PPG SIGMAGLIDE® 2390

Biocide-free fouling release for optimum efficiency and a decarbonized future

Designed to help you achieve your IMO greenhouse gas targets while maintaining high speed flexibility.

PPG SIGMAGLIDE® 2390

Biocide-free fouling release for optimum efficiency and a decarbonized future

PPG SIGMAGLIDE 2390 represents a real breakthrough in fouling release technology and is the latest addition to the renowned PPG SIGMAGLIDE range that has been widely used by many vessel owners and operators worldwide for more than 30 years.

This durable and extremely long-lasting biocide free, fouling release coating will help your vessels achieve instant power savings of up to 20% with a speed loss performance of less than 1%.

It does this whilst also allowing you to profit from a considerable reduction in long term maintenance costs.

By lowering vessel emissions by up to 35%, PPG SIGMAGLIDE 2390 makes it significantly easier to meet your IMO GHG targets, EEXI and EEDI ratings, and CII compliance. Higher speed flexibility becomes effortless to maintain.

These significant performance benefits are achieved thanks to the incorporation of PPG's HydroReset™ technology into the 100% pure silicone binder formulation.

PPG HydroReset™ modifies the coating when it is immersed in water to create a highly effective, almost friction-free, non-stick surface that marine organisms do not recognize and cannot adhere to. This results in outstanding fouling control that delivers up to 150 days of idle performance.

This unrivalled fouling control performance is achieved with no release of biocides into the oceans, thus safeguarding PPG's commitment to a sustainable future.

Offering a reduction in CO_2 emissions of up to 35% and instant power savings of up to 20%, PPG SIGMAGLIDE 2390 helps you take a significant step towards achieving your EEXI and CII targets.

PPG HydroReset™ – water-responsive surface for unrivalled smoothness and non-stick properties.

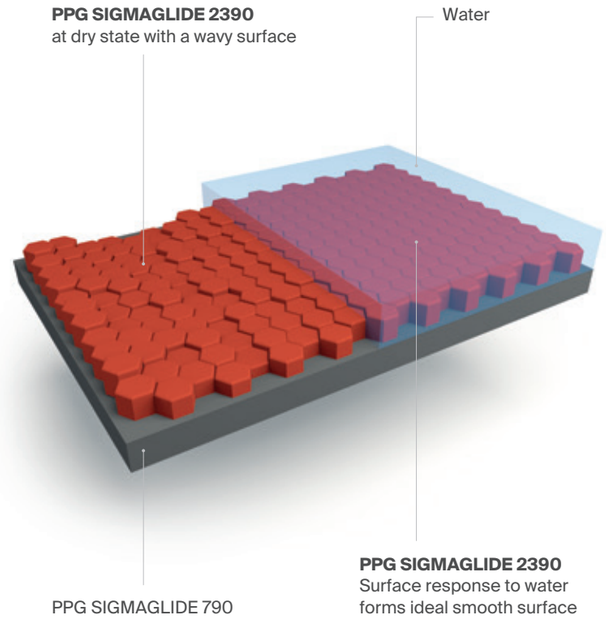
HydroReset™ is a new technology developed by PPG and incorporated into PPG SIGMAGLIDE 2390. It creates an unrivalled smooth surface when immersed in water.

Vessels coated with this advanced new technology are able to withstand up to 150 days of idle performance whilst experiencing less than 1% speed loss - a significant breakthrough in operating efficiency. Additionally, the ultra-smooth surface of PPG SIGMAGLIDE 2390, results in immediate power savings of up to 20%.

When PPG SIGMAGLIDE 2390 is immersed in water, the PPG HydroReset™ technology senses the presence of water molecules and instantly reorganizes the surface profile of the coating at a nano scale to generate a super-smooth ultra-low friction surface.

The low frictional resistance of the coating delivers significant, long-lasting hydrodynamic benefits and provides a highly effective non-stick surface that marine organisms do not recognize and cannot adhere to.

HydroReset™ surface technology:



