



“Ultima Silicone PH-SIF”

Product Information

Ultima Silicone PH-SIF is an advanced fluoropolymer fouling-release coating for the control of slime. A two-component product that combines the benefits of advanced silicone hydrogel with a potent fouling-preventing biocide, enhancing the antifouling layer and extending the duration of fouling protection. Ultima Silicone PH-SIF is ideal for vessels operating in slow steaming conditions and tropical waters, offering excellent flexibility in various operational settings. It performs well across a range of activity levels, from high to low. It provides a very smooth surface with minimal friction, optimizing fuel efficiency during operations. It offers significant fuel savings and delivers immediate performance upon water contact **contributes to minimizing the environmental footprint**. The product is easy to overcoat and can be applied in warm climates, with a temperature application range down to 0°C (32°F).

Ultima Silicone displays very good compatibility with various well-known producers.

Recommended Purpose

Ultima Silicone PH-SIF is suitable for any type of vessel, regardless of operating speed, including slow or ultra-slow steaming vessels and FPSOs. It is also well-suited for use on propellers. It can accommodate vessels with extended service intervals, up to 90 months as a part of a complete coating system, and is effective during prolonged idle periods of up to 60 days. Additionally, it is an excellent choice for superyachts, even those that remain idle for extended periods (up to 60 days), offering a prolonged service interval of up to 90 months.

Physical Properties

Colors: Red Brown, Dark Blue, Black

Sheen: Glossy

Volume Solids (%): 70 ± 2 test / standard ISO 3233:1998

Theoretical Coverage: 4.70 m²/Lit at 150 microns dry

Typical Film Thickness: Range: 150 - 200 microns dry (208 - 278 microns wet)

may be specified depending upon end use

Flash Point: 35 ± 2 °C test /standard ISO 3269 method I

REGULATORY DATA: VOC

247 g/lit as supplied (EPA Method 24)

251 g/kg of liquid paint as supplied. EU Solvent

Emissions Directive (Council Directive 1999/13/EC)

265 g/lit Chinese National Standard GB23985

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Product Data Sheet

Note: VOC values are typical and are provided for guidance purposes only. These may be subject to variation depending on factors such as differences in color and normal manufacturing tolerances.

This product does not contain organotin compounds acting as biocides and as such is in compliance with the International Convention on the Control of Harmful Anti-fouling Systems on ships as adopted by IMO in October 2001 (IMO document AFS/CONF/26).

Application Data

Mixing Ratio: Basis 16 part/weight, Curing Agent 2 part/weight.

Readiness Time: 20 minutes in an ample temperature.

Thinner: Not recommended. The material is ready for use, under special conditions use Thinner PH 300, max 5% by volume. Consult Philadelphia Coatings LLC Technical Department about thinning.

Application requirements: To prevent condensation, ensure the surface is clean, dry, and at least 3°C [5°F] warmer than the dew point. For effective mixing, pumping, and spraying, the ideal paint temperature is 20°C [68°F]. During application, the product temperature should be maintained above 15°C [59°F].

Relative Humidity: During the curing process, the relative humidity should be between 40% and 85%. During the application process, the relative humidity should also be maintained between 40% and 85%.

Application notes: To prevent contamination of adjacent areas, it is advisable to use masking to avoid causing fish eye. For guidance on applying silicone systems, please contact our Technical Department.

Painting Method: Airless spraying is our recommendation. Tip range 0.36mm-0.51mm, blowing pressure should not less than 211kg/cm² (3000psi).

Application by brush is recommended for touch up areas only. Multiple coats may be required to achieve specified film thickness.

Application by roller is recommended for small areas only. Multiple coats may be required to achieve specified film thickness.

Actual safety measures and precautions are very important from the selected method and environment work.

Emergency Contact Numbers are available World Wide upon any request.

Power tool cleaning and Cleaners with Thinner PH 300.



Product Data Sheet

Drying and over coating Conditions

Temperature of basis material	5°C	15°C	25°C	35°C
Touch Dry [ISO 9117/3:2010]	5hrs	3hrs	2hrs	60mins
Hard Dry [ISO 9117-1:2009]	15hrs	6hrs	4hrs	2hrs
Pot life	2hrs	90mins	1hr	30mins
Dry to launch (Min) / Refloating time	48 hrs	36hrs	20hrs	17hrs
Repainting interval (Max)	The exposure time at the atmosphere environment should be max 14 days. All information given is for guidance only. The actual time should be subject to the climate and environment conditions.			

