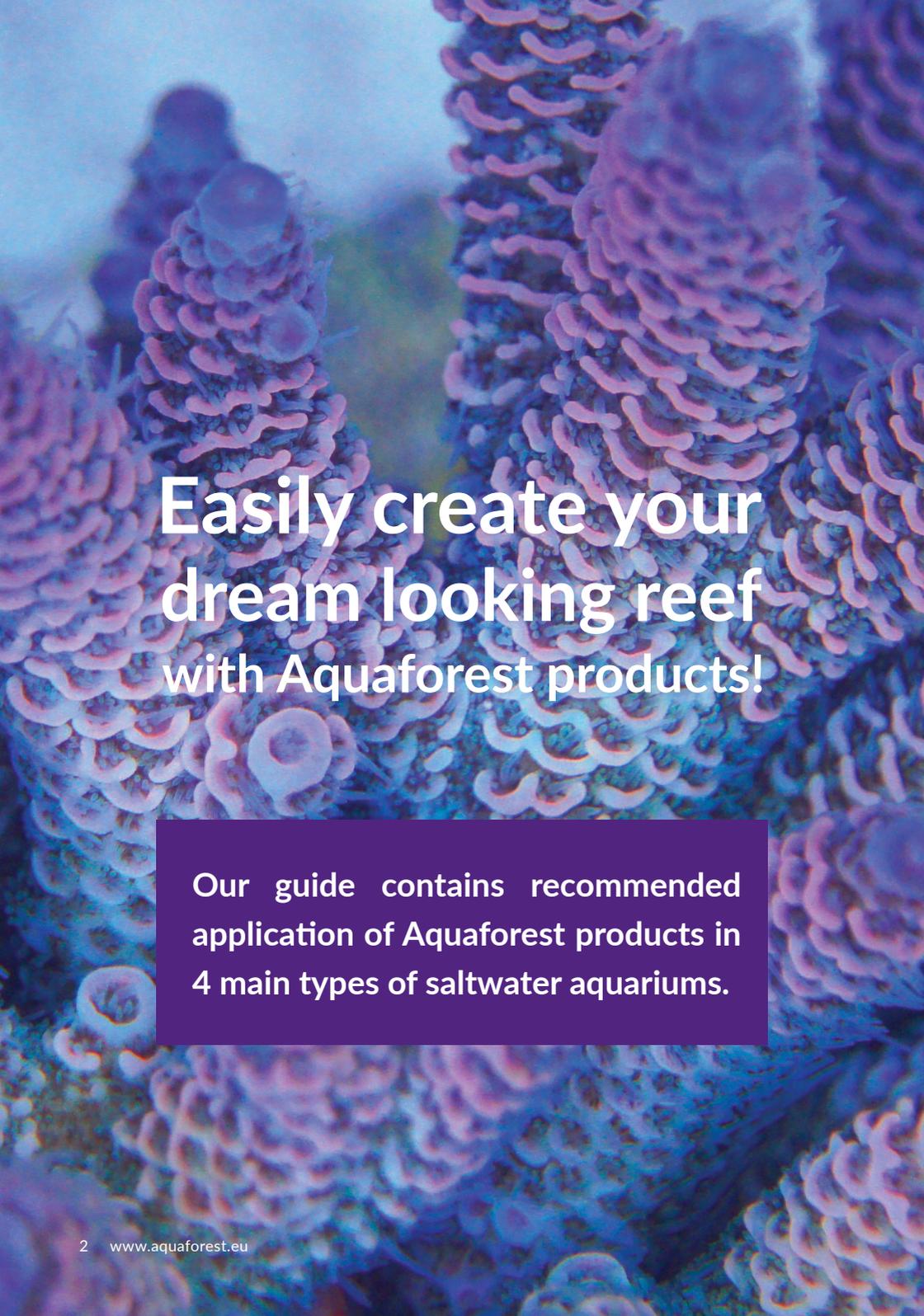


 Aquaforest®  


# Aquaforest Products Guide

Contains your guide for starting and maintaining marine aquariums based on individual Aquaforest products.

[www.aquaforest.eu](http://www.aquaforest.eu)



# Easily create your dream looking reef with Aquaforest products!

Our guide contains recommended application of Aquaforest products in 4 main types of saltwater aquariums.

# Aquaforest Products Guide

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- 4 Main types of saltwater aquariums
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# 1 Fish Only Aquarium

We suggest using Sea Salt & nitrification bacteria Bio S (1 drop/100 litres (27 US gal). At the start of the aquarium we recommend to add the following products in a filter media, or in a good water flow:

- **Phosphate Minus** (100ml/100l (27 US gal) – in order to adsorb phosphates and silicates.
- **Carbon** (100ml/100l (27 US gal) – to remove water pollution.

Additionally we also strongly suggest the use of Bio S bacteria with every water change.

Fish can be introduced after 14 days from the start of the aquarium - if  $\text{NO}_2$  and  $\text{NH}_4$  are not present.

## 1. Dissolve the salt, add nitrification bacteria and filter media



## 2. Populate the aquarium with fish no sooner than 14 days from day 1

(If  $\text{NO}_2$  and  $\text{NH}_4$  are not present).



FISH

We recommend that every animal or coral is introduced into the aquarium gradually so the biological balance is not disturbed.

## 3. After the settlement of life in aquarium we recommend to use following products:



Use 1 drop per 1 cube of food once per week alternately

The dosage of each supplement depends on the number and fish size as well as quantity of administered food.

# 2 Soft, LPS Corals and Fish Aquarium

We suggest using Reef Salt & nitrification bacteria Bio S (1 drop/100 litres (27 US gal)). At the start of the aquarium we recommend to add the following products in a filter media, or in a good water flow:

- **Phosphate Minus** (100ml/100l (27 US gal)) – in order to adsorb phosphates and silicates.
- **Carbon** (100ml/100l (27 US gal)) – to remove water pollution.

Additionally we also encourage the use of Bio S bacteria with every water change. Corals can be introduced after 14 days from the start of the aquarium - if  $\text{NO}_2$  and  $\text{NH}_4$  are not present. We recommend that you add and acclimate corals first, and fish later. It is also suggested to take advantage of our supplements and feed the corals. For an aquarium of this type, we recommend a moderately strong circulation, LED lighting, metal halide, T5 or hybrid (T5 + LED). According to our experience, nutrients ( $\text{NO}_3$  and  $\text{PO}_4$ ) should be detectable, eg.: 2-10 / : 0,01-0,08.