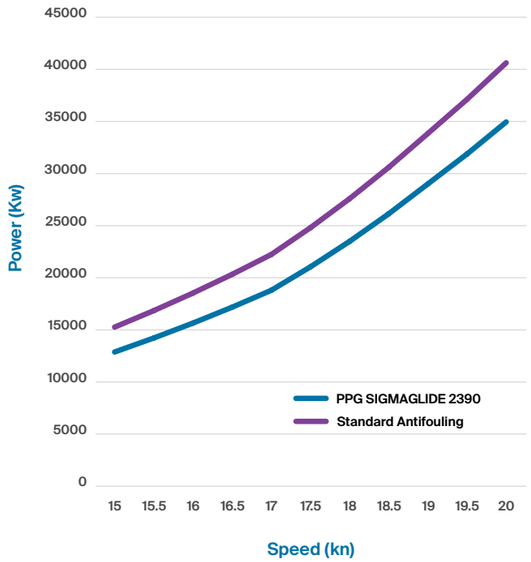
PPG SIGMAGLIDE® 2390

Immediate power savings of up to 20%

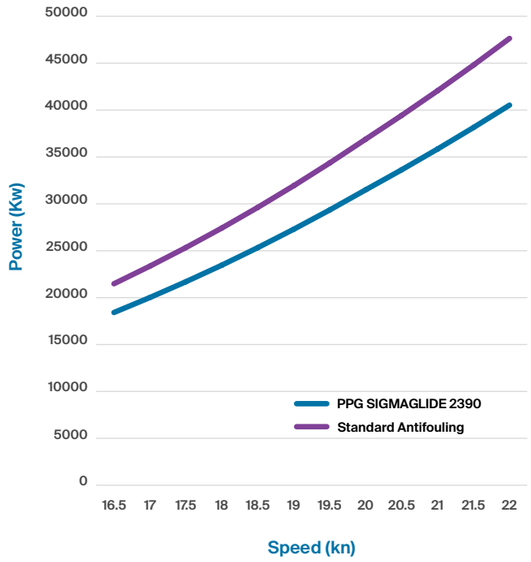
Instant power savings, minimum speed loss, increased static performance

In cooperation with a leading, third party institute PPG performed CFD (Computational Fluid Dynamics) predictions for different ship models comparing PPG SIGMAGLIDE 2390 to standard antifouling technologies. The results proved that with this ultra-smooth water-modified surface PPG SIGMAGLIDE 2390 delivers immediate power savings of up to 20% whilst only experiencing a 1% loss of speed and idle performance of up to 150 days thus, contributing in achieving the IMO GHG targets.

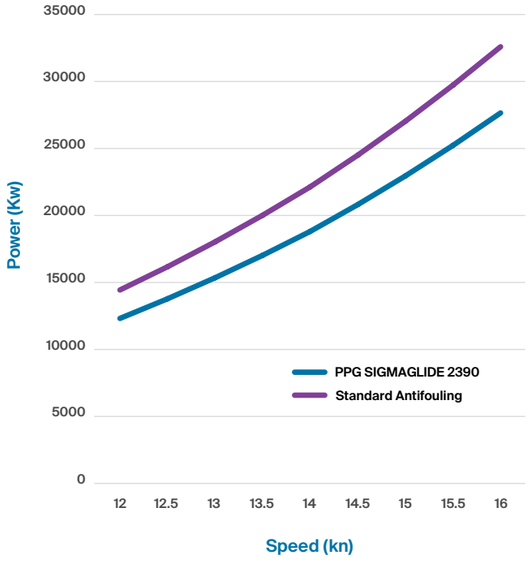
18% Power improvement for Qmax LNG



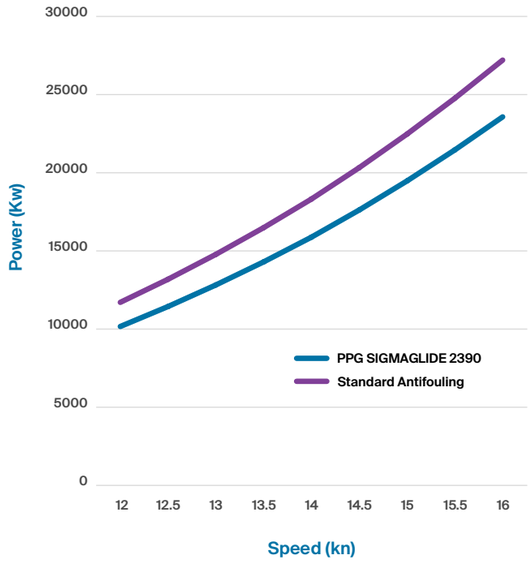
18% Power improvement for 13500TEU container



18% Power improvement for VLCC



15% power improvement for a Bulk Carrier

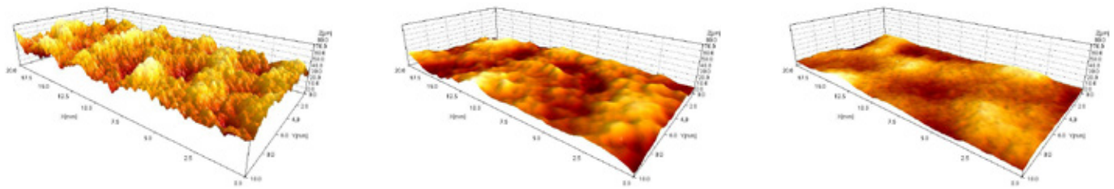


PPG SIGMAGLIDE® 2390

Fast return on investment and significant 10-year savings

Smoother surface compared to Self-Polishing Antifouling (SPC) and previous generation fouling release

When compared to conventional technologies such as self-polishing co-polymers containing copper or even the previous generation of fouling release technologies, it is clear that PPG SIGMAGLIDE 2390 is a pivotal new formulation that paves the way for ship owners and operators to radically improve efficiency and reduce CO_2 emissions.



