

DEKRO PAINTS
CHUGOKU
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MANUFACTURERS/LICENSEE
CMP
CHUGOKU MARINE PAINTS, LTD.

Dekster

MARINE COATINGS

GUIDELINES FOR MARINE
COATING APPLICATIONS

DEKRO
PAINTS

Introduction

Dekro Paints provides a variety of heavy duty paints and primers for marine applications These heavy duty paints are provided by Dekro's own Marinecote range and through the company's relationship with Chugoku Marine Paints. Chugoku Marine Paints is one of the largest paint manufacturers in Asia and Dekro Paints manufacture coatings under licence in strict accordance to the ISO 9001 quality accreditation from the SABS .

The ISO 9001 certificate represents a significant recognition on a national and international scale. It forms part of the SABS ISO 9000 series, which is a code of practice for quality control systems developed and published by the International Standards Organisation based in Switzerland.





Vessel Areas

Consult the table below to select the most appropriate classification for your project.

A1	Water Ballast Tanks
A2	Underwater Hull
A3	Deck
A4	Superstructure
A5	Topside
A6	Cargo Holds
A7	Cargo Tanks
A8	Interiors

Vessels are essential for global logistics. CMP's marine coatings protect vessels from severe marine condition. CMP's anti-corrosive and anti-fouling coating has been developed by our long experience with shipbuilders, ship owners and ship management companies in order to meet professional requirements.

A1 Water Ballast Tanks

Water Ballast Tanks/ Flume Tanks/ Brine Tanks/ Rig Drain Tanks/ Bilge Tanks/ Sludge Tanks/ Base Oil Tanks and Sea Water Tanks

Product Name	Painting Interval at 23°C	Volume Solids (%)	Theoretical Coverage SQM/L Without Loss	Paint Film Thickness DFT µ	Paint Film Thickness WFT µ
Umeguard SX	12hrs	58	385	150	259
Umeguard SX	12hrs	58	385	150	259

The condition of the water ballast tanks can directly affect both the safety and structural integrity of the vessel and also reduce its asset value.

Water ballast tanks are an integral part of every ship and although these areas are not revenue earning, they can be critical if steel requires replacement as a result of corrosion. Whilst the outer hull, external deck and structure may be in good condition, lifting the hatches of the water ballast tanks can reveal the real condition of the vessel. If extensively corroded, the condition of water ballast tanks can affect both the safety and structural integrity of the vessel . Not only is the cost of repairing of these spaces huge, these are also potentially complex and time-consuming operations.



A2

Underwater Hull

Underwater Hull Flat Bottom Specification

Product Name	Painting Interval at 23°C	Volume Solids (%)	Theoretical Coverage SQM/L Without Loss	Paint Film Thickness DFT µ	Paint Film Thickness WFT µ
Umeguard SX	12hrs	58	385	150	259
Bannoh 1500 RZ	7,5hrs	73	292	250	342
Sea Grandprix 660	5hrs	67	45	150	224
Sea Grandprix 660	5hrs	67	45	150	224

Underwater Hull Flat Bottom Specification

Product Name	Painting Interval at 23°C	Volume Solids (%)	Theoretical Coverage SQM/L Without Loss	Paint Film Thickness DFT µ	Paint Film Thickness WFT µ
Epicon Zinc Rich Primer HB-2	9hrs	57	714	80	140
Umeguard SX	12hrs	58	385	150	259
Bannoh 1500 RZ	7,5hrs	73	292	250	342
Sea Grandprix 1000	1,5hrs	44	33	150	340
Sea Grandprix 1000	1,5hrs	44	33	150	340
Sea Grandprix 1000	1,5hrs	44	33	150	340

Protecting the integrity of a ship's hull is extremely important in order to keep a vessel at its top performance. Hull damage or fouling can not only affect the overall speed and fuel efficiency of a ship, but can also be harmful to the crew, cargo, and has the potential to negatively impact surrounding marine life. The physical ability of the ship to cut through the water in an efficient manner is imperative for optimal performance and fuel economy.

A2 Deck

Exterior Decks /Heli Deck Structures /Super Structures outsides these decks/ Crane Pedestals & Gantry/Tertiary Structure – Hand rails (guard rails & wind wall type) /Kick Plates or Toe rails / Ladders/stairways/Bollards etc. Specification

Product Name	Painting Interval at 23°C	Volume Solids (%)	Theoretical Coverage SQM/L Without Loss	Paint Film Thickness DFT µ	Paint Film Thickness WFT µ
Epicon Zinc Rich Primer HB-2	9hrs	57	714	80	140
Umeguard SX	12hrs	58	385	150	259
Umeguard SX	12hrs	58	385	150	259
Unymarine	7hrs	50	10	50	100

Protecting your deck from impact and abrasion is critical to ensuring operational stability. Our coating systems are designed to keep your decks operational for extended service intervals and provide additional functionality such as low solar absorbency, lower installed weight and non-skid which ads large operational benefits.

From low temperature-curing, rapid repair and cosmetic benefits, our full range of deck coating systems are approved to the highest standards - we make it easy to choose the right deck coating system for your vessel in both general and landing areas.