## 1. Dissolve the salt, add nitrification bacteria and filter media



## 2. Populate the aquarium with fish/coral no sooner than 14 days from day 1

(If  $\text{NO}_2$  and  $\text{NH}_4$  are not present).



We recommend that every animal or coral is introduced into the aquarium gradually so the biological balance is not disturbed.

## 3. After the settlement of life in aquarium we recommend to use the following products:

(If the tests show decrease of Ca, KH, Mg)



Maximum dosage is 20ml(4 tsp) per 100l(27 US gal) of water (of each product).

The dosage of each component depends on the consumption of Ca, KH and Mg in your tank.

## 4. Feeding livestock

For fish:



Use 1 drop per 1 cube of food once per week alternately

For corals:



10 drops/100l (27 US gal)

1 drop/100l (27 US gal)

1 measuring spoon/100l (27 US gal)

With an average coral cast.

The dosage of each supplement depends on the number, size of fish and corals as well as quantity of administered food.

# 3 Aquarium with LPS and less demanding SPS corals

We suggest using Reef Salt & nitrification bacteria Bio S (1 drop/100 litres (27 US gal). At the start of the aquarium we recommend to add the following products in a filter media, or in a good water flow:

- **Phosphate Minus** (100ml/100l (27 US gal) – in order to adsorb phosphates and silicates.
- **Carbon** (100ml/100l (27 US gal) – to remove water pollution.

Additionally we also encourage the use of Bio S bacteria with every water change. Corals can be introduced after 14 days from the start of the aquarium - if  $\text{NO}_2$  and  $\text{NH}_4$  are not present. We recommend that you add and acclimate corals first, and fish later. For an aquarium of this type, we recommend a moderately strong circulation, LED lighting, T5 or hybrid (T5 + LED), HQI + T5. According to our experience, nutrients ( $\text{NO}_3$  and  $\text{PO}_4$ ) should be detectable, eg.: 2-5 / : 0,01-0,05.

## 1. Dissolve the salt, add nitrification bacteria and filter media



## 2. Populate the aquarium no sooner than 14 days from day 1

(If  $\text{NO}_2$  and  $\text{NH}_4$  are not present).



We recommend that every animal or coral is introduced into the aquarium gradually so the biological balance is not disturbed.

## 3. After the settlement of life in aquarium we recommend to use following products:

(If the tests show decreases of Ca, KH, Mg)



## 4. Feeding livestock

For fish:



Use 1 drop per 1 cube of food once per week alternately

For corals:



1 drop/100l (27 US gal)

With an average cast of corals



1 measuring spoon/100l (27 US gal)

The dosage of each supplement depends on the number, size of fish and corals as well as quantity of administered food.

# 4 SPS Coral aquarium run by Aquaforest Probiotic Method

Aquaforest Probiotic method introduces to the aquarium carefully selected bacteria in order to reduce levels of harmful nitrates and phosphates. This system is recommended for experienced aquarists. Characteristic feature of this approach is a very low level of nutrients (Ulns - Ultra low nutrients system). This scheme requires powerful protein skimmer and precise dosage of probiotic bacteria and culture medium. Corals - which are kept in aquariums with very low levels of nutrients, should have permanent access to: vitamins, amino acids and foods. For a tank of this type - we recommend a strong circulation, and good-quality lighting HQI + T5 or T5. We recommend that nutrients ( $\text{NO}_3$  and  $\text{PO}_4$ ) are maintained at very low levels, eg.: 0.1-0.5 / 0.01-0.04.

## 1. Dissolve the salt, add nitrification bacteria and filter media



## 2. Populate the aquarium no sooner than 14 days from day 1

(If  $\text{NO}_2$  and  $\text{NH}_4$  are not present).



FISH



LPS



SPS



1 drop/100l (27 US gal)



1 measuring spoon/100l (27 US gal)

We recommend that every animal or coral is introduced into the aquarium gradually so the biological balance is not disturbed.

## 3. After the settlement of life in aquarium we recommend to use following products:

(If the tests show decreases of Ca, KH, Mg)



Dosage according to consumption of macronutrients (Ca, KH, Mg)

## 4. Feeding livestock

For fish:



Use 1 drop per 1 cube of food once per week alternately

For corals:



1 drop/100l (27 US gal)



1 measuring spoon/100l (27 US gal)  
With an average coral cast.

The dosage of each supplement depends on the number, size of fish and corals as well as quantity of administered food.

## Probiotic method in comparison with other methods:

### **DSB (Deep Sand Bed), Refugium, MM (Miracle Mud)**

There were no contraindications, nor requirements for linking these systems together.

### **VSV (Vodka, Sugar, Vinegar)**

Not recommended while using probiotic method.

### **Vodka method:**

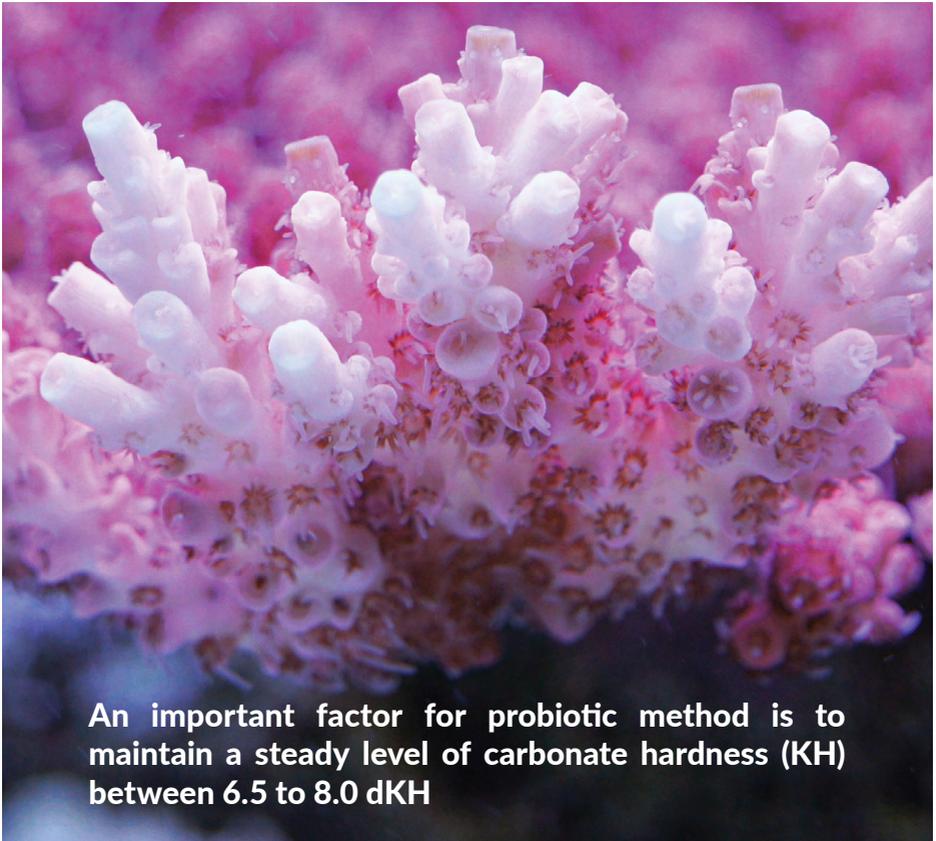
Not recommended while using probiotic method.

