



ZincShield



MARINE
Sustainable Performance

Description:

ZincShield is a single component, moisture curing, surface-tolerant, zinc primer. With enhanced coating strength and edge protection due to the micaceous iron oxide addition. Specially designed for low temperature application to steel

- High resistance to mud cracking
- Easy to apply, no re-coat restrictions
- Excellent durability
- Outstanding abrasion and chemical resistance
- Very high corrosion resistance and excellent adhesion

Recommended Uses:

As a high corrosion-resistant coating on minimally prepared substrates and by the excellent properties applicable as single layer system.

- As a primer in a coating system for bridges, tanks, chemical-, and marine structures
- Cargo holds and ship decks
- Ideal for priming water assisted abrasive blasted surfaces where flash rusting or blooming, limits the use of conventional zinc rich coatings
- Primer for poorly prepared surfaces, old paint, tightly adherent rust

Specifications:

Finish:	Matt finish
Theoretical Spread:	6,5m ² @150 µm
Specific gravity:	2,45 ± 0,05 g/cm ²
Colour:	Black, Oxide-Red, Grey, Light Grey
Solids (Wt.):	90%
Solids (vol.):	75%
VOC:	226 gr/litre
Shelf life:	24 months, unopened Store indoors at 5°C to 40°C
Recommended DFT:	80 µm, 150 µm DFT max.



ZincShield



MARINE
Sustainable Performance

Qualifications:

ZincShield applied in a coating system has passed the test requirements as mentioned in NEN-EN-ISO 12944-6 (2018) C5H.NEN-EN-ISO 20340(2009) C5M&IM2, Shell DEP 70.4811.30 code FC1-N/M, NORSOK 501 & IMO resolution MSC.215(82). In compliance with Federal Drugs Authority, USA, FDA Title 21, part 175.300, approved for exposure to dry foodstuffs (GRAIN), BVI Certificate CFP-17.153

Adhesion value (ISO 4624): > 10 Mpa (pull-off)
Shore D hardness (DIN 53 505): > 60
Cupping test (ISO 1520): 11,01 mm until break
Bending test (ISO 6860): < 1,5 mm
Taber Abrasion CS17 1000/1kg < 20 mg

Drying Schedule @100 microns wet film thickness:

at 50% RH	10 °C	25 °C	40 °C
To touch	2 hours	1 hour	18 Mins
Recoat after:			
Minimum	8 hours	4 hours	2,5 hours
Maximum	No restriction	No restriction	No restriction
Full cure	10 days	7 days	5 days

Preparation of steelwork

Good Practices:

The surface to be coated must be dry, clean, dull and free from dirt, grease, oil, rust, mill scale, salts or any other surface contaminants that interfere with adhesion.

Ensure welds, repair areas, joints, and surface defects exposed by surface preparation are properly cleaned and treated prior to coating application.

Areas of oxidation after surface preparation and prior to coating application, should be prepared to specified standard.

Consult the latest revision, SSPC-PA1 and your H2O Marine Representative for additional information or recommendations.



ZincShield



MARINE
Sustainable Performance

Preparation of steelwork

Surface contaminants:

Residues of oil, grease, marking inks, cutting oils etc. after fabrication operations will seriously affect the adhesion of applied coatings and must be removed. It is erroneous to think that subsequent cleaning operations will remove such contaminations and it is bad practice to permit them to remain on the surface. Failure to remove these contaminants before blast cleaning results in them being distributed over the steel surface and contaminating the abrasive.

Suitable organic solvents, emulsion degreasing agents or equivalents should be applied to remove contaminants in preparation for subsequent treatments. Further guidance can be obtained from SSPC SP-1

Iron & Steel (immersion service)

Remove all oil and grease from the surface by Solvent cleaning as per SSPS SP-1. Remove all weld spatter and round all sharp edges by grinding. Minimum surface preparation is Near White Metal Blast cleaning Sa2,5. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (50 to 85µm/rz). The blast cleaning operation produces large quantities of dust and debris which must be removed from the abraded surface. Or use waterjet cleaning according to NACE 5 / SSPC SP-12 WJ-2L, see SSPC- VIS4/NACE VIS7 for reference photographs. Waterjet cleaning does not provide the primary anchor pattern on the metallic surface known as "surface profile" and is therefore not applicable on new steel. Prime any bare steel the same day as it is cleaned or before flash rusting occurs.

Iron & Steel (atmospheric service)

Remove all oil and grease from the surface by Solvent cleaning as per SSPC SP-11. Remove all weld spatter and round all sharp edges by grinding. Minimum surface preparation is Hand/Power tool per SSPC SP-2 and SP2 or ISO St. 2 or St. 3. For better performance use Commercial Blast Cleaning Sa2 or SSPC SP6/NACE 3. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (50 to 85µm/rz). Or use waterjet cleaning according to SSPC SP-12 WJ-2L, see SSPC- VIS4/NACE VIS7 for reference photographs. Waterjet cleaning does not provide the primary anchor pattern on the metallic surface known as "surface profile" and is therefore not applicable on new steel.

Prime any bare steel the same day as it is cleaned or before flash rusting occurs.

Previously painted surfaces

In order to prepare a strategy for maintenance painting, it is important to undertake a survey to determine whether part or full re-painting is required, where coatings are found to be firmly adherent to the substrate with no indication of breakdown, they can be considered as a suitable base for the maintenance coats.

The surface condition of the existing paint should be thoroughly washed to remove contaminants, and it may then be necessary to abrade the surface lightly especially of hard and shiny coatings, to enable good adhesion.

