

RAFFAELLO NORSEMAN

TECHNICAL DATA SHEET

Product description

DIY USAGE

Tin-free, insoluble antifouling with copper oxide, a formulation producing a considerable improvement if compared to previous conventional antifouling paints. This product is recommended for working boats providing effective antifouling protection also in fresh and salt water.

It complies with the IMO (AFS/CONF/26) antifouling requirements and contains active substances according to the **BPR Regulation (Regulation (EU) No 528/2012)**.

Product information

Finish	Matt	
Colour	Black .708, Dark blue .512, Red .378 <i>The colour of the antifouling paint after diving may be slightly different. Small tinting differences may occur between different production batches: in case mix them before the application.</i>	
Solids (by volume)	ASTM D2369	50 ± 2 %
Specific gravity	UNI EN ISO 2811-1	1,30 ÷ 1,40 g/cm ³
Flash point	UNI EN ISO 13736	33,5 °C
Shelf life		2 years
VOC (calculated average content)	ISO 11890-2/2006	433 g/l
Packaging	0,75 – 2,5 Lt	

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TECHNICAL DATA SHEET

Application and use

SURFACE PREPARATION

Surfaces with old antifouling

Good condition: remove contaminants and any vegetation through high pressure wash with fresh water. Sanding with 120-180 grain paper. If the old antifouling is unknown or of a different nature apply a coat of an insulator like TICOPRENE AL.

Bad conditions: remove contaminants, possibly vegetation and non-adherent material through high pressure wash with fresh water. Sanding with 80-120 grain paper or with a slight sandblasting removing the existing antifouling and paying attention not to damage the underneath paint system. Apply coat of ADHERPOX or TICOPRENE AL primer onto the entire treated area before proceeding with the antifouling application.

New surfaces or brought to new

Fiberglass: Degrease the surface to be treated with solvent or with a suitable detergent. Wash with fresh water and remove any traces of oil and grease. All surfaces to be painted must be clean, dry and free of contaminants. Sandpaper with abrasive paper no. P180 - P220 and apply the primer onto the treated surface. Before proceeding with the application of the products, blow with clean and dry air to remove any residual sanding and dirt.

Steel: Wash with fresh water and remove any traces of oil and grease (in case washing with the specific solvent). All surfaces to be painted must be clean, dry and free of contaminants. Perform a sandblasting treatment of grade Sa 2½ or, after consultation with our technicians, mechanical cleaning degree St 3. Overcoat with the proper primer the treated metal before oxidizing principles are present. Before proceeding with the application of the products, blow with clean and dry air to remove any residual sanding and dirt.


Lead: Wash with fresh water and remove any traces of oil and grease (in case washing with the specific solvent). All surfaces to be painted must be clean, dry and free of contaminants. Waxing with large grain disks (mechanical cleaning) the surface layer of metal must be completely and uniformly renewed, removing any oxidation residue and coated with the primer provided on the same day of preparation. Be careful not to exceed the incision. Before proceeding with the application of the products, blow with clean and dry air to remove any residual sanding and dirt.

New wood: The moisture content of the support must not exceed 18%. All surfaces to be painted must be clean, dry and free of contaminants. Sandpaper with paper no. P80 - P120. Before proceeding with the application of the products, blow with clean and dry air to remove any residual sanding and dirt.





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TECHNICAL DATA SHEET


APPLICATION METHODS

Application method	 
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Professional use

Application method		Conventional Pressure 3,5 bar Nozzle 1,7 – 1,9 mm
		Airless Pressure 150 bar Nozzle 0.3 – 0.6 mm
	 	

APPLICATION DATA

Thinner/Cleaning tools		6470
Dry film thickness per coat	Standard application range	40 - 60 µm
	Recommended	40 µm
Wet film thickness per coat	Standard application range	80 - 120 µm
	Recommended	80 µm
Theoretical coverage at the recommended thickness	Application range at the recommended thickness	12,5 m ² /liter
N° coats	2 coats for a seasonal protection. Apply an extra coat in areas subjected to higher consumption/friction	

RAFFAELLO NORSEMAN

TECHNICAL DATA SHEET

Recommended primers	ADHERPOX suitable for all substrates TICOPRENE AL usable as primer on wood, iron, fiberglass or as insulator on old antifouling paints Adherglass on fiberglass
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Drying time

Temperature °C	10		15		20		30	
	Min	Max	Min	Max	Min	Max	Min	Max
Overcoating interval (50 µm)	18 h	N.L.	12 h	N.L.	6 h	N.L.	4 h	N.L.
Launching	24 h	1-6 months	18 h	1-3 months	12 h	1-3 months	8 h	1-2 months

N.B. The drying times and the overcoating intervals increase with higher thickness of the applied film.
Always check that the existing painting film is perfectly dry before applying a further product coat.

CONDITIONS DURING THE APPLICATION

To avoid the formation of condensation, the temperature of the surface should be at least 3 °C above dew point. During the application and curing the min. ambient temperature must not be lower than 10 °C or higher than 30 °C; substrate temperature must not be lower than 5 °C, since curing is remarkably reduced at lower temperatures.

Application is not advisable when relative humidity exceeds 80%. The term-hygrometric survey should be carried out near the surface to be coated. Make sure there is enough ventilation when the application takes place in closed areas.

Storage

It is recommended to avoid exposure to air and extreme temperatures. To maximize the shelf life in the can, it is good to check that the container is well closed during the storage and the temperature is between 10 °C and 35 °C. Avoid exposure to direct sunlight.

RAFFAELLO NORSEMAN

TECHNICAL DATA SHEET

Safety rules

Comply with the provisions set by the local health and safety at work regulations. Avoid contact with the skin, for example. Operate in well-ventilated places and, if in closed areas, use vacuum cleaners, fans and air conveyors. During the application use appropriate protections (masks, gloves, glasses, etc.). Before using, read sections 7-8 of the SDS.

INSTRUCTIONS FOR THE DISPOSAL OF THE BIOCIDAL AND PACKAGING PRODUCT

Empty packagings containing biocidal products: dispose of empty packagings according to the requirements of the waste disposal law, for example by conferring them in the recycling center. Packages containing the unused biocidal product: Dispose of the product not used in accordance with the law of disposal of such waste, for example by conferring it in a recycling center, recycling of packaging is prohibited in this case.

Do not empty into drains or watercourses.

INSTRUCTIONS FOR THE SAFE SECURITY OF THE BIOCIDAL AND PACKAGING PRODUCT.

Empty containers and containers still containing the biocidal product: Packaging must be disposed of as hazardous waste under the full responsibility of the holder of such waste. Do not empty into drains or watercourses.

Notes

The applied product must not come in contact with water, chemicals or subjected to mechanical stress before the curing is complete. The wet film thickness is referring to the undiluted product. In case of dilution, this value increases.

The above information is the result of accurate laboratory tests and practical experience, however, since the product is predominantly used outside the manufacturer's control, Boero Bartolomeo S.p.A. can only guarantee their quality. The information contained in this sheet may be subject to revision by the Company. For clarification, updates or further information, it is recommended to contact Boero Bartolomeo directly. The present datasheet annuls and replaces every other precedent to this one.

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TECHNICAL DATA SHEET

Recommendations

After the application of the last coat the maximum launching period of the antifouling is one month; with top quality copper oxide based products and with the agreement with our technical staff, the launching time may extend up to 3 months, providing that the hull is protected from moisture, rain or atmospheric agents with plastic or similar material.