### **Bio Pellets:**

Not recommended, but acceptable.

### **Ozone, UV:**

Not recommended, but acceptable. It's an unacceptable to use ozone in combination with Probiotic Reef Salt.



**An important factor for probiotic method is to maintain a steady level of carbonate hardness (KH) between 6.5 to 8.0 dKH**

The most important role in salt water aquariums play bacteria responsible for decomposition and the processing of harmful compounds present in the water. At the beginning, you should create adequate conditions for settlement and development of fish cast & corals. The filtration system, when using probiotic method, should be based mainly on the media like Bio Ceramics due to its high porosity. As a medium you can use ceramics, dry rock, live rock or synthetic rock. As a general rule - more porous materials provide better conditions for colonization by bacteria.



## BIO S

Supplement contains nitrifying bacteria. Specially selected bacteria strains will accelerate the removal of ammonia and other toxic organic compounds. It is extremely useful in newly established aquariums because it accelerates the start of the nitrogen cycle. BioS can be also successfully used in tanks in which the filtration system is based on probiotic bacteria. It is recommended to use also BioS at the introduction of new fish to the aquarium or after fish loss. **Dosage:** 1 drop per 100 liters (27 US gal) daily for first 2 weeks of setting up the aquarium.



## PRO BIO S

Highly concentrated probiotic bacteria. Supplement contains several specially selected bacteria strains. Key function is to transform phosphate, nitrate and organic compounds to a biomass which can be easily removed by skimmer or consumed by corals, sponges, clams and many filter feeders. Bacteria will significantly reduce organic sediment accumulating in the substrate & aquascaping elements. To achieve better results it's recommended to place in the sump an additional bacteria medium like Siporax or sand. Bacteria can also be a food source for corals. Pro Bio S protects your tank against pathogenic organisms. Recommended to use in conjunction with -NP Pro or Pro Bio F. **Dosage:** 1 drop per 100 litres daily (27 US gal).



## PRO BIO F

Probiotic bacteria with culture medium for NO<sub>3</sub> PO<sub>4</sub> reduction. It stimulates the development of bacterioplankton, one of the main nutrients for all corals. **Dosage:** one measuring spoon for 100 litres (27 US gal) of water daily.



## -NP PRO

Liquid Polymer - Media for a growth of probiotic bacteria. When -NP Pro is added to the water, bacteria will grow rapidly. These bacteria will convert unwanted nutrients, like nitrate and phosphate into biomass. As a result valuable bacterioplankton is absorbed by corals (providing an additional source of natural food). Recommended to use in conjunction with Pro Bio S. **Dosage:** 1 drop per 100 litres (27 US gal) daily.

The next important element of the filtration system when using the probiotic method is the application of efficient protein skimmer. When set to „dry” skimming it helps to keep nitrates ( $\text{NO}_3$ ) and phosphates ( $\text{PO}_4$ ) at a low level and reduces the excess of multiplied bacteria. In order to lower the level of phosphates in already functioning or “fresh” aquariums we recommend using a phosphate reactor with suitable adsorber. It should not act as a main filtration system in this method however, and must be disconnected once phosphates are below recommended limit. Please also note that refills based on alumina must not be used.



## CARBON

High quality granulated active carbon developed to eliminate toxic compounds and to improve water clarity. It's great absorption is attributed to high porosity. It does not contain any phosphates. Use 100ml (3.38 fl oz) per 100l (27 Us gal) of aquarium water.



## PHOSPHATE MINUS

Effective medium for phosphate reactors. It reduces the phosphates and silicates level in marine and fresh water aquariums. Use 25-100ml (3.38 fl oz) per 100l (27 Us gal) of aquarium water.



## ZEO MIX

A specially selected blend of zeolites. For use in marine and freshwater aquaria. Zeo Mix should be replaced every 6 weeks, the volume to use is between 100-500 ml per 100 liters of water in the aquarium. Zeolites do not require shaking - they can be placed in fluidised filter. The recommended flow through the bed is 300-500 Ltrs /h. Zeo Mix should be used in coral reef aquaria only by experienced aquarists as the zeolites have very high adsorptive properties, potentially leading to water being stripped too fast of elements. US: 3.5 oz.-17.5 oz. for 27 US gal. of aquarium water.



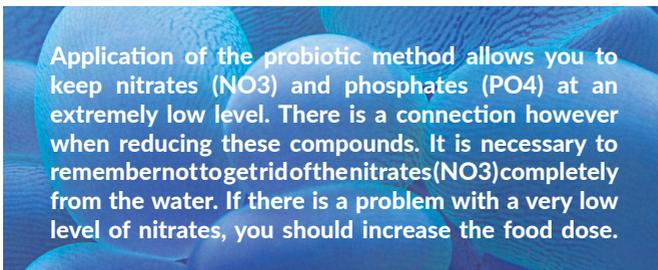
## LIFE BIO FIL

Life Bio Fil is a natural biological filter medium. Selected strains of bacteria soothes maturation through aid of nitrification process. The filling increases filtration efficiency in existing aquariums and is an excellent filter media for newly establish ones. The main advantage is live bacteria as an ingredient of Life Bio Fil. This means that product works immediately and there is no need to wait until the inhabitation of bacteria. Life Bio Fil should be placed in the sump in a good water flow. 1000 ml (33.81 fl oz) medium should be used in an aquarium with a capacity of 400L (105 US gal) We recommend to replace 10 % - 20 % of the filling every 6 weeks.



