



Gold Standard[®] Intersleek[®]

Carbon Credits

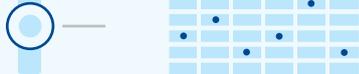
Improving the sustainability of international shipping

How does the Process work?

Validation



Ship converts to Intersleek® technology



Ship owner/operator provides data for whole docking cycle prior to, and after the application of Intersleek®



Data analysed and a claim submitted to The Gold Standard Foundation



Independent auditor and Gold Standard validates the claim submission



Project registration. Guarantee that credits will be issued for vessels

Verification



Ship owner/operator provides up-to-date information after application of Intersleek®



New data is analysed to calculate the exact carbon credit claim



Independent auditor verifies the exact amount of carbon credits to be issued



Gold Standard carries out an issuance review



Carbon credits issued

What are carbon credits?

Carbon credits are financial instruments of measurement where one credit represents one tonne of Carbon Dioxide (CO₂) equivalent either removed or prevented from entering the atmosphere. They were created to promote the use of carbon-reducing technologies through the generation of revenue by reducing greenhouse gas emissions.

Carbon credits in the marine industry

AkzoNobel's Marine Coatings business has worked with The Gold Standard Foundation to create the first approved carbon credit methodology in the marine industry. The methodology is unique in that it is the only approved carbon credit generating methodology for moving articles (i.e. ships) which are not geographically bound (all other projects have strict territorial boundaries). For the first time shipping operators can be additionally rewarded for investment in cleaner technologies through the generation of carbon credits.

What carbon credits can do for you

The generation of carbon credits can enhance the environmental image of your organisation as well as generating revenue through emission savings by selling the credits on the voluntary carbon market.

Further benefits include:

- Assistance with cash flow through regular carbon or cash credits
- Operational cost reduction for fleet
- Voluntarily offset other sources of carbon emissions within your organisation
- They are transferable and therefore can be donated, for example, to charitable foundations
- Sustainability leadership and visibility

Qualifying for carbon credits

To qualify, a vessel needs to be converted from a traditional biocide-containing antifouling to Intersleek® during routine drydocking. Many vessels already converted to Intersleek® already qualify.

What is the value of carbon credits?

Carbon credits can be traded on the carbon markets in a similar way as stocks and shares, therefore, they have an intrinsic value.

Carbon credits generated from Gold Standard methodologies are considered high quality due to the strict eligibility requirements and the rigour employed in approving methodologies. As a result, carbon credits generated from Gold Standard methodologies carry higher than average value on the voluntary market.

Intersleek® helps reduce the impact of shipping on climate change

International shipping is essential to modern life, transporting over 90% of goods around the world in the most carbon efficient way. However, it still represents over 3% of the global greenhouse gas emissions and is excluded from the UNFCCC carbon reduction targets agreed during the Paris Conference of Parties 2015. Marine organisms such as barnacles and tubeworms can attach to the underwater hull of vessels and can have detrimental effect, increasing

the fuel consumption and causing CO₂ emissions to escalate. Intersleek is the most sustainable way of preventing growth of those organisms and improving the efficiency of vessels, resulting in reduced CO₂ emissions. By using Intersleek, shipping operators help to improve the sustainability of their operations by eliminating the use of harmful pesticides commonly used to control fouling and reduce their emissions at the same time.



Zero Biocides

- Elimination of biocides **prevents the release of chemicals** into the marine environment



Reduced Emissions

- CO₂
- Black Carbon
- Nitrous & Sulphur Oxides
- Reduced CO₂ emissions **lower impact on climate change and ocean acidifications**
- Reduced emissions of harmful air pollutants nitrous and sulphur oxides in port areas helps to **improve the health of the local populations**
- Lower black carbon emissions helps to lessen the impact of shipping on arctic regions **helping to slow-down ice cap melting**



Case Study

M/V Argenta, IMO 9289726, a 310,000 DWT VLCC owned by Neda Maritime, was converted to Intersleek® technology in 2010 and was enrolled in the very first claim for carbon credits in the shipping industry. It was possible to claim for carbon credits for the last 20 months of the five year dock cycle resulting in the final issuance of 17,168 carbon credits.