A2

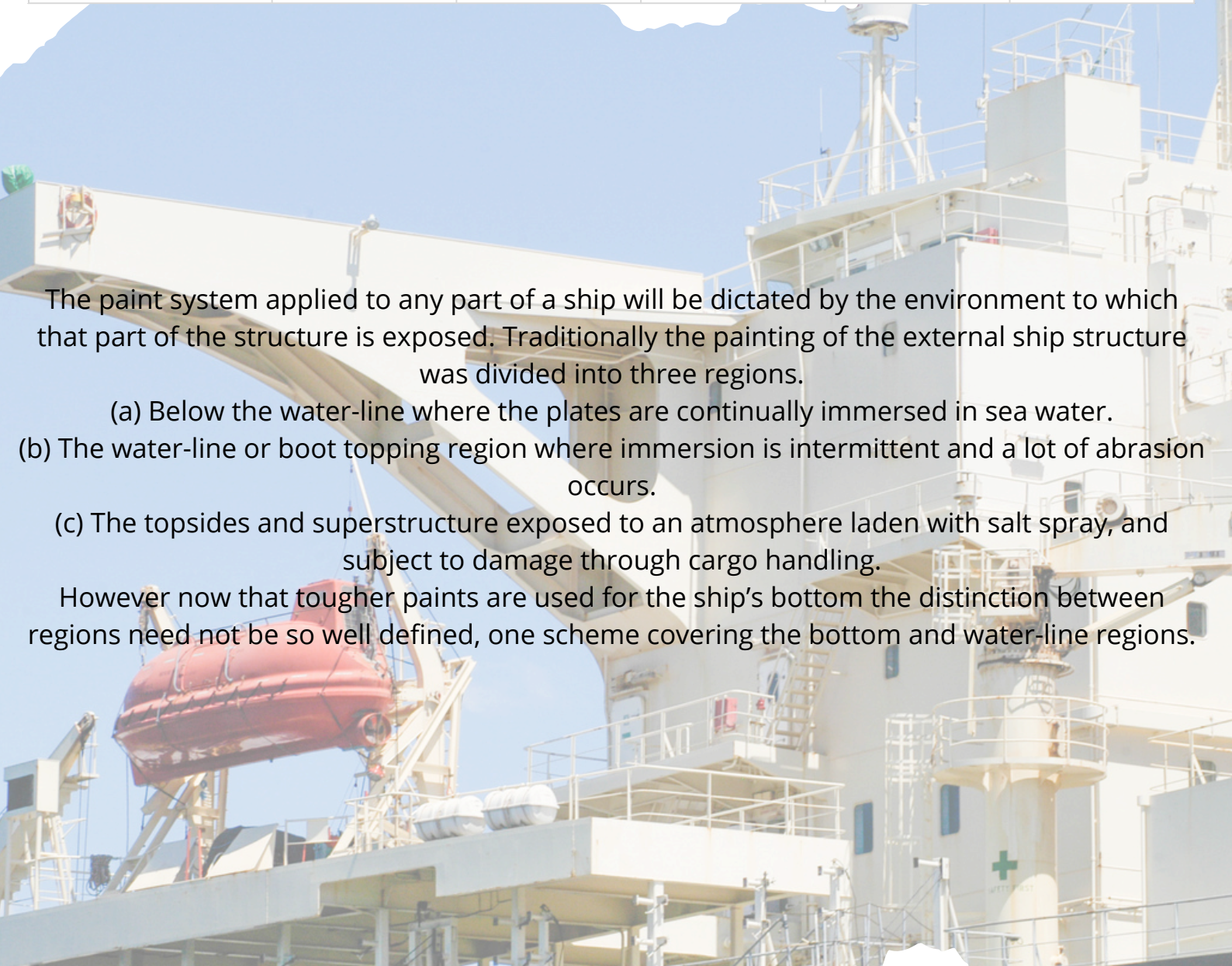
Superstructure

Superstructure Specification (Alkyd)

Product Name	Painting Interval at 23°C	Volume Solids (%)	Theoretical Coverage SQM/L Without Loss	Paint Film Thickness DFT µ	Paint Film Thickness WFT µ
Umeguard SX	12hrs	58	385	150	259
Evamarine	18hrs	50	1,429	35	70

Superstructure Specification (Acrylic Resin)

Product Name	Painting Interval at 23°C	Volume Solids (%)	Theoretical Coverage SQM/L Without Loss	Paint Film Thickness DFT µ	Paint Film Thickness WFT µ
Umeguard SX	12hrs	58	385	150	259
Acri 700	8hrs	37	8	35	95



The paint system applied to any part of a ship will be dictated by the environment to which that part of the structure is exposed. Traditionally the painting of the external ship structure was divided into three regions.

(a) Below the water-line where the plates are continually immersed in sea water.

(b) The water-line or boot topping region where immersion is intermittent and a lot of abrasion occurs.

(c) The topsides and superstructure exposed to an atmosphere laden with salt spray, and subject to damage through cargo handling.

However now that tougher paints are used for the ship's bottom the distinction between regions need not be so well defined, one scheme covering the bottom and water-line regions.

A2

Topside

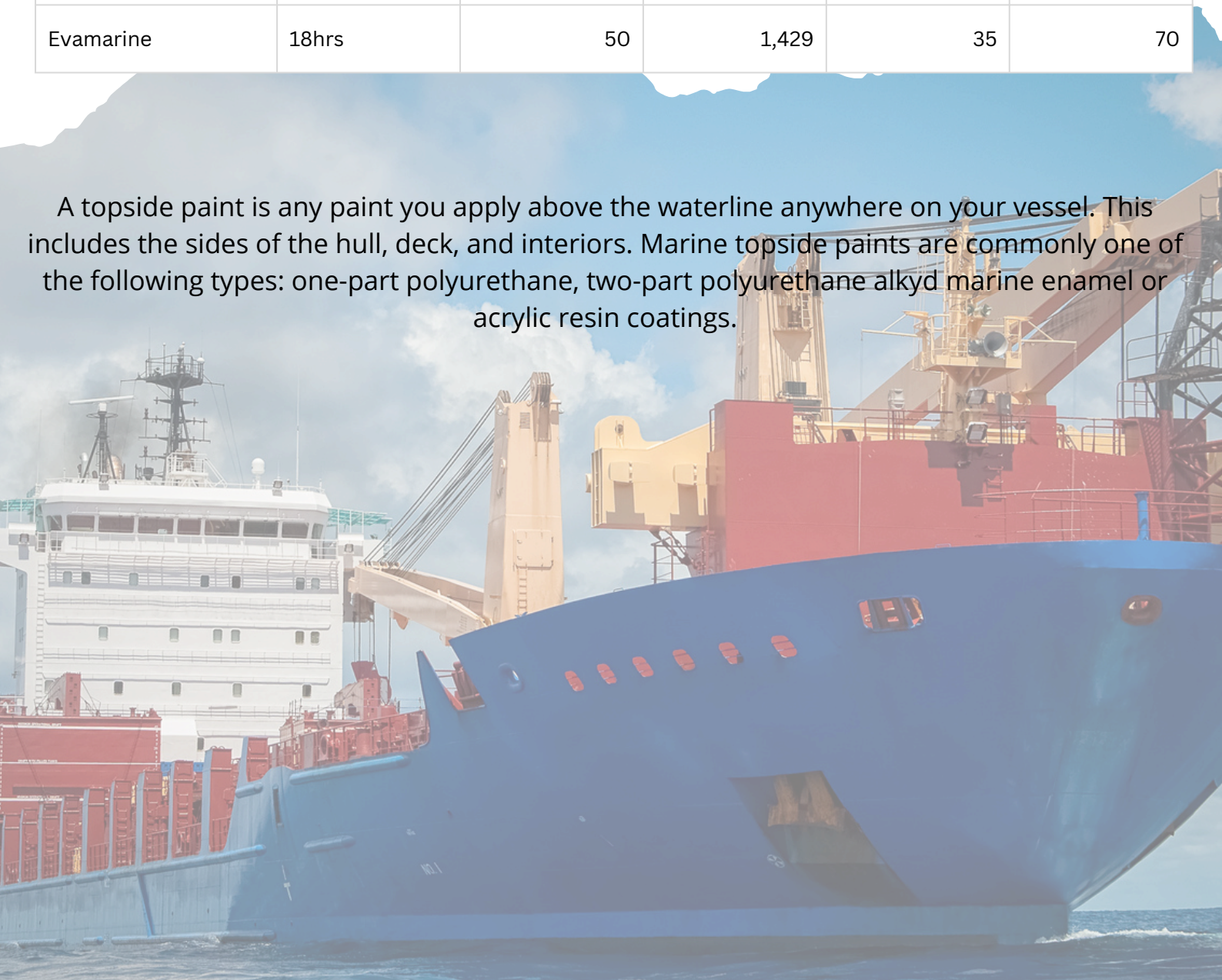
Marine Maintenance and Topside Specification (Acrylic Resin)

