and reservoirs, landfill ponds and cappings, as well as tank liners giving secondary containment for farming, industrial use or industrial waste containments.

We understand and fulfill your needs by providing complete, market-leading solutions which meet high standards in terms of durability with environmental benefits. Studies show that we have rubber materials that can retain their function for over 50 years at a total cost which is often substantially lower than that of alternatives. The durability of our systems is the foundation for us being the environmentally sustainable alternative!

With SealEco as your partner, you will get access to more than 45 years of experience and knowledge. As a leading partner in our field, we are always able to provide the best solutions for your needs. References can be found all over the world- from arctic cold to desert heat.

We seal the world.



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