Conventional premium copper containing SPC Antifouling

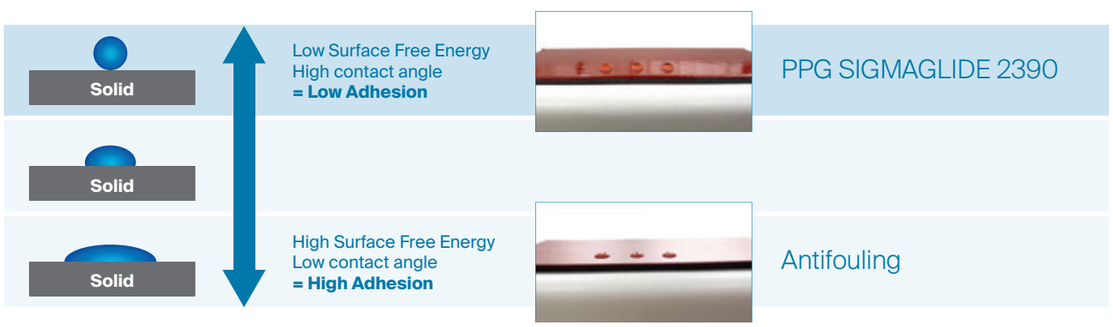
Previous generation Fouling Release

PPG SIGMAGLIDE 2390

Note: 3D laser profilometer images, measured in dry conditions.

High silicone density enables an extended 10+ years coating lifetime and leading ROI

PPG SIGMAGLIDE 2390 is built upon a durable and enduring, high-density 100% pure silicone binder system that exhibits an ultra-low surface energy and thus an essentially frictionless surface; water simply slides off it and marine organisms find it impossible to adhere to.



Fast Return on Investment and significant 10-year savings

In addition to a consistent long idle performance of up to 150 days, the stable, unfluctuating performance of the silicone binder system also has significant return on investment (ROI) benefits.

Owners and operators can expect no surface deterioration of the coating on the hull, nor any leaching or surface porosity and so are able to benefit from an extended lifetime of more than 10 years with minimal maintenance requirements for their vessels.

As such, a vessel coated with PPG SIGMAGLIDE 2390 can save two complete steps of treatment at a five year redocking and can continue for another five years with no need for full blasting or application of a full top coat. This prolonged lifetime benefit has a far-reaching effect on return on investment.

Business case scenario:
10-year benefits for a Tanker

Benefits	PPG SIGMAGLIDE 2390
CII	10-year compliant rating
EEXI	3-6% V_{ref} improvement
10-year savings	Up to $11 MM
10-year carbon savings	Up to 60k tonnes
10-year ROI	7 months

Business case scenario:
10-year benefits for a Bulk Carrier

Benefits	PPG SIGMAGLIDE 2390
CII	10-year compliant rating
EEXI	3-5% V_{ref} improvement
10-year savings	Up to $7 MM
10-year carbon savings	Up to 40k tonnes
10-year ROI	11 months

PPG SIGMAGLIDE® 2390

Benefit from higher speed flexibility whilst ensuring CII rating compliance

PPG SIGMAGLIDE 2390: Fast Return on Investment and significant 10-year savings

Pretreatment steps in dock for PPG SIGMAGLIDE 2390 application

The cost savings achieved as a result of this reduced maintenance requirement, are substantial. Vessel owners choosing PPG SIGMAGLIDE 2390 can typically expect to save on average, 50% of their typical 10-year maintenance costs over an owner choosing a premium antifouling or a fouling release coating that contains biocides.

Cost ↑

	Redocking
Full blasting	-
Application of full paint system	-
Application of full top coat	Optional
Localized spot repairs	Required
Hull water cleaning	Required

Benefit from higher speed flexibility whilst ensuring CII rating compliance

PPG SIGMAGLIDE 2390 can help your vessels to achieve up to 35% lower carbon emissions thanks to instant power savings of up to 20% and speed loss performance of less than 1%.

