Superior Coatings

WATERFINE

Winners on protection against corrosion
Winners on protection of the environment
Winners on proven in-service performance

JOTUN

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SPEED

Apply a complete paint system in one day
Down time period is short
No washing/cleaning of surfaces between coats

PERFORMANCE

Excellent corrosion protection in all atmospheric environments according to ISO 12944
WaterFine systems are also tested and pre-qualified to NORSOK M-501 standard
A reflection of high standards of system performance

ECONOMY

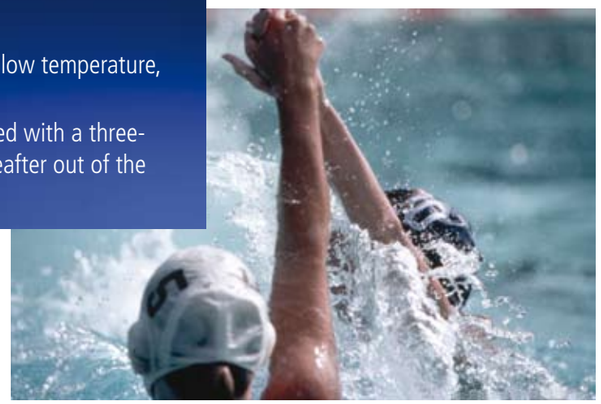
A WaterFine system will, even at low temperature, have a very short recoating time
Blast cleaned items can be applied with a three-coat system in one day and thereafter out of the workshop

What are water-borne coatings?

In simple terms, they are coatings where water is the solvent or thinner.

Dependent upon the choice of the binder, small amounts of a special solvent are added. These melt the particles of the binder together during drying.

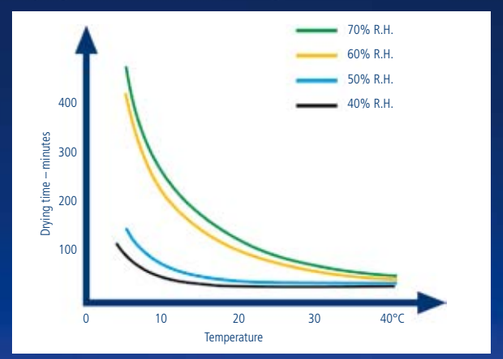
WaterFine coatings provide standards of corrosion protection that are equal to or better than high performance solvent-borne coatings. In addition they provide both cost and environmental benefits – factors, all of which have been proven in service for industry and the marine and offshore sectors.



TIME IS YOUR MONEY

- A standard solvent-borne three coat system will need three days to complete.
- With WaterFine recoating times are short, even at low temperatures.
- A three coat WaterFine system can be completed in just one day – the savings in time and costs are substantial.
- Man hours and the number of people required can be reduced.
- Production methods can be more efficient.
- Scaffolding, ventilation and other equipment costs are reduced and fewer coats are needed – all adding up to considerable savings.
- The project is safer, workers' health is at less risk and the working environment is improved.
- There is less waste, less solvent and, of course, less downtime.

Drying times WaterFine coatings



Typical indications of drying times of individual WaterFine products. Factors such as temperature, humidity and air movement can vary rapidly and cause deviations.

Better for Health

The solvent content is low – there is less exposure to solvents for operators, less exposure of solvents to the surroundings and they are isocyanate free.

Better for Safety

They are not flammable so there is no risk of explosion. This means other work, such as welding or burning, can be carried out at the same time as painting work.

Better for the Environment

VOCs – Volatile Organic Compounds emissions into the atmosphere are minimal – meeting the requirements of environmental legislation on VOCs coming into force worldwide.
WaterFine meets the demand for long-lasting corrosion resistant coatings that are less harmful to the environment.
They also minimise the amount of hazardous waste for disposal.

Better for the applicator too

Applicators appreciate the health and safety benefits of WaterFine – low solvents, isocyanate free and no risk of explosion. The binder in WaterFine epoxy products is a high molecular weight epoxy. In addition, they are fast to dry and equipment can be easily cleaned with fresh water after use.

On most substrates. On most generic paints

WaterFine coatings can be applied on steel, aluminium and other substrates and are compatible with most generic paint systems. They can be applied to moist surfaces (i.e. the substrates can be moist but the environment should allow water to evaporate and there should not be any condensation on the surface during application).

And virtually unlimited colour choice

A specific benefit with WaterFine Topcoat is its virtually unlimited colour choice. With Jotun's Multicolor Aqua tinting system WaterFine can match your specific colour requirements – exactly – ensuring what is well protected looks cosmetically just right too!

WATERFINE

A comprehensive range of Superior Coatings

WaterFine Acrylic Primer

An all-round one-component water-borne acrylic primer

Easy to use and suitable for application to a wide range of different substrates including steel, galvanised steel and aluminium.

Very good water resistance, dries quickly.