## AF LIFE SOURCE

AF Life Source is a 100% natural deposit derived from the cleanest waters of the Pacific. It is perfect as a buffer to enhance microbiology in saltwater aquariums. Biological stabilization is a key element in the culture of corals. By using the AF Life Source corals have access to components and minerals derived from the natural environment. The product is also an excellent complement an Algae refugium and DSB. We recommend that you use it a minimum of once a week, adding 10ml/100L (27 US gal) aquarium. To ensure that corals permanent access to the minerals dose in a high flow water, it contains valuable minerals and nutrients are permanently released into the aquarium. (The water will become cloudy this is normal).



Application of the probiotic method allows you to keep nitrates ( $\text{NO}_3$ ) and phosphates ( $\text{PO}_4$ ) at an extremely low level. There is a connection however when reducing these compounds. It is necessary to remember not to get rid of the nitrates ( $\text{NO}_3$ ) completely from the water. If there is a problem with a very low level of nitrates, you should increase the food dose.

# Aquaforest Media Reactors



A fluidising reactor, intended for use with different types of filter media, It works perfectly as a reactor for Phosphate Absorbers, Activated Carbon and Zeolites. Thanks to the compact dimensions, it can be used both internally in the sump or externally. The Reactor is made entirely from high quality - 100% acrylic, making it resistant to damage and discolouration. We used a silicone seal which protects the filter against leakage. Inside the filter are sponges with a special fixture to prevent deformation of the internal sponge - it prevents also the passage of filter medium outside the filter housing (important in the case of resins or absorbers - like GFO). Our reactors are very solid and nicely made. We recommend the use of 3 Aquaforest Media, Zeo Mix, Carbon and Phosphate Minus in combination.



100% Acrylic body  
Highest quality!  
quick & easy to open



**AF90**

Diameter pipe: 90 mm  
Connections: 16 mm  
Accommodates up to: 1.6L (3.38 US pt)



**AF110**

Diameter pipe: 110 mm  
Connections: 20 mm  
Accommodates up to: 3L(6.34 US pt)



**AF150**

Diameter pipe: 150 mm  
Connections: 20 mm  
Accommodates up to: 7.2L (1.91 US gal)



# Selection of salt

Choosing the salt is very important and should be done accordingly to the requirements of tank. This decision should be based on tank cast & way of managing it. In order to maintain constant water parameters, we recommend the use of salt that has most similar parameters to those of natural environment. We recommend that water changes are carried out every 7 days in amount of approximately 5%–10% of water volume.

Each Aquaforest salt dissolves in 15 minutes and is immediately ready to use. We recommend the use of water RO + DI (eg. Demineralization Resin)

## Optimum water parameters:

Salinity:	33–35 ppt
Ca:	410–440 ppm
Mg:	1230–1320 ppm
KH:	6.5–8,0 dKH
K:	360–400 ppm



**Macro & micro elements in the water have different levels depending on the salinity:**

### SEA SALT:

Salinity	Alk (°dKH)	Ca (mg/l)	Mg (mg/l)	K (mg/l)
30 ppt	7.3 – 7.6	320 – 340	1140 – 1200	330 – 350
33 ppt	7.7 – 8.0	340– 360	1200 – 1260	360 – 380
35 ppt	8.3 – 8.9	380 – 400	1260 – 1300	380 – 400

### REEF SALT:

Salinity	Alk (°dKH)	Ca (mg/l)	Mg (mg/l)	K (mg/l)
30 ppt	7.0 – 7.3	370 – 380	1200 – 1260	330 – 350
33 ppt	7.3 – 7.7	410 – 430	1300 – 1360	360 – 380
35 ppt	7.7 – 8.3	440 – 460	1360 – 1420	380 – 400

### PROBIOTIC REEF SALT:

Salinity	Alk (°dKH)	Ca (mg/l)	Mg (mg/l)	K (mg/l)
30 ppt	7.0 - 7.3	370 - 380	1200 - 1260	330 – 350
33 ppt	7.3 – 7.7	410 – 430	1300 – 1360	360 – 380
35 ppt	7.7 – 8.3	440 – 460	1360 – 1420	380 – 400



## SEA SALT

Fully synthetic marine salt created for fish tanks, less demanding corals and invertebrates. Phosphate and nitrate free. Upon filling new marine tanks it is recommended not to let animals in for 10-14 days. For salinity of 30 ppt dissolve about 3.25 kg (7.16 lbs) of salt in 100 litres (27 US gal) of water.



## REEF SALT

Designed for aquariums with more demanding SPS and LPS corals. This salt can be used with ozone-assisted filtration. Also, it does not contain any probiotic bacteria or growth media. Phosphate and nitrate free. Upon filling new marine tanks it is recommended to let animals in not earlier than after 10-14 days. For salinity of 33 ppt dissolve about 3.75 kg (8.26 lbs) of salt in 100 litres (27 US gal) of water.



## PROBIOTIC REEF SALT

Fully synthetic marine salt created for coral culture, especially SPS. Composition is destined to create the best conditions for marine animals. The micronutrients and macronutrients contained fully satisfy the amount of elements required for proper growth and colorization of corals. Addition of Reef Probiotic Inside the formula guarantees good influence on reduction of nitrates, phosphates, and also inhibits pathogenic bacteria in marine aquarium. Freshly prepared marine water, after dissolution of salt, can be used immediately for water exchange. When setting up new aquariums, the first animals are recommended to be placed no sooner than 10-14 days from filling the aquarium. For salinity of 33 ppt dissolve about 3.75 kg (8.26 lbs) of salt in 100 litres (27 US gal) of water.



