International

Intersleek:
Pioneering performance and sustainability in fouling control – shaping the future at sea

AkzoNobel

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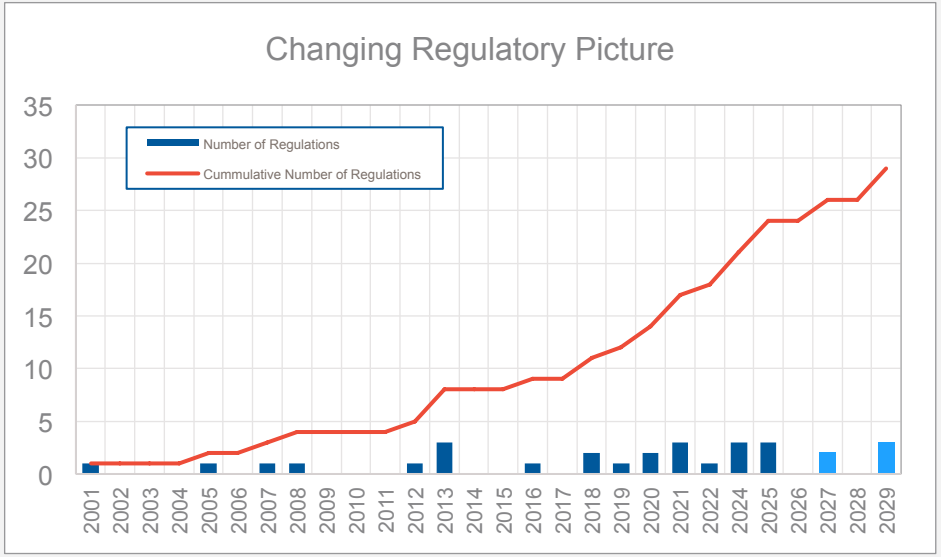
Changing future

- Over the last quarter century, the regulations associated with fouling control have increased almost exponentially
- Both the number and the frequency of regulations has increased
- This trend will continue
- So where is it driving the market?



Assessment of global regulations that influence fouling control uses on vessels

Drivers for future fouling control products

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Decarbonization

High quality vessel performance data to enabling informed decisions.

Improved hull husbandry utilising higher quality anticorrosives and higher performing fouling control.

Biosecurity

New IMO Biofouling Convention will result in more in-water inspections and cleaning.

Cleaning with capture will dominate as further controls over pollution from in-water cleaning will be in place and demands for more locations.

Pollution

Biocides will be continuously challenged leading the pathway to biocide-free solutions.

Other waste products from fouling control will come under scrutiny, e.g. biofouling.

- High performance
- Cleanable
- Biocide-free
- Microplastic-free

The good news…

The future is already here…

Intersleek
A more sustainable solution

- Long lasting
- High solids
- Low VOC
- Zero biocides
- Cradle-to-grave carbon footprint
- Independently verified fuel and emission savings

- In-service track records >20 years
- Less paint transported, lower waste packaging[1]
- Significantly reduced emissions[1]
- Use of biocides eliminated
- Lowest carbon footprint fouling control product[2]
- Only coating technology that has generated voluntary carbon credits for emission reductions[3]

[1]Compared to biocidal antifoulings
[2]Calculated following ISO14021 and comparing AkzoNobel fouling control portfolio
[3]Over 178,000 carbon credits issued by the Gold Standard Foundation validated and verified by RINA

Intersleek
The future invented over 30 years ago

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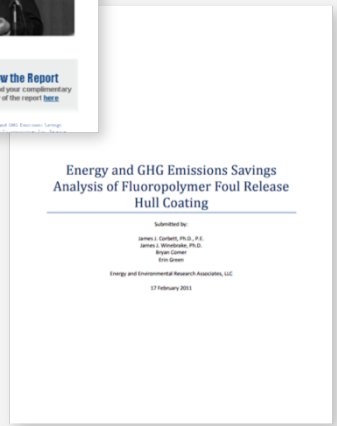
First independent record of fuel savings presented to the IMO



9% fuel savings on average

First ever issuance of carbon credits to the shipping industry

Over **178,000** carbon credits issued

Independent **verification** and **validation** of over **178,000 tonnes** of avoided CO_2 emissions

Continued Growth in applications

Today	>8,000
2022	7,000
2019	6,000
2016	5,000
2014	4,000
2012	3,000
2009	2,000
2007	1,000

Intersleek working mechanism

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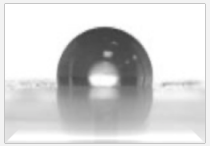
Intersleek technology works by creating an amphiphilic surface by carefully balancing hydrophobic and hydrophilic components of the coating.

