

Antifouling & coatings



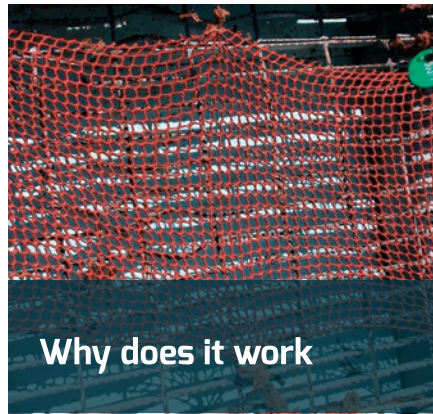
FlexaBar introduction

In the early days of the aquaculture industry it became clear that the fish cages and nets had to be protected from marine growth and fouling during the growth cycle of the fish. Tests carried out around the world under different environmental conditions, have all shown, that a sufficient water flow and optimal oxygen content among the fish increases the overall performance in the cage – mainly due to low stress, no diseases and high feed utilization which reduces production cost and time. So the value of clean and protected net can never be neglected.

The FlexGard net treatment products were developed and introduced in Norway in the late 1970's during the initial growth of the fish farming industry and the present FlexGard product range focus on eliminating non-specific and specific biofouling but also general protection and strengthening of the nets.



As aquaculture began to grow, so did the regulation of the coatings as well as all products used in the aquaculture field. So in order to fulfil these demands and at the same time meet the fish farmers needs for high performing products – the on-going R&D work has secured that the FlexGard and FlexProtect product ranges are considered environmentally friendly, preferable to other copper-base paints and coatings because it controls and leaches out lower levels of biocide compared with other products in the market place.



Traditional copper paints for the aquaculture industry work on ablative and higher leach out levels of biocide, while FlexGard water based products work on a controlled, very low leach out rate of less than 40 mg/per centimeter/per day. This provides equal and better performance compare to traditional copper paints containing 20-30% of copper oxide. (Leach out data and studies are available upon request.)*



Recent years, R&D work has changed in direction of working closely with customers in order to meet the very specific needs that are appearing around the world. As Flexabar is working globally we are meeting biofouling challenges that appears locally- and our aim is to enter a working relationship with our customers to help them optimizing their production and fight their "local" challenges.

The benefit of an optimal net service strategy

A net service strategy designed for your challenges and the exposure of your farm means a healthy growth environment for your fish by promoting good water flow which secure the oxygen levels and maintain the good feeding of the fish. Cleaner nets require fewer changes or washings in the sea – meaning less stress to the fish population in the cage. No stress-sufficient oxygen-good feeding which overall benefits the fish farmer.

FlexGard & FlexProtect

The FlexGard and the FlexProtect product ranges offers you a variety of products giving you, as a customer, multiple options for tailoring the net application that is suitable for your conditions

FlexGard

The FlexGard product range offers a variety of water based antifouling products that resist marine growth including barnacles, hydroids and mussels. Combining a special polymeric resin matrix for controlled leach out rate of the active substances with a proportional lower copper content – (and less copper released to environment) increases the performance in the sea greatly. No matter how exposed the farms are- and which biofouling challenges you are facing.

Flexprotect

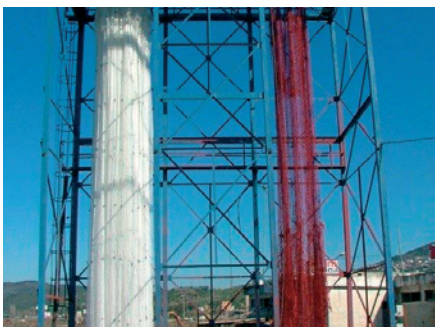
The FlexProtect product range enables you to protect your nets against all known challenges – if the fish are biting the nets, if you want to increase net strength, to protect the nets if using net cleaning devices in the sea- all in all if you want prolonged net life, the FlexProtect range offers the appropriate product. The FlexProtect product range also includes a coating accepted for organic fish farming.

FlexPrime

FlexPrime seals the net fibers so that the antifoulant remains on the nets surface, reducing consumption of antifouling while maintaining efficacy.

FlexGard and FlexProtect – solving all your biofouling and protective challenges

- Optimal performance of every product due to improved leach out rate characteristics
- Extended period of efficacy
- Resists marine growth, barnacles, hydroids and mussels.
- Keep the fish from biting
- Superior protection against UV-rays
- stiffens net cages and bind and sets the knots
- Excellent adhesion to nets
- Increase breaking strength





Fighting specific challenges

Request from a UK salmon farmer who faced severe problems with hydroids and the problem seemed to increase every year. Flexabar recommended FLEXGARD antifouling especially developed to be efficient against mussels and hydroids – and the salmon farmer decided to carry out a field trial and brought in competitive products to be a part of the trial as well.

Trial period: 1st of August 2012 - 26th of April 2013.

A nylon net 15 m wide and 10 m deep was tested – an impregnator was used and the net picked 640 L of the FLEXGARD antifouling diluted 10%

As a supplier, we asked to get all the informations out of the field trial as possible, so we were allowed to investigate

- residues in the fish flesh
- impact on the sea bed
- efficacy against hydroids



We carried out numerous sediment test in the sea bed in order to detect the environmental impact from the antifouling and none of the samples showed any impact.



We did test of the fish flesh before harvesting and the lab was not able to detect any residues from the surroundings at all. (test carried out by LONZA).



According to the salmon farmer, there was a significant difference between this FLEXGARD treated net and the other nets.

The fishfarmer says

After 9 month in the sea, the nets were brought back to the net station for service- and as the only net- the FLEXGARD applicated net was not even cleaned - only disinfected- and then brought back to the sea again.



your supporting relation