Excellent corrosion protection for corrosive environments (atmospheric conditions according to ISO 12944) when used in combination with WaterFine Topcoat.

VOC Value: 66 g/l (Actual)

WaterFine Primer

Two-component water-borne high molecular weight epoxy primer

Can be used on steel, galvanised steel, aluminium and thermally sprayed zinc constructions above the waterline.

It can be applied at high film thicknesses (up to 125 microns DFT per coat).

Fast drying and can be overcoated after 2 hours at 23°C. Compatible with most water-borne and solvent-borne coatings.

VOC Value: 60 g/l (Actual)

WaterFine Topcoat

Glossy, one-component water-borne acrylic topcoat

WaterFine Topcoat outshines other glossy finishes and just lasts and lasts. It combines the safe and easy to apply characteristics of water-borne technology with the tough corrosion protection and good abrasion resistance properties of a modified acrylic. Good weatherability, flexibility, water resistance and UV resistance.

Provides consistent colour stability, low dirt pick-up and maintains unprecedented non-yellowing performance. Excellent colour and gloss retention means less recoating, saving material and application costs.

Apply as a topcoat on a complete water-borne corrosion protection system as well as on several solvent-borne coatings.

No costly surface preparation when changing from an aged solvent-borne system.

Good adhesion and fully compatible when applied over sound alkyd, acrylic, vinyl, chlorinated rubber, epoxy or polyurethane systems.

VOC Value: 119 g/l (Actual)

The winning WaterFine range

Winners on protection against corrosion

Winners on protection of the environment

Winners on proven in-service performance

WaterFine Barrier

A water-borne organic zinc rich high molecular weight epoxy primer for long term corrosion protection

Suitable for use in aggressive environments providing very good resistance to water, solvents and very good abrasion resistance. Complies with SSPC 20:1982

VOC Value: 117 g/l (Actual)

WaterFine ZN Primer

A water-borne inorganic zinc silicate primer for long term corrosion protection

Suitable for use in aggressive environments providing very good resistance to water, solvents and very good abrasion resistance. Complies with SSPC 20:1982

VOC Value: 0 g/l (Actual)

Resist 5WF

Specially designed two-component water-borne inorganic zinc silicate primer

Can be applied up to 200 microns DFT in a single coat which is suitable for interior tanks and superstructures. For extreme environments with excellent corrosion protection even when applied as a one coat system.

VOC Value: 0 g/l (Actual)

Multicolor Aqua

Specially designed Multicolor tinting system for water borne topcoats in marine and industrial environments.

Multicolor Aqua is built on Jotuns experienced and well proven tinting technology, and specially designed to meet requirements for colour stability and appearance in marine and protective environments.

WaterFine systems

Recommended paint systems according to ISO 12944

Category	C2 M
Surface preparation for carbon steel: Blast cleaning to Sa 2½	
For aluminium and galvanised steel: Abrading, sand-sweeping or alkaline cleaner	
WaterFine Acrylic Primer	80 µm DFT
WaterFine Topcoat	40 µm DFT
Total	**120 µm DFT**

Category	C3 L
Surface preparation for carbon steel: Blast cleaning to Sa 2½	
For aluminium and galvanised steel: Abrading, sand-sweeping or alkaline cleaner	
WaterFine Primer	80 µm DFT
WaterFine Topcoat	40 µm DFT
Total	**120 µm DFT**

Category	C3 M
Surface preparation for carbon steel: Blast cleaning to Sa 2½	
WaterFine Barrier	80 µm DFT
WaterFine Topcoat	80 µm DFT
Total	**160 µm DFT**

Category	C3 H
Surface preparation for carbon steel: Blast cleaning to Sa 2½	
For aluminium and galvanised steel: Abrading, sand-sweeping or alkaline cleaner	
WaterFine Acrylic Primer	80 µm DFT
WaterFine Acrylic Primer	80 µm DFT
WaterFine Topcoat	40 µm DFT
Total	**200 µm DFT**

Category	C3 H
Surface preparation for carbon steel: Blast cleaning to Sa 2½	
WaterFine Barrier	50 µm DFT
WaterFine Primer	80 µm DFT
WaterFine Topcoat	50 µm DFT
Total	**180 µm DFT**

Category	C4 L
Surface preparation for carbon steel: Blast cleaning to Sa 2½	
For aluminium and galvanised steel: Abrading, sand-sweeping or alkaline cleaner	
WaterFine Acrylic Primer	80 µm DFT
WaterFine Acrylic Primer	80 µm DFT
WaterFine Topcoat	40 µm DFT
Total	**200 µm DFT**

Category	C4 M
Surface preparation for carbon steel: Blast cleaning to Sa 2½	
WaterFine Barrier	50 µm DFT
WaterFine Primer	120 µm DFT
WaterFine Topcoat	40 µm DFT
Total	**210 µm DFT**