Why is that important?

		Animals (barnacles, mussels etc.)	**Slime** (bacterial, algae, diatoms)
Hydrophobic (water hating)		✓	✗
Amphiphilic (both water hating and loving)		✓	✓
Hydrophilic (water loving)		✗	✓

Intersleek environmental value

Case Study: LNG (266,000m^3)

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Delivery 2008

2012 Docking	2018 Docking	2023 Docking
		
2012 Out-docking	**2018 Out-docking**	**2023 Out-docking**
		

13 CLIMATE ACTION	Carbon footprint down by >770 tonnes CO_2e[1]	72%
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	>19,000 litres less paint used[1]	32%
14 LIFE BELOW WATER	>43 tonnes biocides eliminated[1]	100%
13 CLIMATE ACTION	>10 tonnes VOC avoided[1]	47%
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	>23,000 tonnes fuel saved[2]	5%
13 CLIMATE ACTION	>74,000 tonnes CO_2 saved[2]	5%

Intersleek delivers measurable cost savings compared to biocidal antifoulings over the entire vessel lifecycle, including application at newbuild and three M&R dry-dockings.

[1]Actual numbers from Intersleek applications (NB and 3 x M&R dockings) compared to a silyl methacrylate biocidal antifouling scheme appropriate for this vessel.

[2]Assumed 5% fuel saving compared to a silyl methacrylate SPC antifouling

Positive impact on the fleet

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If the savings from a single ship were applied across a fleet of 60 vessels for a 15-year lifecycle:

	Fuel Consumption	CO_2 Emissions	Biocide emissions	VOC emissions	Paint Consumption	Paint Carbon Footprint[3]
Single Vessel 	**>$10M** saved[1]	**>70,000** tonnes avoided[1]	**>11** tonnes eliminated[2]	Prevents over **6 tonnes** of VOCs[2]	Reduced by **10,000 litres**[2]	Reduced by **>260 tonnes**[2]
Fleet of 60 vessels 	**>$600M** saved[1]	**>4M** tonnes avoided[1]	**>660** tonnes eliminated[2]	Prevents over **360 tonnes** of VOCs[2]	Reduced by **600,000 litres**[2]	Reduced by **>15,000 tonnes**[2]

Data from IVL-validated Eco Efficiency Analysis of a 3,000 TEU containership
15-year lifecycle
Fuel @$500/tonne
[1]Assumed 5% fuel saving compared to a silyl methacrylate SPC antifouling
[2]Compared to a silyl methacrylate SPC antifouling
[3]Carbon footprint calculated as per ISO14021

AkzoNobel

Our approach to sustainability

At AkzoNobel, we're focused on ensuring that the pioneering paints and coatings we supply continue to protect what matters – both now and in the future.

We **innovate** with and for customers and play a progressive and collaborative role in energizing entire industries to advance towards a more **sustainable future**.

GOLD | Top 5% ecovadis Sustainability Rating AUG 2025

MSCI ESG RATINGS AAA
CCC B BB BBB A AA AAA

SUSTAINALYTICS ESG 2024 INDUSTRY TOP RATED

GENPRO

"…their strong commitment to ESG principles and responsible manufacturing."

Sustainability is at the core of our identity

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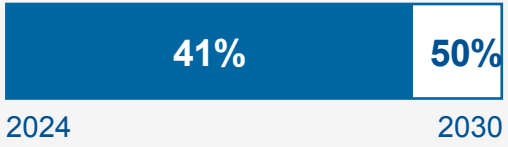
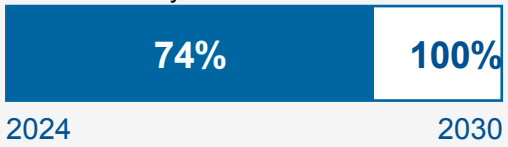
We produce durable solutions in a more sustainable manner

50% less carbon emissions in our **own operations**

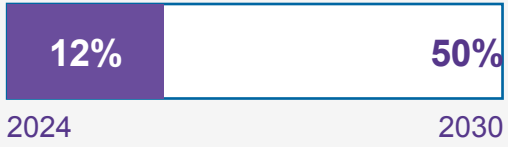


100% circular use of materials in own operations driven by reduce, reuse, recycle

