# SIGMA ECOFLEET® 690

Self-polishing, high-activity antifouling solves fouling problems for low-activity fleet

## Case study

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<td>The Challenge</td>
<td>To ensure long-term antifouling performance on vessels with a low operational rate and low speed</td>
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<td>The Solution</td>
<td>The SIGMA ECOFLEET 690 coating: a newly developed high-activity, self-polishing antifouling specifically suited for vessels exposed to severe fouling conditions</td>
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<td>The Benefits</td>
<td>Highly efficient protection against fouling settlement and development that keeps the underwater hull in excellent condition</td>
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<td>Superb fouling-free performance on the underwater hull</td>
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## The Customer

The shipping company ESVAGT, part of the A.P. Møller-Mærsk Group, delivers safety and service to the offshore and wind industry. The organization’s most important activities cover providing emergency and oil spill preparedness in and around the oil fields, and services for the offshore wind farms, where its specialized vessels and crew are an important part of installation safety management.

## The Challenge

Supply vessels typically suffer from constant exposure to fouling. This is due to the fact that these vessels have a low operational rate and, therefore, have long idle times in coastal waters where fouling has the opportunity to settle on the underwater hull.

Over the years, ESVAGT has tried a wide range of commercial antifoulings. In this particular case, the company found that this newly developed solution suited their requirements most closely for vessels operating in some of the most severe fouling conditions.
The Solution

When considering how to provide the most effective solution for this particular problem, many aspects need to be carefully investigated, which can be a detailed and lengthy process.

In 2008 PPG started to work together with ESVAGT in order to provide a suitable solution for their fleet. PPG first started test applications of the newly developed SIGMA ECOFLEET 690 product and this in-depth development finally resulted in the first full application to one vessel in early 2011.

Since then, the in-service operational results have been closely monitored to ensure that all the performance targets were successfully met.

The Benefits

The SIGMA ECOFLEET 690 product clearly demonstrates reliable and consistent high-activity antifouling performance for vessels exposed to severe fouling.

The ultra-high-volume solids content of 70% reduces VOC emissions and also produces a coating that is easy to apply, which increases productivity. As a result of its reliable, durable protection characteristics the added commercial benefits include extended in-service periods and reduces maintenance costs at subsequent dry dockings.

Main Benefits:

- Self-polishing, high activity antifouling for extreme and aggressive fouling conditions
- Fouling control for service periods up to 60 months
- Extended fouling control periods – reduces maintenance costs
- Easy application and recoating – less time, more productivity
- Developed specifically for coastal- and low-activity vessels
- Industry standard for high-film build with 70% volume solids
- Complies with IMO AFS Convention
- PPG’s patented self-polishing binder composition
- Reduces VOC emissions

The Results

The SIGMA ECOFLEET 690 product has proven its value following exhaustive monitoring of its performance, which included a survey carried out by divers after the first vessel had been in service for 1.5 years.

The results were outstanding and showed no significant fouling on the intact antifouling, whereas unprotected areas, such as the zinc anodes showed heavy settlement of mussels.

The owners have been delighted with the results and, since this first application, ten more vessels have now been coated with the SIGMA ECOFLEET 690 product, making eleven in total.