Product Name	Painting Interval at 23°C	Volume Solids (%)	Theoretical Coverage SQM/L Without Loss	Paint Film Thickness DFT µ	Paint Film Thickness WFT µ
Umeguard SX	12hrs	58	385	150	259
Acri 700	8hrs	37	8	35	95

Marine Maintenance and Topside Specification (Alkyd)

Product Name	Painting Interval at 23°C	Volume Solids (%)	Theoretical Coverage SQM/L Without Loss	Paint Film Thickness DFT µ	Paint Film Thickness WFT µ
Umeguard SX	12hrs	58	385	150	259
Evamarine	18hrs	50	1,429	35	70

A topside paint is any paint you apply above the waterline anywhere on your vessel. This includes the sides of the hull, deck, and interiors. Marine topside paints are commonly one of the following types: one-part polyurethane, two-part polyurethane alkyd marine enamel or acrylic resin coatings.



Cargo Holds

Cargo Holds/ Void Tanks and Mud Pits Specification

Product Name	Painting Interval at 23°C	Volume Solids (%)	Theoretical Coverage SQM/L Without Loss	Paint Film Thickness DFT µ	Paint Film Thickness WFT µ
Epicon Zinc Rich Primer HB-2	9hrs	57	714	80	140
Umeguard SX	12hrs	58	385	150	259

Cargo holds are the areas subject to the harshest operating environments; without excellent coating protection, the structural integrity can be compromised, jeopardising vessel profitability and safety.

Erosive cargoes such as coal and iron ore increase the potential for significant coating damage during loading. The impact can fracture and detach coatings over a short period, leading to loss of steel protection and subsequent corrosion. Often these areas of damage are high on the bulkhead and are therefore difficult to repair in service.

Once suffering this form of impact damage, vessel-owners and -operators are faced with more frequent repair, increased costs and potential downtime.