# Supplements & Coral Foods

Corals are affected not only by parameters of the water but also by the nutrients provided to them in the form of various supplements. Those contained in food, increase their vitality, accelerate growth and improve their colours. In the system with an efficient probiotic protein skimmer there is always a big drop in the level of vitamins and amino acids necessary for proper corals development. For this purpose, we recommend regular use of supplements to keep appropriate levels in the aquarium. When an aquarist maintains the correct water parameters, including nutrients at as low as possible levels it is worthwhile to begin to feed the corals. All Aquaforest formulas are adapted to dispense one drop at 100l (27 US gal) of water. However, it should be remembered that each aquarium is different, depending on reef cast. By introducing a new product to the aquarium you should begin dispensing 1/2 dose and observe how the corals respond. Then gradually increase the dosage to reach the target. Corals should be fed at night when they extend their tentacles. We recommend that you give food to corals after lights out. It's not a good practice to mix all supplements together and to give them all at once. It is best to supply food to the Hi Flow area, so corals can collect it freely from the water.

## AF AMINO MIX



Supplement contains over 20 concentrated amino acids. This is essential additive for marine aquarium, especially for Ultra Low Nutrient Systems (ULNS). Amino acids are one of the main sources of energy for all types of corals and filter feeders. It promotes metabolism, aids growth as well as vitality. In natural coral reefs the concentration of total amino acids is low. It fluctuates between 200-500 nmol/l. However the latest scientific research proves that coral can adsorb up to 7 times more amino acids depending on availability. Amino acids are very easily removed by skimming process, ozone or granulated carbon. Regular dosing is highly recommended.

**Dosage:** 1 drop per 100l (27 US gal)  
Every other day when the light is off.

## AF VITALITY



Vitamins are very easily removed from water by skimming process, ozone or granulated carbon. AF Vitality is a supplement that contains concentrated vitamins for corals. Emphasizes the intensity of the colour and increases the resistance of coral. Supports recovery of stressed and weakened corals after import or disease. AF Vitality contains: vitamin A, vitamin B1, vitamin B2, vitamin B6, vitamin B12, vitamin C, vitamin D3, vitamin E and vitamin K3.

**Dosage:** 1 drop per 100l (27 US gal)  
Every other day when the light is off.

## AF BUILD



Speeds up the adsorption of calcium and carbon required for building up coral skeleton. AF Build maintains correct pH level and improves water clarity. It lowers the levels of undesirable hair algae and prevents the growth of pathogenic blue-green algae. Contains: iodides, carbonates, calcium.

**Dosage:** 1 drop for 100l (27 US gal)  
Every other day when the light is off.

## AF ENERGY



Highly concentrated and nutritious food for corals. Contains omega-3 and omega-6 fatty acids. Extract from selected zooplankton, amino acids, vitamins and carbohydrates. Product does not contain phosphates and nitrates. An addition of copper sulphate reduces the development of zooxanthellae and increases bright pastel colouring in SPS corals. Small amount of Copper sulphate, this will not harm your corals or invertebrates.

**Dosage:** 1 drop for 100l (27 US gal)  
Every other day when the light is off.



## AF POWER FOOD

Powdery alimentary supplement dedicated for SPS and LPS corals. Instructions: prepare a small container and fill it with 20ml (4 tsp) of water from the tank. Add one measuring spoon of AF Power Food powder and mix it for 1 minute. Pour the contents into the aquarium or use syringe/pipette to feed specific coral. Use one spoon per 100L (27 US gal). We recommend to dose supplement at night or when the lights are switched off.



## AF PHYTO MIX

Liquid food for soft, gorgonian, clams and non-photosynthetic corals. It consists of zooplankton and phytoplankton. It should be applied every other day. Recommended dosage of 10 drops per 100l (27 US gal) of water in aquarium with average number of corals.



## RICCO FOOD

Powdery food dedicated for Ricordea corals. Instructions: prepare a small container and fill it with 20ml of water from the tank. Add one measuring spoon of Ricco Food powder and mix it for 1 minute. Pour the contents into the aquarium or use syringe / pipette to feed specific coral. Use one spoon per 100L (27 US gal). We recommend to dose food at night or when the lights are switched off.



## AF PURE FOOD

AF Pure Food is 100% natural food for the coral, which supports the calcification of calcium thus ensures proper development and growth of corals and other invertebrates. AF Pure Food is derived from the tissues of coral and it is food that feeds corals in the wild. AF Pure Food also helps to stabilize the pH in saltwater aquariums.



## AF CALANUS

A natural food containing planktonic crustaceans from the North Atlantic. This food is rich in amino acids and astaxanthin, which perfectly promote the normal development of pigments in marine livestock. Thanks to the content of unsaturated fatty acids, amongst others, EPA, DHA and SDA Omega-3 and Omega - 6 all have a positive effect on the immune system of marine livestock, especially fish. After crushing and soaking AF Calanus you can also successfully feed your corals. Nutrients: protein 55.6%, Salt 9.3% Moisture 5.4%, fat 22.2%, ash 14.5%, Astaxanthin 0.046%. Ingredients: pure Calanus finmarchicus 100%.



Use one of our supplements to keep your fish in excellent form:

## FISH V

Contains concentrated fish vitamins and amino acids. Dedicated for all ornamental fish in both marine, and freshwater aquariums. Recommended to use with frozen foods that typically do not contain adequate amount of vitamins. Ingredients: vitamins A, B1, B2, B6, B12, C, D3, E, K3, and biotin, alanine, choline, cysteine, glutamine, leucine, lysine, serine, tyrosine.

**Dosage:** one drop per portion of frozen food directly into the tank.



## GARLIC OIL

Natural supplement from garlic extract. Contains vitamins, omega-3 acid, fish oil and natural antibiotics. It strengthens fish immune system against viruses & parasites. Strongly recommended during treatment and quarantine.

**Dosage:** 1 drop per portion of food, 2-3 times a week.



# Supplementation

Aquaforest recommends to change 5-10% of the water from your tank weekly. It is always a good practice to perform tests (Ca, KH, Mg, K) during this process. Start supplementation when Ca, KH, or Mg drop is observed.

## Aquaforest offers the following product range:

Calcium, Magnesium, KH Buffer, Reef Mineral Salt & Components Strong In the initial phase of the marine aquarium development- the microelements contained in the Components Strong are not required. You should consider micronutrients supplementation when the aquarium is fully inhabited with coral cast however.