In doing so, PPG SIGMAGLIDE 2390 provides a significant contribution to the achievement of your IMO GHG targets and CII compliance whilst maintaining maximum speed flexibility for your vessels.

The cumulative effect of the lower friction resistance delivered by our HydroReset™ technology and the minimal loss of speed that can be accomplished due to improved hull efficiency can deliver up to a 35% reduction in CO_2 and support CII compliance for over 10 years.

Vessels coated with PPG SIGMAGLIDE 2390 benefit from maximum speed flexibility as they can operate at an average 1 knot higher speed while remaining CII compliant.

PPG SIGMAGLIDE 2390: 10-year CII rating predictions*

Tanker 12.0 knots	1st Dry Docking Period					2nd Dry Docking Period				
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
PPG SIGMAGLIDE 2390	A	A	A	A	A	A	A	A	B	B
Premium Antifouling	A	A	B	B	C	B	C	C	D	D

Bulk Carrier 11.5 knots	1st Dry Docking Period					2nd Dry Docking Period				
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
PPG SIGMAGLIDE 2390	A	A	A	A	A	A	B	B	C	C
Silyl Acrylate Antifouling	A	B	B	C	D	B	C	D	E	E

PPG SIGMAGLIDE 2390 delivers maximum carbon reduction impact for vessel owners and operators.

* Actual results dependent on ship type, vessel specific utilization and operation.

PPG SIGMAGLIDE® 2390

An essential step towards a decarbonized future

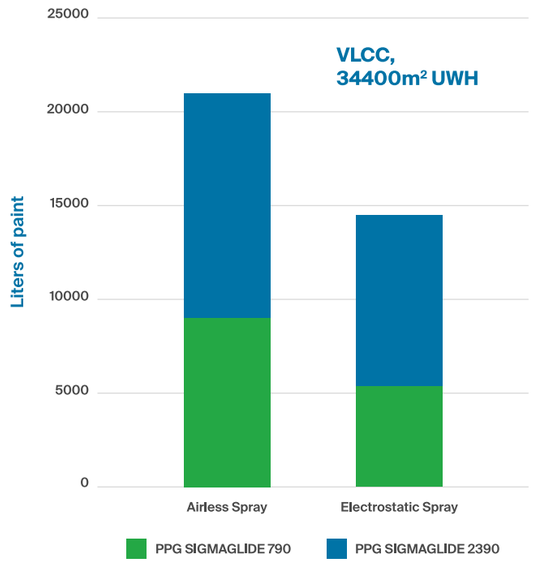
Electrostatic application drives further cost savings

PPG SIGMAGLIDE 2390 is a three-coat system that is high in volume solids and has best-in-class low VOC.

Designed to be suitable for electrostatic application, painters will therefore benefit from high transfer efficiency and reduced paint consumption due to the tendency for less overspray.

Owners and operators will also benefit from a noticeable reduction in material consumed and complexity of mixing thanks to its extended 10+ year lifetime and two-component system.

Electrostatic spray application – reduced paint consumption



PPG SIGMAGLIDE 2390 - an essential step towards a decarbonized future

Protection of the environment continues to be a high priority and PPG is fully committed to driving innovation to deliver a wide range of technologically superior products that have a beneficial impact on our customers and the planet.

PPG SIGMAGLIDE 2390 exemplifies this approach. Its advanced smoothing characteristics provide vessel owners with a significant reduction in carbon emissions of up to 35% whilst also ensuring that no biocides are introduced to the oceans.

Coupled with a fast return on investment and meaningful maintenance cost savings over an extensive product lifetime, PPG SIGMAGLIDE 2390 is an essential step towards a decarbonized future.

Features	Benefits
Ultimate low-friction based on **HydroReset™** technology	**20%** power reduction, max **1.0%** speed loss performance and up to **150** days idle*
100% pure silicone high density matrix with uniform layer during entire service life	Resistant to slime and degradation with **prolonged lifetime** and **excellent ROI** on the industry
Sustainable, biocide-free, high-solids system with possibility of electrostatic spray application for high transfer efficiency	ESG contribution with ultimate fouling resistance and carbon emission reduction up to **35%***

* Actual results are subject to the previous hull coating and conditions as specified in a performance guarantee to be issued by PPG.

Visit **ppgpmc.com** or contact:
Asia Pacific ✆ +86-21-6025-2688 ✉ ppgpmc.ap@ppg.com
Europe, Middle East and Africa ✆ +32-3-3606-311 ✉ customers@ppg.com
Latin America ✆ +57-1-8764242 ext. 201 ✉ ppgpmcandean-ca@ppg.com
North America (US & Canada) ✆ +1-888-9PPGPMC ✉ PMCMarketing@ppg.com

We protect and beautify the world™