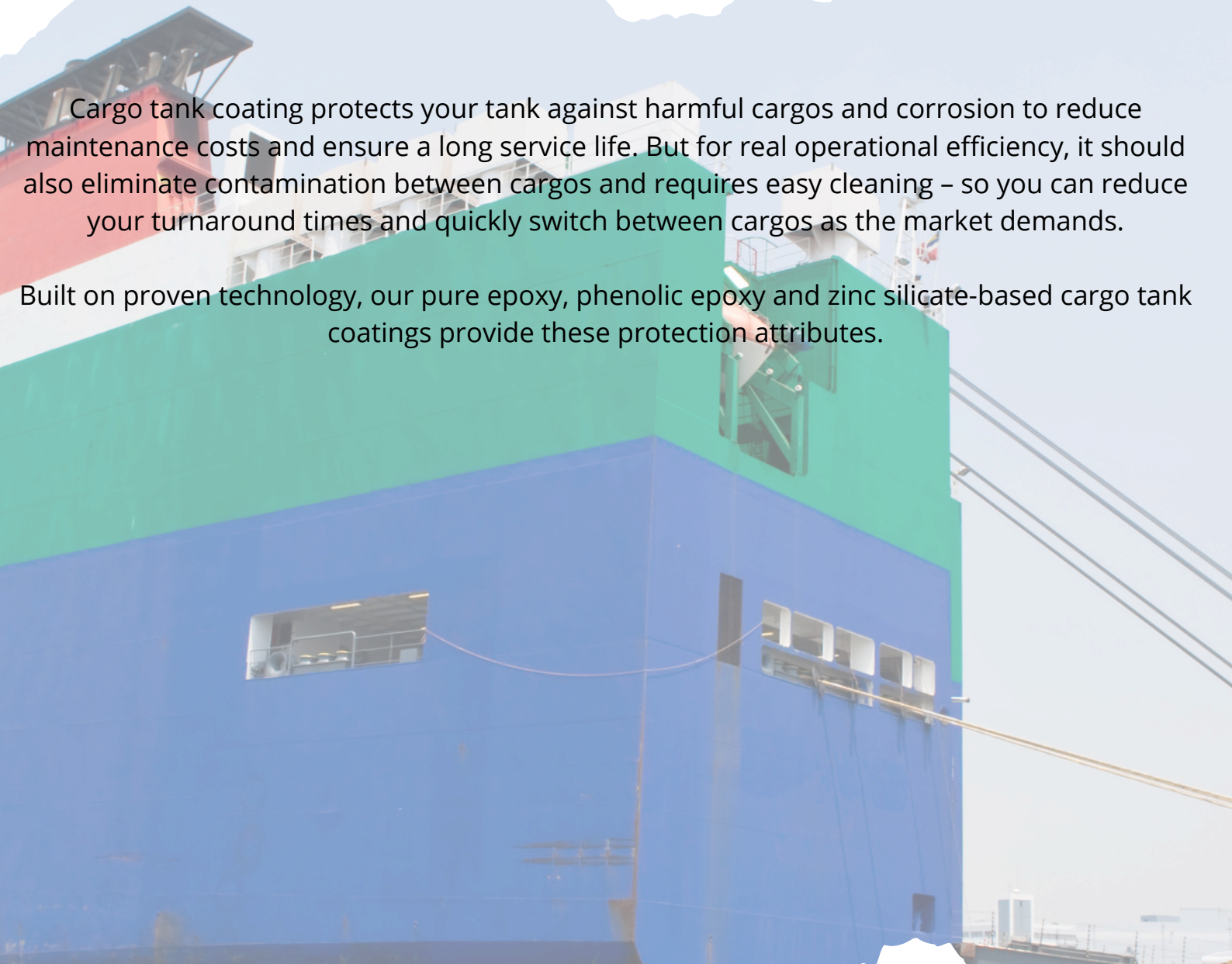
Cargo Tanks

Cargo Tanks and Potable Water Tanks Specification

Cargo Tanks and Potable Water Tanks Specification

Product Name	Painting Interval at 23°C	Volume Solids (%)	Theoretical Coverage SQM/L Without Loss	Paint Film Thickness DFT µ	Paint Film Thickness WFT µ
Epicon Zinc Rich Primer HB-2	9hrs	57	714	80	140
Umeguard SX	12hrs	58	385	150	259

Product Name	Painting Interval at 23°C	Volume Solids (%)	Theoretical Coverage SQM/L Without Loss	Paint Film Thickness DFT µ	Paint Film Thickness WFT µ
Epicon T500	9hrs	44	44	125	227
Epicon T800	17hrs	63	42	150	238



Cargo tank coating protects your tank against harmful cargos and corrosion to reduce maintenance costs and ensure a long service life. But for real operational efficiency, it should also eliminate contamination between cargos and requires easy cleaning – so you can reduce your turnaround times and quickly switch between cargos as the market demands.

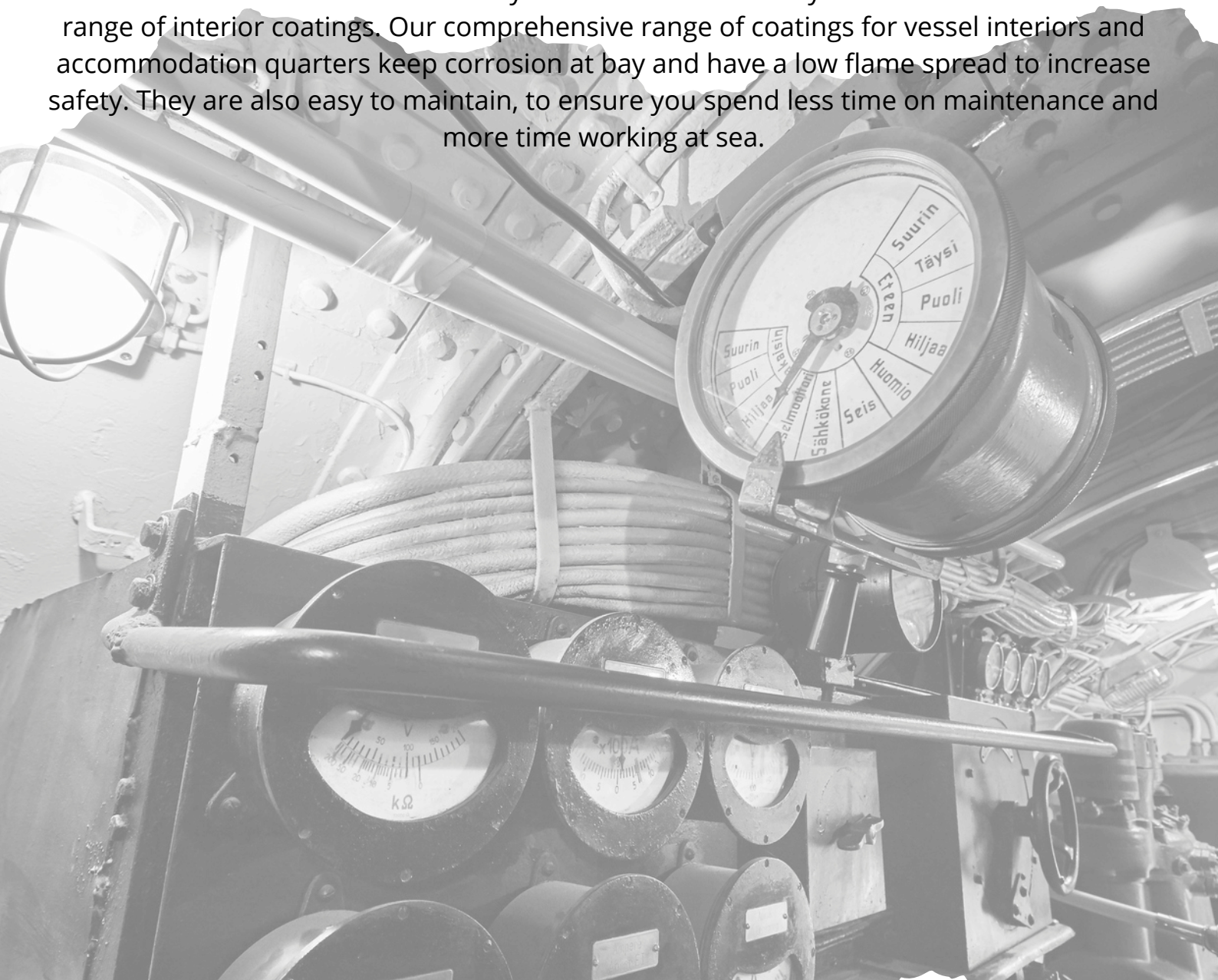
Built on proven technology, our pure epoxy, phenolic epoxy and zinc silicate-based cargo tank coatings provide these protection attributes.

Interiors

Engine room & Pump room below gratings/ Engine Control Room/ Engine Utility Room/ Utility Room/ Decks/ Mud Pump Room Deck/ Sack storage Deck/ Mud pit tank top / Sewage Treatment room /Workshop/ Stores / Switch Board Room Specification

Product Name	Painting Interval at 23°C	Volume Solids (%)	Theoretical Coverage SQM/L Without Loss	Paint Film Thickness DFT µ	Paint Film Thickness WFT µ
Epicon Zinc Rich Primer HB-2	9hrs	57	714	80	140
Umeguard SX	12hrs	58	385	150	259
Unymarine	7hrs	50	10	50	100

Protect and maintain the interior of your vessel with our easy-to-maintain cost effective range of interior coatings. Our comprehensive range of coatings for vessel interiors and accommodation quarters keep corrosion at bay and have a low flame spread to increase safety. They are also easy to maintain, to ensure you spend less time on maintenance and more time working at sea.