Where the breakdown is localized, and the majority of the protective coating is intact and soundly adherent to the substrate, then the small areas of breakdown can be prepared back to the substrate for localized repainting. Ideally, the affected areas should be prepared to a standard as mentioned above, e.g. localized blast cleaning or by manual and mechanical methods where blasting is impractical. Feather the edges to insure proper adhesion of the repainted surface.

In maintenance painting operations after surface cleaning of the substrate, even by dry blast cleaning to Sa 2,5 standard, there may be contamination with salts produced by the corrosion process. Old steel structures that are pitted by corrosion are more likely to have salts of ferrous sulphate and iron chlorides retained within the pitted areas and their presence needs to be determined prior to painting. The maximum allowable contamination is 40 mg/m².

H2O Marine B.V.

Burg. Loefflein 70C, LB 29, 5211 RX, 's-Hertogenbosch - The Netherlands - +31 (0)85 060 2837 - www.h2o-marine.com - info@h2o-marine.com



ZincShield



MARINE
Sustainable Performance

Application Equipment:

The following is a guide. Changes in pressure and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Use a new set of spray hoses and keep them reserved for 2-k Epoxy coatings, if the equipment is not well cleaned and if there is a foreign reducer or cleaning thinner in the system the coating can react to a chewing gum or simply not dry out.

Reducer/Clean up

Spray : H2O Solvent
Brush and Roll: H2O Solvent

Airless Spray

Pump: Minimum 30:1 ratio
Pressure: 125-140 bar (1840-1960 psi) minimum
Hose: 1/4" ID
Tip: 0.15" – 0.21"
Filter: 60 Mesh (250 Mu)
Reduction: As needed up to 10% by volume

Brush

Material: Natural bristle
Reduction: as needed up to 10% by volume

Roller

Material: 1/4" natural or synthetic with solvent resistant core
Reduction: as needed up to 10% by volume

Application Conditions:

Temperature

Air and Surface: -7°C (19.4°F) minimum, 55°C (131°F) maximum.
Material: 7°C (44.6°F) minimum.
Do not apply over surface ice or water.
Relative humidity: 6% Minimum, 98% Maximum



ZincShield



MARINE
Sustainable Performance

Application Procedures:

Surface preparation must be completed as indicated.

Mix material thoroughly prior to use with (preferably) low speed agitator. Filter slowly through a 50 mesh (300µm) screen.

Stripe coat all crevices, welds, and sharp angles to prevent early failure in these areas. When using a spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. If necessary, cross spray at a right angle.

Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, over thinning, climatic conditions, and excessive film build. Excessive reduction of material can affect film build, appearance, and adhesion.

Dry film applications more than 2,5 times the recommended minimum should be avoided, at high humidity and temperature, cure is rapid, but the carbon dioxide released by the reaction of isocyanate with water can be trapped as bubbles, especially in thick films.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with reducer Uni-Solvent M or Uni-Solvent 100. Pour a small amount of Uni-Solvent M over the top of the paint in the can to prevent skinning or gelling. Place a temporary cover over the pail to keep excessive moisture, condensation, fog, or rain from contaminating the coating.

Uni-Speedcure is the accelerator for use, see technical data sheet for details. Do not use accelerated Uni-Coat 3000 Micazinc MC longer than 10 hours!

It is recommended that partially used cans not be sealed/closed for use at a later date, if you want to store these partially used cans for later put a small float of Uni-Solvent 100 on top of the paint before sealing/closing the cans.

Clean the tools immediately after use with H2O Solvent.

Drying times and curing times should be considered as a guide only.

Safety Precautions:

Danger!

Intended for professional use only. Obtain and Read Unica's Safety Data Sheet for this before using. **Container could be under pressure, take care opening the lit.**

Adequate Ventilation: Do not breathe dust, vapors or spray mist. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. Do not get in eyes, on skin or on clothing. Wash thoroughly after handling. Keep away from heat, sparks and flame. Vapor may cause flash fire.

Keep out of reach of children

First aid: If affected by inhalation of vapor or spray mist, remove to fresh air. If breathing difficulty persists or occurs later, consult a physician and have label information available. In case of eye contact, flush immediately with plenty of water for at least 15 minutes and get medical attention; for skin, wash thoroughly with soap and water. If swallowed, do not induce vomiting. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.

Keep container closed when not in use. If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

H2O Marine B.V.

Burg. Loefflein 70C, LB 29, 5211 RX, 's-Hertogenbosch - The Netherlands - +31 (0)85 060 2837 - www.h2o-marine.com - info@h2o-marine.com



ZincShield



MARINE
Sustainable Performance

Ordering Information:

Packaging: 5 and 10 Liter cans
Product code: 09966-xx
Weight : Mixed 2,45 ± 0,05 Kg/L

Warranty:

H2O Marine B.V. warrants her products to be free of manufacturing defects in accord with applicable H2O Marine quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by H2O Marine B.V. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY H2O Marine B.V., EXPRESSED OR IMPLIED STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Disclaimer:

The information and recommendations set forth in this Technical Data Sheet are based upon tests conducted by or on behalf on the H2O Marine Company, such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication.

Consult your H2O Marine representative to obtain the most recent Technical Data Information.

H2O Marine B.V.

Burg. Loeffplein 70C, LB 29, 5211 RX, 's-Hertogenbosch - The Netherlands - +31 (0)85 060 2837 - www.h2o-marine.com - info@h2o-marine.com