17,168 carbon credits represents the avoidance of 17,168 tonnes of CO₂ from the Argenta for a period of 20 months or a verified fuel saving of 5,432 tonnes.

17,168 tonnes of CO₂ is equal to



8.3
MILLION
KILOGRAMS
OF COAL
BURNED



6,000
TONS OF
WASTE TO
LANDFILL



7.3
MILLION
LITRES
OF FUEL
CONSUMED



6.5
MILLION
KILOMETERS
DRIVEN BY
AN AVERAGE
CAR

In order to generate these savings from traditional routes, it would take



500,000 TREE
SEEDLINGS GROWN
FOR 10 YEARS



14,000 ACRES
OF FORESTS IN
ONE YEAR



M/V Argenta, IMO 9289726

First coated with Intersleek® in 2011

Intersleek® has real and verifiable benefits to the environment and shipping

The first claim for carbon credits using the unique and pioneering AkzoNobel methodology realised 126,785 carbon credits from the 15 vessels that had enrolled into the programme.

Carbon credits are only generated after rigorous validation and verification by United Nations-approved organisations.

The average annual validated and verified CO₂ saving from the 15 vessels in the first claim was 4,000 tonnes representing annual fuel savings of around 1,250 tonnes per vessel.

Burning fuel oil not only releases CO₂ into the atmosphere, it also releases sulphur oxides, nitrous oxides and black carbon. Through verifying CO₂ reductions it is also indirectly possible to do the same for other air pollutants.

As Intersleek® technology is the most sustainable way to control marine fouling growth on the underwater hull, there are other clear benefits to the environment and the sustainability of the shipping industry through elimination of biocides, reducing waste and paint consumption during new construction and routine maintenance work.

126,785 verified carbon credits represents avoidance of emitting

126,785
TONNES OF CO₂

2,400
TONNES OF SO₂

2,000
TONNES OF NO₂

400
TONNES OF BLACK CARBON



Gold Standard Intersleek Carbon Credits are generated from an award-winning pioneering methodology

- Working in collaboration with the Gold Standard and The FReMCo Group, the emission savings generated from the multiple award winning Intersleek technology have been converted into carbon credits
- This is a unique methodology in that it is the first to consider moving articles (ships), the first not to be bound by geographical limitations and the first for the shipping industry
- Investing in Gold Standard Intersleek Carbon Credits will help to improve the sustainability of international shipping and have significant impacts on global carbon emissions

- *Making ships smoother*
- *Improving the environment*
- *Reducing CO₂ emissions*

In recognition of Intersleek®

2016 Environment Leader Product of the Year

Environmental Leader Product & Project Awards

2015 Best Offsetting Project,

Voluntary Carbon Markets Rankings

2015 Sustainability Award,

Winsemius Awards

2015 Best Product Innovation Award,

ICIS Innovation Awards

2014 Clean Shipping Award,

Seatrade Awards 2014

2014 QinetiQ Maritime Innovation Award,

Royal Institution of Naval Architects

2013 Green Coatings Award,

Ringier Technology Innovation Awards

Carbon Credits from your Sustainability Partner

Intersleek® is part of the International® range of marine coatings from AkzoNobel who have held the number one position in the prestigious Dow Jones Sustainability Index for the last four years. AkzoNobel have public targets to reduce their own carbon emissions, reduce waste, increase renewable energy use and engage suppliers and customers in sustainability through long-term partnership.

For more information, please visit

www.international-marine.com/CarbonCredits

www.international-marine.com/intersleek

International is the brand of AkzoNobel's Marine and Protective Coatings business. AkzoNobel is a leading global paints and coatings company and a major producer of specialty chemicals.

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