Surface Preparation

Sa 1 – Light blast cleaning.
Sa 2 – Thorough blast cleaning.
Sa 2½ – Very thorough blast cleaning.
Sa 3 – Blast cleaning to visually clean steel.

When viewed without magnification, the surface shall. be free from visible oil, grease and dirt and from mill scale, rust, paint coatings and foreign matter.

Dekster 711 Salt Solve Pro completely removes all salts, resulting in no conductivity. It also removes abrasives and debris from the surface's profile providing a better surface area to bond with coating. Since Dekster 711 Salt Solve Pro leaves a clean, rust-free surface for up to 72 hours, large areas of structures can be blasted and cleaned completely before coating application, instead of having to be coated immediately after blasting every day.

Dekster 711 Salt Solve Pro can be worked into any blasting process to achieve a totally clean surface, with zero flash-rust and zero residue left behind. Dekster 711 Salt Solve Pro is a clear, simple additive with visible results, eliminating both natural and artificial contaminants. At sea or on land, Dekster 711 Salt Solve Pro is safe to use and compatible with a wide variety of surfaces, including steel, concrete, fiberglass, aluminum, composites, and more!





Primers

Primer coatings for marine applications

Bannoh 1500 RZ

Modified Polyamide Epoxy

BANNOH 1500 RZ, is a two-component, modified epoxy/polyamide, high-build anti-corrosive primer and binder coat. Manufactured by Chugoku Marine Paints (CMP), it is primarily used in the maritime industry as a protective coating for ships' hulls, decks, and ballast water tanks.

Tuffcoat ST85

Surface Tolerant Epoxy

Tuffcoat ST85 is a surface tolerant, glass reinforced epoxy coating designed to protect steel and concrete with a minimum amount of surface preparation. Excellent abrasion, adhesion and corrosion resistance. Resistance to salt water, solvents and chemicals. Suitable for immersion in water. (not potable water) High solids coating.

Tuffcoat ST100

Surface Tolerant Epoxy

Tuffcoat ST100 is a glassflake filled solvent free surface tolerant epoxy coating, designed to protect concrete with a minimum amount of surface preparation. Suitable for concrete and cement surfaces. Excellent abrasion, adhesion and corrosion resistance. Resistance to salt water, solvents and chemicals. Suitable for immersion in water. (not potable water) High solids coating.

Umeguard SX

Surface Tolerant Epoxy

Umeguard SX is a surface tolerant, modified epoxy paint. It gives adhesion physical properties such as adhesion, toughness and abrasion resistance, etc. and chemical resistance to water, salt water and crude oil. Umeguard SX is recommended for cargo hold, Inside and outside of accommodation space, Void space, Cofferdam, Engine room, Pipe line, Other steel structure, etc.



Epicon Zinc Rich Primer HB B-2

Zinc Rich Epoxy

EPICON ZINC RICH PRIMER B-2 is a two component primer, based on a combination of metallic zinc, epoxy resin and hardener. Suitable primer for the protection of blast cleaned steel plates used for under water areas and touch-up primer for zinc silicate shop primer.

Suitable Available Products

Dekster 504 - Surface Tolerant Epoxy Mastic
Dekster 501 - Epoxy Zinc Phosphate Primer



Primers

Primer coatings for marine applications

Acri 700 Primer

Acrylic Resin Primer

ACRI 700 PRIMER is an effective anti-rust primer based on acrylic resin and drying by evaporation of the solvents. It can be applied directly on to bare steel or existing paint film such as Acrylic, chlorinated rubber and epoxy. It has also good workability and it is possible to obtain thick coat especially by spray application.

NZ Primer

Shop Primer

NZ Primer, is based on a combination of epoxy resin, rust preventing pigments and hardener, is quick drying and gives adequate preliminary protection of blast cleaned steel plates.

Epicon F HB (MIO)

Micaceous Iron Oxide Epoxy Primer

EPICON F-HB, is a high-build type epoxy micaceous iron oxic paint based on a combination of epoxy resin and polyamide resin pigmented with micaceous iron oxide.

Coatings

Maintenance coatings for marine applications

Acri 700

Acrylic Resin Paint

ACRI 700 is a finish coat based on acrylic resin which dries by evaporation of the solvents. It has excellent adhesion properties, weathering resistance and gloss and colour retention.

Evamarine

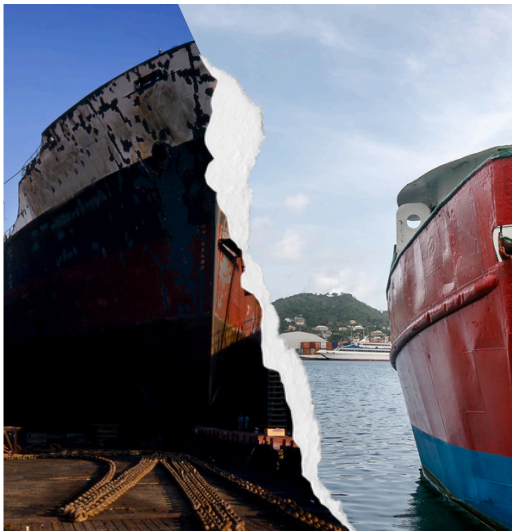
Resin Coating

EVAMARINE is an alkyd resin based paint with excellent adhesion properties, weathering resistance and colour retention. Evamarine is recommended as a finishing coat on exterior wood and steel surfaces.

Marine coatings are a type of protective coating used mostly in the marine environment to protect ships, vessels, tankers, and other materials from saline water or fresh water. A marine coating has specific functional properties, therefore it can provide superior protection to the surfaces to which it is applied.







Protective coatings

Protective epoxy, polyurethane, vinyl and heat resistant coatings for marine applications

Silicon no 400

Heat resistant coating

SILICON No.400 SILVER, is a silicon resin aluminium paint based on silicon resin and aluminium pigment.



Unymarine

Polyurethane top coats

Unymarine is based on a polyurethane resin and has excellent gloss retention, durability and chemical resistance that is suitable for protection of concrete. It is also resistant to detergents, chemicals, solvents, lubricants, organic fuel oil and high octane fuels.

Vinyl AC HB

Vinyl coating

Vinyl AC HB is a vinyl chloride resin and aluminium pigment based primer, providing effective protection against corrosion.