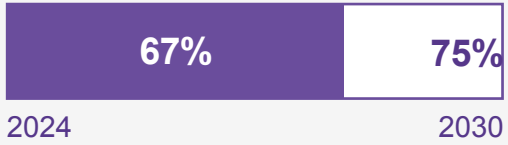


We help our partners to become more sustainable

50% less carbon emissions across our **value chain**

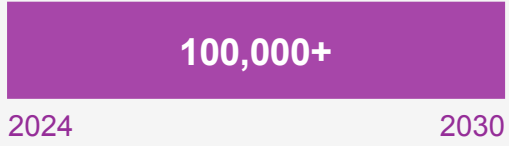


75% of suppliers meeting sustainability expectations*

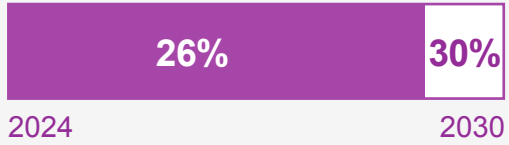


We empower our communities and employees

100,000+ members of local communities empowered with new skills



30% female executives



*75% of the suppliers in our sustainability program - covering over 1,500 customers with 84% of our global spend and 97% of our upstream carbon emissions.

Helping you to decarbonise

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Greenhouse Gas Emissions

Scope 2

Indirect emissions from your operations (purchased energy)

Scope 1

Direct emissions from your operations

CO_2 Intersleek can help to minimise and maintain fuel consumption reducing your Scope 1 emissions

Scope 3

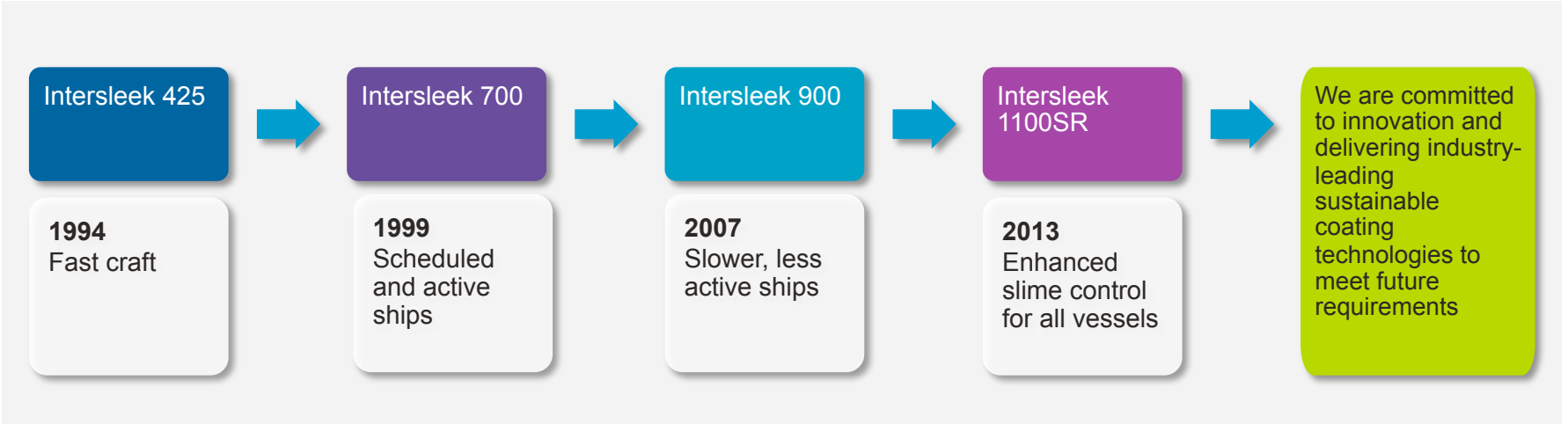
Upstream emissions from your suppliers

Downstream emissions as a result of your operations

CO_2 Through reduced consumption and AkzoNobel's own carbon reduction targets your supplier Scope 3 emissions will reduce by at least 50%

Where next?

For over 30 years, Intersleek Foul Release technology has developed and widened the scope of vessels suitable for benefiting from biocide-free, energy efficient products.



Thank you

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