To make micronutrients selection easier- Aquaforest created Component 1+, 2+, 3+ These ready mixed macro and micronutrients solutions fully meet the coral's requirements, guarantee healthy growth and beautiful coloration. The dosage of Component 1+, 2+, 3+ formulas depends on macro and micronutrients level of consumption by corals, as well as on water parameters. The microelements that are included in Components Strong may also be dosed separately (Iron, Fluorine, Kalium, Micro E, Strontium, Iodum) but we only recommend this approach to experienced aquarists. For tanks with Calcium reactor, individual micronutrients, Component A, B, C are more suitable.

**i** We recommend dosing of any liquid in the same quantities.



## COMPONENT 1+, 2+, 3+

Chemical composition of Components 1+,2+,3+ is based on method developed by H. Balling, but it has been fine tuned in our lab and enriched with microelements necessary for typical marine aquarium. These 3 fluids are intended for dosing in equal amounts on regular basis. Designed to fulfil coral demands not only in terms of magnesium and calcium, but also in terms of other elements that would be difficult to quantify and dose under home conditions. In case the tank contains average number of hard corals, the dose is approximately 50 ml daily per 100 l of water (27 US gal).

**COMPONENT 1+ contains:** Ca, Mg, Sr, Ba, Co, Mn, Cu, Fe, Zn, Ni, Cr.

50 ml raises Ca by 9 mg /100 l and Mg by 0,6 mg /100l (27 US gal).

**COMPONENT 2+ contains:** NaHCO<sub>3</sub>, F, I, 50ml raises the KH of 1,3 dkh (Alk 0,46 meg/l).

**COMPONENT 3+ contains:** mineral salts and K, B. An agent to maintain constant levels of minerals in coral reef aquaria - to maintain ion equilibrium in reef tank.



## CALCIUM

An agent to maintain constant levels of calcium in coral reef aquaria. Dissolve 50g of the product and 10g of Aquaforest Magnesium in 1000ml of deionized water. To maintain ion equilibrium, use Aquaforest KH Buffer and Reef Mineral Salt products as well. The recommended calcium level in coral reef aquaria is 400-440 mg/L. Contains CaCl<sub>2</sub>. US: 13 tbsp of the product and 2.4 tbsp of Aquaforest Magnesium in 1 US gal of deionized water. 10g Calcium in 100l of water increases by about 35 mg/l (ppm) calcium levels. 100ml Calcium solution increases by about 17,5 mg/l (ppm) in 100L (27 US gal) of water.



## MAGNESIUM

An agent to maintain constant levels of magnesium in coral reef aquaria. Dissolve 10g of the product and 50g of Aquaforest Calcium in 1000ml of deionized water. To maintain ion equilibrium, use Aquaforest KH Buffer and Reef Mineral Salt. The recommended magnesium level in coral reef aquaria is 1280-1350 mg/L. Contains MgCl<sub>2</sub>. US: 2.4 tbsp of the product and 13 tbsp of Aquaforest Calcium in 1 US gal. of deionized water. 10g Magnesium in 100l of water increases by about 12mg /l (ppm) levels of magnesium. 100ml Magnesium solution increases by about 1,2mg/l (ppm) in 100L (27 US gal) of water.



## KH BUFFER

An agent to maintain constant carbonate hardness in coral reef aquaria. Dissolve 80g of the product in 1000ml of deionized water. To maintain ion stability, it is recommended to use with Aquaforest Calcium, Magnesium and Reef Mineral Salt. US: Dissolve 1.28 cups of the product in 1 US gal. of deionized water. The recommended KH level in coral reef aquaria is 6.5°-8.0°dKH. Contains  $\text{NaHCO}_3$ . 10g KH Buffer increases by about 3,3 dKH (Alk. 1,18mg/l) in 100L. 100ml KH Buffer solution increases by about 1,60 dKH in 100L (27 US gal) of water.



## REEF MINERAL SALT

An agent to maintain constant levels of minerals in coral reef aquaria. Dissolve 25g of the product in 1000 ml of deionized water. To maintain ion stability, use Aquaforest KH Buffer, Magnesium and Calcium products. US: Dissolve 6.14 tbsps of the product in 1 US gal. of deionized water. To maintain ion equilibrium, we recommend to dose in equal dose with Aquaforest products: KH Buffer, Magnesium and Calcium products as well.



## COMPONENTS STRONG

We recommend to use Components strong with Aquaforest Calcium, Magnesium, KH Buffer & Reef Mineral Salt.

**COMPONENT A STRONG** - contains concentrated strontium and barium. The amount of strontium and barium depends on requirements for magnesium and calcium. 5 ml should be added to 1 litre of ready solution of Aquaforest calcium and magnesium. US: 19ml should be added to 1 US gal.

**COMPONENT B STRONG** - contains concentrated heavy metals. The amount of heavy metals depends on requirements for magnesium and calcium. 5 ml should be added to 1 litre of ready solution of Aquaforest calcium and magnesium. US: 19ml should be added to 1 US gal.

**COMPONENT C STRONG** - contains concentrated iodide and fluoride. The amount of iodide and fluoride depends on requirements for calcium. 5 ml should be added to 1 litre of ready solution of Aquaforest KH buffer. US: 19ml should be added to 1 US gal.

**COMPONENT K STRONG** - contains concentrated potassium. The amount of potassium depends on requirements for magnesium and calcium. 5 ml should be added to 1 litre of ready solution of Aquaforest reef mineral salt. US: 19ml should be added to 1 US gal.

## Dosage of macro and micronutrients based on Aquaforest products:

Macronutrients:



+

+

+

Micronutrients:



or



In aquariums with soft corals and small number of LPS corals - if macronutrients (Ca, Mg, KH) levels decrease insignificantly it is recommended to use:



### CA PLUS

Solution increasing calcium level in the water. Application: 10ml of the solution increases Ca level by 10mg/l in 100l of water. Maximum daily dosage is 20ml per 100l of water. US: 2 tsp of the solution increases Ca level by 10ppm in 27 US gal of water. Maximum daily dosage is 4 tsp by 27 US gal of water. Calcium level in reef aquarium should be kept at around 430mg/l.



### MG PLUS

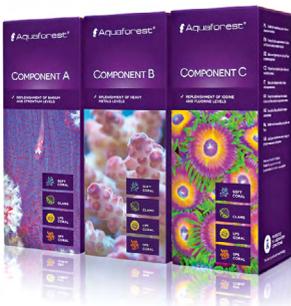
Solution increasing magnesium level in marine aquarium. Application: 10ml of the solution increases Mg level by 5 mg/l in 100l of water. Maximum daily dosage is 20ml per 100l of water. US: 2 tsp of the solution increases Mg level by 5ppm in 27 US gal of water. Maximum daily dosage is 4 tsp per 27 US gal of water. Magnesium level in reef aquarium should be kept at around 1300mg/l.