Silva Spar no 500

Heat resistant coating

Silva Spar no 500 is a special blend of aluminium paste and heat resisting resins.

Suitable Available Products

Dekster 112 - Acrithane

Adthane Enamel - Polyurethane

It is often assumed that all paint coatings prevent attack on the metal covered simply by excluding the corrosive agency, whether air or water. This is often the main and sometimes the only form of protection; however there are many paints which afford protection even though they present a porous surface or contain various discontinuities.







Anti Fouling Coatings

Anti fouling coatings
for marine applications

Sea Grandprix 1000

Anti fouling top coats

SEA GRANDPRIX 1000 is a tin free self polishing antifouling paint based on the specific polymer with highly hydrolysis activity. Excellent antifouling effect is derived from the highly active polymer which ensures maximum effectiveness and leaching of the biocides.



Sea Grandprix 660HS

Anti fouling top coats

Sea Grandprix 660 HS is an antifouling paint, with self-polishing action, suitable for application to wood, fiberglass, or metal vessels subject to attack by barnacles, algae, tubeworms, and other marine fouling organisms. It provides season long protection of vessels with moderate to heavy fouling.

Marine Star 30G

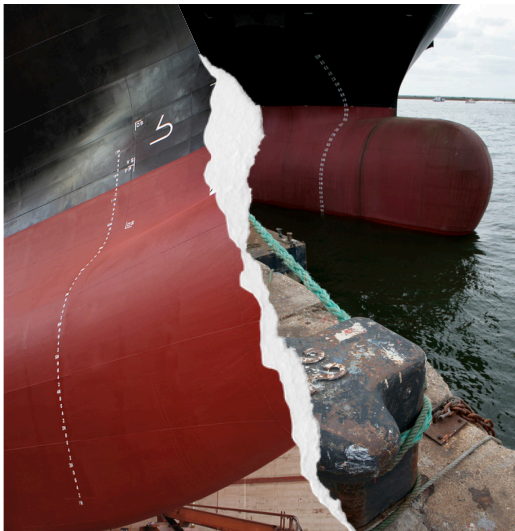
Anti fouling top coats

Marine Star 30G is an antifouling paint, with self- polishing action, suitable for application to wood, fiberglass, or metal vessels subject to attack by barnacles, algae, tubeworms, and other marine fouling organisms. It provides season long protection of vessels with moderate to heavy fouling.

Anti-fouling paint - a category of commercially available underwater hull paints (also known as bottom paints) - is a specialized category of coatings applied as the outer (outboard) layer to the hull of a ship or boat, to slow the growth and/or facilitate detachment of subaquatic organisms that attach to the hull and can affect a vessel's performance and durability. Anti-fouling paints often have other functions in addition to their antifouling properties, such as acting as a barrier against corrosion on metal hulls that will degrade and weaken the metal, or improving the flow of water past the hull of a fishing vessel.







Food Grade

Twin pack coatings for food grade coatings

Epicon T500

Food Grade Epoxy

Epicon T-500 is a high build type epoxy coating, has excellent physical properties such as adhesion, toughness, abrasion resistance, etc. as well as chemical resistance to salt-water, fresh water, petroleum products, crude oil, alkalis and weak acids. It is suitable as a protective coating for tank interiors. Airless spray can build a dry film thickness of 75 – 125 microns per coat. It is suitable as a protective coating for concrete floors at factories where liquid and solid foods are manufactured. Coating can be used for cold storage facilities.



Epicon T800

Food Grade Epoxy

Epicon T-800 is a high-build type epoxy phenolic coating, which has excellent physical properties such as adhesion, toughness, abrasion resistance, as well as chemical resistance to salt-water, fresh water, hot water, petroleum products, crude oil, alkalis and weak acids. It is suitable as a protective coating for concrete floors at factories where liquid and solid foods are manufactured. Coating can be used for cold storage facilities.

Acri 700

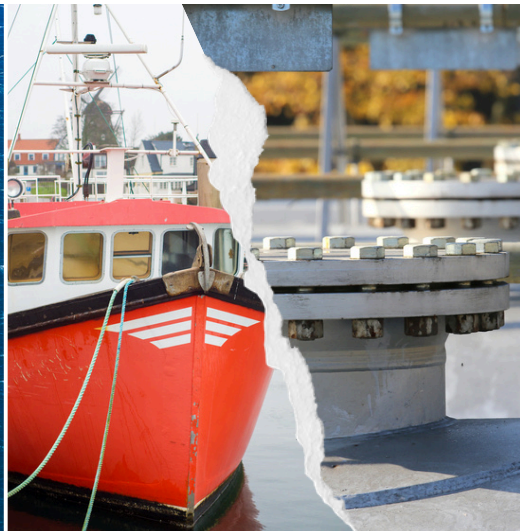
Food Grade Coating

it is a single pack finishing coat based on acrylic resin and drying by evaporation of the solvents. It has excellent adhesion property, weathering resistance and gloss and color retention.

Food grade coatings are mostly used in food and drink processing plants, wholesale warehouses and retail food storage facilities, as the name would suggest. Food grade paints are not only used for specific types of food or drink – they can be used for all types and for a variety of reasons. Dekro Paints stock a wide array of FDA compliant coating systems for a multitude of food processing applications.









