

Helix Pro Propeller Protection System

New generation coating for antifouling protection on propellers

Product Description

HelixPro Propeller Protection System is the next generation of propeller fouling release coatings. It bonds directly to the metal surface; therefore it eliminates the use of primer coat and associated costs of multiple prefabrication coats (primers) application and time. The impermeable coating formed after the curing process offers superior corrosion protection for ferrous and non-ferrous metals. **HelixPro** offers a multi-seasonal service of 3 years as well as an environmentally safe life with prevention of marine growth, without the use of copper or tin compounds.

Recommended Use

The perfectly smooth surface of **HelixPro** is designed to provide protection on all underwater surface types made of bronze, aluminum, stainless steel and alloys: propellers (outboard – inboard, arneson type) rudders, propeller shafts, shafts brackets, trim tabs, bow-thrusters, stern-thrusters, swim platform brackets, swim ladders.

Technical Specifications

Type	▶	Modified Silicone Epoxy Polyamide
Color	▶	Clear
Components	▶	Base A & Hardener B
Thinner/Solvent	▶	NanoPhos Thinner A
Mixing ratio	▶	3.5 : 1, A: B per volume
VOC (Volatile Organic Compounds)	▶	<240 gr/L ¹
Solids (% vol.)	▶	75±3
Touch Dry Time	▶	6h @20°C (*)
Dry Through Time	▶	12h @20°C (*)
Min. Recoat Interval	▶	24h @20°C (*)
Induction Time	▶	15min @20°C (*)
Water Resistance	▶	Excellent
Abrasion Resistance	▶	Excellent
Flexibility	▶	<4mm in Mandrel
Weathering	▶	min. 3000h QUV-A

(*) Dry-to-recoat time is prolonged under low temperature and high humidity

NanoPhos S.A.

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Surface Preparation

The surface must be cleaned before application to ensure adequate adhesion. This cleaning would include getting rid of foreign materials like oil, grease, dirt, or loose rust.

To properly prepare new metal surfaces, use mineral spirits to remove grease and apply a rust-inhibitive primer before painting. For painted surfaces that are in sound condition, remove dust with a clean, dry cloth, de-gloss the surface with light sanding, and wipe with mineral spirits to ensure good adhesion. To remove persistent dirt, wash surfaces with a mild detergent solution or with a commercial product recommended for cleaning painted surfaces.

However, for the full effect of DTM and an aesthetically pleasing result, it is important to make sure that the substrate receiving the coating is prepped correctly.

Compatible Coats: All surfaces should be clean, dry and free from oil, grease and other foreign matters or contamination. Preparation according to ISO 8502-3:1992 Test for the assessment of surface cleanliness.

Application Instructions

Before application, test the atmospheric conditions in the vicinity of the substrate for the dew formation according to ISO 8502-4. Air temperature: 8 - 35 °C [46.4 - 95°F], Substrate temperature: 8 - 45 °C [46.4 - 113°F], Relative Humidity (RH): < 75%.

Material should be kept in room temperature (20°C/68°F) for at least 24 hours prior to application.

Mixing

Mix the entire contents of the base with the hardener. If you're using a separate mixing bucket, mix carefully ensuring that all contents of the base and hardener containers are poured. Mix using an electric mixer on low speed for about two minutes or until the two ingredients are completely mixed.

Apply the coating when the substrate temperature is at least 3 °C [5 °F] above the dew point with conventional spray, airless spray or brush.

These products are moisture sensitive, and they should not be opened until just before they are needed.

Application: The application of **HelixPro** can be done by conventional sprays, vacuum sprayers, as well as by roller or brush. The above are indicative methods of application and it is at the discretion of each person as to which method to apply. The substrate temperature must be at least 5°C and at least 3°C above the dew point of the air. Good ventilation is required to ensure proper drying.

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Conventional Spraying ▶	Paint pressure pot with power agitator, double air regulators, moisture trap, 1/2" ID fluid hose, 5/16" ID air hose, DeVilbiss 510 gun, "E" tip and needle, 74 or 78 air cap.
Airless Spray ▶	Minimum pump: 30:1, Nozzle: 19-23
Brush ▶	Recommended application method only for stripe coating or small narrow areas.

This product is intended for professional use only. Applicators and operators must be trained, experienced and have the ability and equipment to mix / mix and apply coatings correctly and in accordance with NanoPhos technical documentation. Applicators and operators must use appropriate personal protective equipment when using this product. This guideline is given based on current knowledge of the product. To be used in well-ventilated conditions.

Coverage

FILM THICKNESS PER COAT

	Minimum	Maximum	Recommended
Dry Film Thickness (µm):	60	100	80
Wet Film Thickness (µm):	80	135	106
Spreading Rate (m ² /L):	12.5	7.4	9.43

Substrate temperature should be minimum 5°C and at least 3°C above air dew point. Good ventilation is required to ensure proper drying.

Additional Information

Paint System

Please contact NanoPhos Marine for more information.

Storage

Store in the original closed packaging, in a well-ventilated area, at a temperature of 5°C to 35°C, away from sunlight and frost.

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Health and Safety

Read the product label before use. The Safety Data Sheet is available on www.NanoPhos.com or on request by contacting NanoPhos by email: info@NanoPhos.com or by phone: 2292069312.

Available Packages

- 5L Unit (Total 5L in two metal containers, 3.5 : 1 | A: B per volume)
- 20L Unit (Total 20L in two metal containers, 3.5: 1 | A: B per volume)

- **Notes & Precautions:** Adverse weather conditions during or after the product application may affect the properties of the coating. Storage of closed containers, in controlled dry and enclosed space, away from sources of ignition and temperatures from 5oC to 35oC, for up to 18 months. The Technical Data should be read in conjunction with the Safety Data Sheets. The current edition of this technical data sheet automatically cancels any previous one concerning the same product. For more information, please contact NanoPhos: info@NanoPhos.com
- The technical data sheets and the recommendations for using NanoPhos products are based on our scientific knowledge, laboratory studies, and long-term experience. Therefore, the information provided must be considered indicative and subject to constant review in relation to the circumstances and each practical application. Furthermore, the product's suitability should be examined in each case for each specific use. The end-user bears complete & exclusive responsibility for any side effects that may arise from the incorrect use of the product.

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