### KH PLUS

Solution increasing carbonate hardness level in marine aquariums. Application: 10ml of the solution increases KH level by 0,5°dKH in 100l of water. Maximum daily dosage is 20ml per 100l of water. US: 2 tsp of the solution increases KH level by 0,5 dKH in 27 US gal of water. Maximum daily dosage is 4 tsp per 27 US gal of water. Temporary hardness level in reef aquarium should be kept at around 6,5° – 8,0°dKH.

**i** Improve colour of your corals using following concentrated microelements:



### COMPONENT A, B, C

#### COMPONENT A

Component designed for supplementing strontium and barium in marine aquarium. It should be applied at least once a week in a dosage of 10 drops per 10l of aquarium water or 10ml (one top) per 200l of water – with average coral planting. US: 19 drops per 5 US gal. of aquarium water or 10ml (one cap) per 54 US gal of water.



#### COMPONENT B

Component designed for supplementing heavy metals in marine aquarium. It should be applied at least once a week in a dosage of 10 drops per 10l of aquarium water or 10ml (one top) for 200l of water – with average coral planting. US: 19 drops per 5 US gal. of aquarium water or 10ml (one cap) per 54 US gal of water.

#### COMPONENT C

Component designed for supplementing iodine and fluorine in marine aquarium. It should be applied at least once a week in a dosage of 10 drops per 10l of aquarium water or 10ml (one top) per 200l of water – with average coral planting. US: 19 drops per 5 US gal of aquarium water or 10ml (one cap) per 54 US gal of water.

The most important role in the daily control of marine aquariums are the use of high accuracy tests kits, which can be done at home. Chemists have developed Aquaforest drip tests, which are characterised by high accuracy, ease of use and reproducibility of results. Thanks to this accuracy high quality testing can safely measure and provide readings for dosing macronutrients and control of unwanted nutrients, helping you provide stable parameters for your corals

**Soon!**

### TEST KIT: ALKALINITY

Aquaforest Test kit Alkalinity is designed to quickly measure the carbonate hardness, or alkalinity in the marine aquarium. In order to ensure the proper functioning of the marine aquarium alkalinity should be 6.5 to 7.5 dKH. for Low Nutrient Systems, (ULNS) Higher values are permissible for aquariums with higher nutrients. Test Aquaforest dKH enough to perform 78-100 determinations of the required carbonate hardness / alkalinity.



**Soon!**

### TEST KIT: CALCIUM

Aquaforest Test kit Calcium is designed to quickly measure the calcium content in the marine aquarium, freshwater aquarium, Ponds or water reservoirs. In order to ensure the proper functioning of the marine aquarium calcium levels should be maintained in the range 380-460 mg / l (ppm). Test Aquaforest the Ca test volume is enough to perform 55-65 determinations of the required concentration of calcium.



**Soon!**

### TEST KIT: MAGNESIUM

Test Aquaforest Mg is designed to quickly measure the magnesium content in the marine aquarium. In order to ensure the proper functioning of the marine aquarium magnesium concentrations should be maintained within the limits of 1180-1450 mg / l (ppm). Test Aquaforest Mg sufficient for the execution of 55-60 determinations of the required concentration of magnesium.