Category	C4 M
Surface preparation for carbon steel: Blast cleaning to Sa 2½	
For aluminium and galvanised steel: Abrading, sand-sweeping or alkaline cleaner	
WaterFine Acrylic Primer	100 µm DFT
WaterFine Acrylic Primer	100 µm DFT
WaterFine Topcoat	40 µm DFT
Total	**240 µm DFT**

Category	C4 M
Surface preparation for carbon steel: Blast cleaning to Sa 2½	
WaterFine Barrier	50 µm DFT
WaterFine Primer	120 µm DFT
WaterFine Topcoat	80 µm DFT
Total	**250 µm DFT**

Category	C4 H
Surface preparation for carbon steel: Blast cleaning to Sa 2½	
WaterFine Zn Primer	40 µm DFT
WaterFine Special	80 µm DFT
WaterFine Special	80 µm DFT
WaterFine Topcoat	40 µm DFT
Total	**240 µm DFT**

Category	C4 H
Surface preparation for carbon steel: Blast cleaning to Sa 2½	
WaterFine Barrier	50 µm DFT
WaterFine Primer	120 µm DFT
WaterFine Topcoat	80 µm DFT
Total	**250 µm DFT**

Corrosivity category C5-I and C5-M ref. NORSOK pre-qualified systems.

Pre-qualified to NORSOK Standards – A statement of quality

The aim of the NORSOK Standards is to reduce the overall cost level for the offshore field development by standardising a number of disciplines. In the area of corrosion protection, it has led to a simplified pre-treatment and painting specification, agreed mutually by the oil companies operating in the Norwegian sector.

To verify the durability of the various painting systems, the NORSOK M-501 specification describes a set of pre-qualification tests, which are carried out by an independent test laboratory with very specific and strict acceptance criteria.

The requirement pre-qualification to NORSOK M-501 places great demands on the quality of the paint systems.

WaterFine products are tested in pure water-borne systems and in combination with solvent-borne products and have met the requirements for NORSOK M-501 Certification.

NORSOK PRE-QUALIFIED SYSTEMS

System WF01 Surface preparation: Blast cleaning to Sa 2½	
WaterFine Primer	100 µm DFT
WaterFine Primer	100 µm DFT
WaterFine Topcoat	50 µm DFT
Total	**250 µm DFT**

System WF02 Surface preparation: Blast cleaning to Sa $2^{1}/_{2}$	
WaterFine Primer	120 µm DFT
WaterFine Topcoat	80 µm DFT
Total	**200 µm DFT**

System WF03 Surface preparation: Blast cleaning to Sa 2½ or water jetting (UHPWJ)	
WaterFine Barrier	50 µm DFT
WaterFine Primer	120 µm DFT
WaterFine Topcoat	80 µm DFT
Total	**250 µm DFT**

System WF04 (hybrid system) Surface preparation: Blast cleaning to Sa 2½	
Resist 86	75 µm DFT
WaterFine Primer	75 µm DFT
WaterFine Topcoat	75 µm DFT
Total	**225 µm DFT**

System WF05 (hybrid system) Surface preparation: Blast cleaning to Sa 2½ or water jetting (UHPWJ)	
Barrier	50 µm DFT
WaterFine Primer	120 µm DFT
WaterFine Topcoat	80 µm DFT
Total	**250 µm DFT**

WATERFINE

Superior Coatings

Achieve better protection than high performance solvent-borne systems

A good standard of surface preparation, as with all coatings, is essential if protection of the structure is to be optimised.

Observing a few simple precautions will ensure that WaterFine provides protection equal or better than solvent-borne coatings plus important health and safety benefits – no solvent odour, safer and more user friendly with lower impact on health and the environment.

The basic nature of water-borne versus solvent-borne as the carrier imposes some limitations:

- WaterFine systems are not suitable for submerged areas.
- Care must be taken to store at temperatures above 0°C.
- Ensure good ventilation, temperature and humidity control.
- For the first 6 to 24 hours after application the coating remains partly water-soluble and should therefore be allowed to dry or fully cure before exposure.

The film formation process of water-borne epoxy coatings differs from that of solvent-borne epoxies. There are two additional steps in the film formation process of water-borne epoxies – the evaporation of water and the flowing together of the polymer particles to make the paint film (coalescence) before the solvents will evaporate and cross-linking takes place.

Control of temperature, relative humidity and ventilation during application are therefore more important than with solvent-borne epoxy.

Winning solutions for newbuildings or maintenance

WaterFine for tank protection in Oman

WaterFine for containers, Sweden

WaterFine for protection of communications towers, Thailand

WaterFine for protection of ships of any kind

WaterFine for tank protection in Thailand

WaterFine for protection of bridges, Denmark

WaterFine for offshore use in North Sea environments

WaterFine for protection of containers, Denmark

WaterFine protecting steel in the oil industry, Saudi Arabia

WaterFine for protection of steel structures in buildings, Denmark