Note:

The interval prior to flooding may be reduced to 24 hours at temperatures between 5°C and 20°C provided that the ship remains at rest for a minimum period of 2-3 days after flooding. At temperatures between 0°C and 5°C, the absolute minimum time to flooding is 48 hours and the ship must remain at rest for a minimum of 4 days after undocking. However, the coating may suffer coating detachment in any areas that are subject to mechanical abrasion due to, e.g. fendering or impact damage.

Coating Specification

Ultima Silicone should always be applied to a recommended coating system. The surface should be dry and free from contamination of any existing layers of PhilaDur, Phila VIN/CL, tie coat/sealers or various A/Fs, to secure good adhesion and good performance. Specific recommendations and statements should be agreed and approved by Philadelphia Coatings LLC Technical Department in writing to do so, as there is a limit of liability only for the supplied quantity and value of the antifouling.

Surface Preparation

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion (SSPC-SP1).



Product Data Sheet

Minimum recommended surface preparation:

Substrate	Minimum	Recommended
Carbon steel	St 2 (ISO 8501-1)	ISO standard 8501-1 (2007) - Sa 2 ½ 8501-4WJ-2
Stainless steel	The surface shall be hand or machine abraded with non-metallic abrasives or bonded fibre machine or hand abrasive pads to impart a scratch pattern to the surface and to remove all polish from the surface.	Abrasive blast cleaning to achieve a surface profile using non-metallic abrasive media which is suitable to achieve a sharp and angular surface profile.
Galvanised steel	The surface shall be clean, dry and appear with a rough and dull profile.	Light brush blasting using nonmetallic abrasive leaving a clean, rough and even pattern.
Coated surfaces	Clean, dry and undamaged compatible coating (ISO 12944-4 6.1.4)	Clean, dry and undamaged compatible coating (ISO 12944-4 6.1.4)
Concrete	Low pressure water washing to a rough, clean, dry and laitance free surface.	Minimum 4 weeks curing. Moisture content maximum 5 %. Prepare the surface by means of enclosed blast shot or diamond grinding and other appropriate means to abrade the surrounding concrete and to remove laitance.

Optimum performance, including adhesion, corrosion protection, heat resistance and chemical resistance is achieved with recommended surface preparation. For other surface treatments, please consult with Philadelphia Coatings LLC.

Storage

Self-life at least 24 months for the base and at least 12 months for the curing agents, when stored cool and dry, shaded and ventilated condition. The container/paint, must be kept sealed and away from heat and ignition.

In some markets commercial shelf life can be dictated shorter by local legislation. The above is minimum shelf life, thereafter the paint quality is subject to re-inspection.

Color Variation

When applicable, products primarily intended for use as primers or antifoulings may have slight color variations from batch to batch. Such products may fade and chalk when exposed to sunlight and weathering. Color and gloss retention on topcoats/finish coats may vary depending on type of color, exposure environment such as temperature, UV intensity etc., and application quality. For further information, please consult with Philadelphia Coatings LLC.

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Pack Size

Standard packing of Base 16 Lit pail and curing agent 2 Lit pail. If other packing specifications are needed, please consult with Philadelphia Coatings LLC.

Health and Safety

Prior to use, obtain, consult and follow the Material Safety Data Sheet for this product concerning health and safety information. Read carefully and conform to precautions on MSDS and packing vessels. To avoid eye and skin contact, such tools as gloves, goggles and face mask etc. should be used for works (proper safety measures should be taken according to construction methods and circumstances). All works with the product must be carried out according to all relative national health, safety and environment standards and codes. This product is for professional use only.

Limitation of liability

All information is given for guidance only and is subject to regional variation depending upon local climate and environmental condition. An excessive film thickness delays the final curing and creates sagging. Over coating interval will increase with the increment of the number of paint layer and the thickness of the paint film. For recommended paints at special circumstances, please consult with our Philadelphia Coatings LLC. Apply in good weather. The relative humidity must not exceed 80% temperature of the surface to be coated must be at least 3°C above the dew point. All data from the tests are obtained at the special lab circumstance, so Philadelphia Coatings LLC, won't bear any liabilities from the condition whether the data could reflect the objective status at the actual application circumstance or not.

Disclaimer

The information in the product manual is based on our experiences from the tests and practices. For the application without our knowledge, we could only make sure that our products themselves are warranted. It is allowed to modify the data in this product manual according to our continuous development and experience accumulation without advance notice.