Standard Marine Colours

Consult the table below for a selection of our standard marine colours

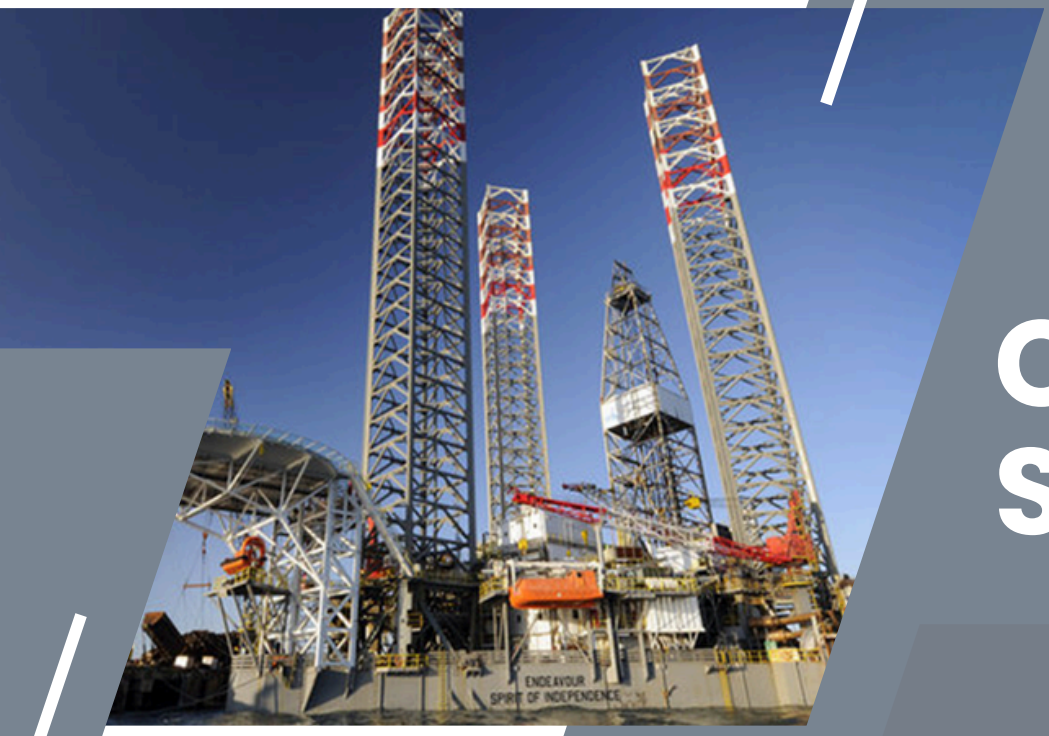
CS650 BLACK	CS516 GREY	CS615 GREY	CS614 GREY	CS611 GREY	CS651 WHITE	CS622 YELLOW	CS620 YELLOW	CS619 BUFF	CS618 LIGHT BUFF
CS656 BUFF	CS617 BUFF	CS625 SIGNAL RED	CS623 ORANGE	CS626 ORANGE	CS514 GREEN	CS519 GREEN	CS518 GREEN	CS517 GREEN	CS632 GREEN
CS630 GREEN	CS631 GREEN	CS680 BLUE GREEN	CS676 BLUE	CS643 BLUE	CS649 BLUE	CS640 BLUE	CS679 BLUE	CS511 RED BROWN	CS627 BROWN







ENDEAVOUR - SPIRIT OF INDEPENDENCE



CASE STUDY

OBJECTIVES

Sea-going vessels are considered as the principle assets operating in global transport/exploration logistics, and therefore marine paints became indispensable to protect hull's surface from severe fouling environment in the ocean. In this respect, Dekro Paints has developed relations with the Marine industry. Based on its technical expertise, know-how, and experience gained during its long history in the marine business, Dekro Paints has met performance requirements for paints in all marine areas, introducing many technologies, from anti-fouling paints for preventing fouling adherence to ship bottoms, to corrosion-resistant paints for protecting ballast tanks from corrosion, and protective paints for superstructures that enhance appearance.

The Endeavour, Spirit of Independence is an Independent Leg Cantilever, jackup rig used for offshore drilling. The rig is currently in Saldanha Bay undergoing extensive decorative repairs to the structure.

Redecoration of this structure commenced earlier this year and is expected to end in August/September later this year. We conduct daily site inspections on the preparation of surfaces and the application of products to ensure that the coatings are applied within specification parameters.

100%
SUCCESS RATE



Surface preparation is the most important part in the performance of any paint system. Prior to priming or painting it is essential to ensure that the substrate is sound, to remove any chalkiness, salt contamination and loose and flaking paint by means of hydroblasting to SA 2.5 Swedish Standard, or SIS SA 2.5.







Rust was removed by abrading the surface with awire wheel or cupped wire wheel whichis good for removing debris, scale & loose rust from metal to standard ST 2-3 (ISO 8501-1). .

Salt contamination beneath a coating, such as paint on steel, can cause adhesion and corrosion problems due to the hygroscopic nature of salt. Its tendency to attract water through a permeable coating creates a build-up of water molecules between substrate and coating. These, together with salt and other oxidation agents entrapped during coating or migrating later through the coating, create an electrolytic cell, causing corrosion. Blast cleaning is frequently used to clean surfaces before coating; however, with salt contamination, blast cleaning may increase the problem by forcing salt into the base material. Washing a surface with deionized water before coating is a common solution.

IMO PSPC (International Maritime Organization performance standard for protective coatings) regulations set a maximum allowable concentration of soluble salts on a surface to be coated, measured as sodium chloride, of 50 mg•m−2.. On this tested section a reading of 27 mg•m−2 was achieved.





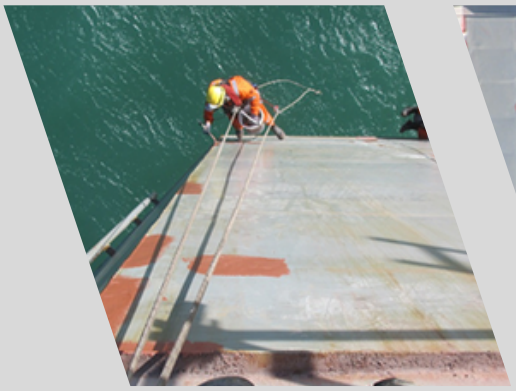


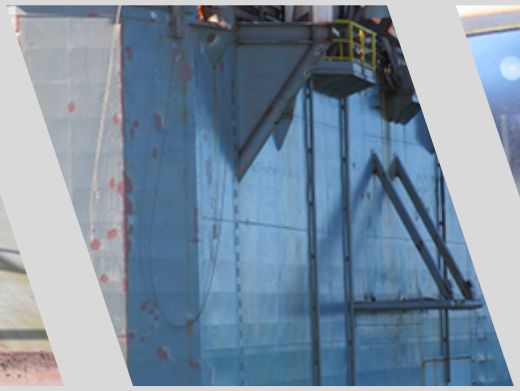
Daily dew points were taken using an Elcometer 319 Dewpoint Meter. It obtains accurate climatic parameters required to determine whether the conditions are suitable for painting. It measures relative humidity, air temperature, surface temperature and dewpoint temperatures. Steel temperatures must be a minimum of 3°C above dew point, measured in the vicinity of the substrates.