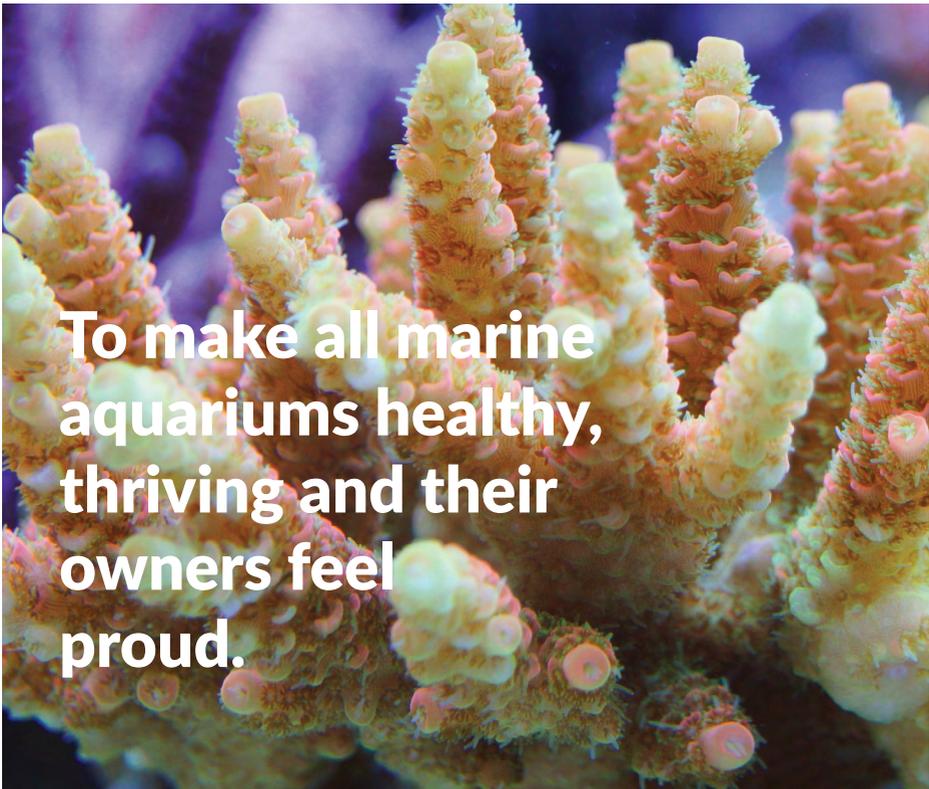


# Dosage of Aquaforest products

MARINE SALTS			
PROBIOTIC REEF SALT	Fully synthetic marine salt for SPS and LPS Corals (probiotic inside)	3,95 kg per 100 L to 34 ppt (-1,025 S.G.) 140 oz (8.71 lbs) of salt in 27 US gal	
REEF SALT	Fully synthetic marine salt for SPS and LPS Corals	3,95 kg per 100 L to 34 ppt (-1,025 S.G.) 140 oz (8.71 lbs) of salt in 27 US gal	
SEA SALT	Fully synthetic marine salt created for fish tanks	3,80 kg per 100 L to 31 ppt (- 1,023 S.G.) 134 oz (8.71 lbs) of salt in 27 US gal	
PROBIOTICS & NITRIFICATION			
BIO S	Nitrifying bacteria for Start-Up & ammonia reduction	1 drop per 100 L (27 US gal)	⬆️
PRO BIO F	Probiotic bacteria with culture medium for NO <sub>2</sub> PO <sub>4</sub> reduction	1 measuring spoon per 100 L (27 US gal)	
PRO BIO S	Probiotic bacteria for NO <sub>2</sub> PO <sub>4</sub> reduction	1 drop per 100 L (27 US gal)	⬆️
-NP PRO	Liquid Polymer - Media for a growth of probiotic bacteria	1 drop per 100 L (27 US gal)	
SUPPLEMENTS & CORAL FOODS			
AF AMINO MIX	Aminoacids - energy source for corals	1 drop per 100 L (27 US gal)	☾
AF BUILD	Growth acceleration	1 drop per 100 L (27 US gal)	⬆️ ☾
AF ENERGY	Highly nutritious food for corals	1 drop per 100 L (27 US gal)	⬆️ ☾
AF VITALITY	Vitamins for vitality & health	1 drop per 100 L (27 US gal)	☾
AF PHYTO MIX	Liquid feed	10 drops per 100 L (27 US gal)	☾
AF POWER FOOD	Powdered feed for sps and lps corals	1 measuring spoon per 100 L (27 US gal)	☾
RICCO FOOD	Powdered feed for corals of the Ricordea family	1 measuring spoon per 100 L (27 US gal)	☾
GARLIC OIL	Vitamins Omega-3 acid garlic extract	1 drop per food cube	
FISH V	Vitamins for fish vitality & health	1 drop per food cube	
AF PURE FOOD	100% natural food for the coral, which supports the calcification of calcium thus ensures proper development and growth	1 measuring spoon per 100 L (27 US gal)	☾
AF CALANUS	A natural food containing planktonic crustaceans from the North Atlantic. Rich in amino acids and astaxanthin.	Small portions several times per day	
MICROELEMENTS			
IODUM	Supplement for blue and purple colour enhancement	1 drop per 100 L (27 US gal)	
STRONTIUM	Supplement for skeletal strength and branching	1 drop per 100 L (27 US gal)	
FLUORINE	Supplement for blue and white colour enhancement	1 drop per 100 L (27 US gal)	
KALIUM	Supplement for pink and red colour enhancement	1 drop per 100 L (27 US gal)	
IRON	Supplement for green colour enhancement	1 drop per 100 L (27 US gal)	⬆️
MICRO E	Complex of heavy metals for marine organisms	1 drop per 100 L (27 US gal)	⬆️
WATER CHEMISTRY + ADDITIVES			
COMPONENT 1+2+3+	Micro and macronutrients	The dosage varies depending on aquarium types and lifecycle stages.	
COMPONENT A	Replenishment of barium and strontium levels	10 ml per 200 L 19 drops for 5 US gal	
COMPONENT B	Replenishment of heavy metals levels	10 ml per 200 L 19 drops for 5 US gal	
COMPONENT C	Replenishment of iodine and fluorine levels	10 ml per 200 L 19 drops for 5 US gal	
CA PLUS	Increases Calcium Levels	20 ml per 200 L 2 tsp in 27 US gal	
MG PLUS	Increases Magnesium Levels	20 ml per 200 L 2 tsp in 27 US gal	
KH PLUS	Increases Carbonate Levels	20 ml per 200 L 2 tsp in 27 US gal	
CALCIUM	Maintains constant levels of calcium in coral Reef Aquaria	50 g per 1 L 13 tbsps/1 US gal	
MAGNESIUM	Maintains constant levels of magnesium in coral Reef Aquaria	10 g per 1 L 2.4 tbsps/1 US gal	

<b>KH BUFFER</b>	Maintains constant levels of carbonate hardness in coral Reef Aquaria	80 g per 1 L 1.28 cups/1 US gal
<b>REEF MINERAL SALT</b>	Maintains constant levels of minerals in coral Reef Aquaria	25 g per 1 L 6.14 tbsp/1 US gal
<b>COMPONENTS STRONG</b>	Supplement containing all microelements required in coral reef Aquaria	5 ml per 1 L 19ml/ 1 US gal
<b>FILTRATION MEDIA</b>		
<b>CARBON</b>	Removes undesired chemicals from marine and freshwater aquaria	100 ml per 100 L 100ml/27 US gal
<b>PHOSPHATE MINUS</b>	Adsorbing and reducing phosphates and silicates	25-100ml/100L (27 US gal)
<b>ZEO MIX</b>	Specially selected blend of zeolites	100-500 ml per 100 L 3.5 oz.-17.5 oz./27 US gal
<b>LIFE BIO FIL</b>	Natural biological filter medium. Increases filtration efficiency in existing aquariums and is an excellent filter media for newly established ones	Replace 10 % - 20 % of the filling every 6 weeks
<b>AF LIFE SOURCE</b>	100% natural deposit derived from the cleanest waters of the Pacific. It is perfect as a buffer to enhance microbiology in saltwater aquariums	We recommend that you use it a minimum of once a week, adding 10ml/100L (27 US gal)

Dosage outlined above is based on our own experience and has been tested in Aquaforest Coral Farm. Each aquarium has its own very specific set of conditions, so the actual dosage should be adjusted to individual needs and tank lifecycle stages. The demand for supplementing changes depends on your aquarium type, therefore dosage in SPS reef tanks will be different than in fish only or in soft coral aquariums. We recommend that you start with half of the indicated dosage and that you watch your aquarium carefully before and after supplementing with any product.



**To make all marine  
aquariums healthy,  
thriving and their  
owners feel  
proud.**



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Aquaforest sp. z o.o. sp. k.  
Ul. Magazynowa 1  
33-300 Nowy Sącz  
Poland  
(+48) 18 444 19 88  
info@aquaforest.eu  
www.aquaforest.eu



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