ACRI 700 PRIMER is an effective anti-rust primer based on acrylic resin and drying by evaporation of the solvents. It can be applied directly on to bare steel or existing paint film such as Acrylic, chlorinated rubber and epoxy. It has also good workability and it is possible to obtain thick coat especially by spray application. The specification for the verticals on this rig was to spot prime with ACRI 700 Primer and then overcoat with ACRI 700 Finish. The dry film thickness is between 40 - 80µ and the readings obtained were between 62.7 and 124µ.









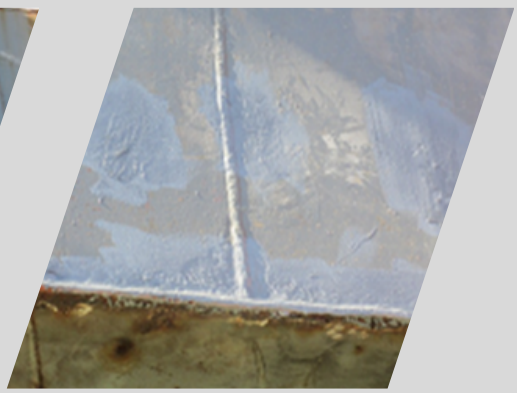
The metal fixings, railings and balustrades were coated with LZI Primer which is an alkyd resin based red iron oxide and selected rust-preventing pigments. It dries quickly effective rust-prevention and excellent resistance to impact and bending.
The top coat is Evamarine which is alkyd resin based paint with excellent adhesion property, weathering resistance and excellent colour retention.



Wet Film Thickness Gauges are designed to quickly and easily measure the thickness of coatings immediately after they have been applied to a substrate. These gauges are also commonly known as: Combs, MIL Gauges, Step Gauges and Notched Gauges. The gauges incorporate a series of notches cut into their sides much like the teeth on a comb. The wet film thickness of most organic coatings including paints, resins, lacquers, varnishes, gel coat, etc. may be measured. The thickness of powder type coatings may also be measured before curing.









The platform was primed with Umeguard SX which is a surface tolerant paint and a modified epoxy paint. It gives physical properties such as adhesion, toughness and abrasion resistance, etc. and chemical resistance to water, salt water and crude oil.
A wet film thickness of more than 200µ was achieved on this primary coat.









The platform and side shell was then coated with Acri700 finish which is a finishing coat based on acrylic resin and drying by evaporation of the solvents. It has excellent adhesion property, weathering resistance and gloss and colour retention. Acri700 is recommended for the finishing coat on ship's topside, superstructures. Acri700 is available in a variety of standard marine colours.



Surface preparation to the topside was done using a marine descaling machine and pneumatic needle descalers. The purpose of descaling the surface is to remove rust, scale, paint, adhesives and other deposits on the steel in preparation for re-coating.











The close up shots demonstrate the extent of the rust that can be found within the hidden recesses of a rig and why these areas cannot be dealt with by conventional cleaning or blasting methods. Rust is another name for ferrous oxide, which occurs when iron or an alloy that contains iron, like steel, is exposed to oxygen and moisture for a long period of time. Over time, the oxygen combines with the metal at an atomic level, forming a new compound called an oxide and weakening the bonds of the metal itself. Eradicating rust is essential to any recoating procedure.







To maximize efficiency during operation, it is important to protect these valuable offshore assets against corrosion and fouling and our objective is to provide technical staff to monitor and evaluate these projects.
We have made various kinds of products for vessels and marine structures and have grown along with other industries around the world. Thanks to our innovative technology and accumulated experiences, our anti-corrosive and topcoat as well as antifouling paints have been highly praised by our valuable customers. Offshore structures, one of our specific target, require long durable anti-corrosive performance, free from undesirable rusting and keep the structure well without any colour fading or discoloration.
For more information on our marine coatings forward your details to helpdesk@dekro.co.za

TWO BOYS - VESSEL



CASE STUDY

OBJECTIVES

Sea-going vessels are considered as the principle assets operating in global transport/exploration logistics, and therefore marine paints became indispensable to protect hull's surface from severe fouling environment in the ocean. In this respect, Dekro Paints has developed relations with the Marine industry. Based on its technical expertise, know-how, and experience gained during its long history in the marine business, Dekro Paints has met performance requirements for paints in all marine areas, introducing many technologies, from anti-fouling paints for preventing fouling adherence to ship bottoms, to corrosion-resistant paints for protecting ballast tanks from corrosion, and protective paints for superstructures that enhance appearance.

TWO BOYS is a Fishing vessel built in 1980 by KOBAYASHI SHIPBUILDING - OSAKIKAMIJIMA, JAPAN. Currently sailing under the flag of South Africa. Formerly also known as MATSUEI MARU. It's gross tonnage is 150 tons.

100%
SUCCESS RATE



Surface preparation is the most important part in the performance of any paint system. Prior to priming or painting it is essential to ensure that the substrate is sound, to remove any chalkiness, salt contamination and loose and flaking paint by means of hydroblasting to SA 2.5 Swedish Standard, or SIS SA 2.5.







Rust was removed by abrading the surface with awire wheel or cupped wire wheel whichis good for removing debris, scale & loose rust from metal to standard ST 2-3 (ISO 8501-1).

Salt contamination beneath a coating, such as paint on steel, can cause adhesion and corrosion problems due to the hygroscopic nature of salt. Its tendency to attract water through a permeable coating creates a build-up of water molecules between substrate and coating. These, together with salt and other oxidation agents entrapped during coating or migrating later through the coating, create an electrolytic cell, causing corrosion. Blast cleaning is frequently used to clean surfaces before coating; however, with salt contamination, blast cleaning may increase the problem by forcing salt into the base material. Washing a surface with deionized water before coating is a common solution.

Two Boys arrived at Eldock on 19/09/2012.They commenced with High Pressure Washing to remove contaminates.

IMO PSPC (International Maritime Organization performance standard for protective coatings) regulations set a maximum allowable concentration of soluble salts on a surface to be coated, measured as sodium chloride, of 50 mg•m−2.. Blast cleaning to Sa 2.0 was achieved







Applied 1st coat Umeguard SX to rust affected areas at 150µ WFT (Wet Film Thickness). Applied 2nd coat Bannoh 500 on previously primed areas at 150µ WFT (Wet Film Thickness). Applied Unymarine Black to topsides At WFT (Wet Film Thickness) of 70µ. Applied AF Seagrandpix 660HS Lt Brown to undercarriage At WFT (Wet Film Thickness) of 250µ. Applied final coat of AF Seagrandpix 660HS Lt brown to undercarriage At WFT (Wet Film Thickness) of 250µ









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