Hempel's AntiFouling Oceanic Flex+

Product characteristics

Description
Hempel's Antifouling Oceanic Flex+ 7390W is a high solid, SPC antifouling based on zinc carboxylate and acrylic binders. The product offers a strong predictable antifouling protection through a very stable self-polishing mechanism, which is based on chemical hydrolysis and an efficient biocide package. The use of improved microfiber technology at higher concentrations enables the fibers to fit parallel to the coating surface leading to a controlled polishing throughout the service life, while on the same time offers superior mechanical strength.

Recommended use
Hempel's Antifouling Oceanic Flex+ 7390W can be used for maintenance of underwater hull. For drydocking intervals up to 60 months.

Certificates / Approvals
- This product does not contain cybutryne or organotin compounds acting as biocides and complies with the International Convention on the Control of Harmful Antifouling Systems on Ships adopted by IMO October 2001 (IMO Document AFS/CONF/26 and its subsequent amendments)

Features
- Efficient biocide package.
- Low activity level.
- Easy overcoating.
- Smart fiber technology for superior mechanical properties and optimized leached layer formation.
- Application in warm environment.
- Can be applied below 0°C [32°F].
- Performance guarantee.

Product safety

Flash point 22°C [72°F]

VOC content

Legislation	Value
EU	346 g/L [2.89 lb/US gal]
US (coatings)	346 g/L [2.89 lb/US gal]
US (regulatory)	346 g/L [2.89 lb/US gal]
China	346 g/L [2.89 lb/US gal]

According to specific legislation, see details in the Explanatory Notes available at Hempel website, hempel.com or at your local Hempel website.

Handling
Handle with care. Before and during use, observe safety labels on packaging and paint containers and follow all local and national safety regulations. Always consult Hempel's Safety Data Sheet for this product along with the Product Data Sheet.

For professional use only.

Product data

Product code
7390W

Standard shade* / code
Brownish red 51110 **

Gloss
Flat

Volume solids
64 ± 2%

Specific gravity
1.7 kg/L [14 lb/US gal]

Reference dry film thickness
100 micron [4.0 mils]

* Other shades are available, please contact your local Hempel representative.
** Slight discolouration may occur. This does not affect the performance of the coating.

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Surface preparation

New build:
- According to Hempel's Specification.

Maintenance and Repair
- Remove salts, detergents, contaminants and marine growth by high pressure fresh water cleaning.
- Sealer: Whether to use a sealer coat/tiecoat or not depends on the type and condition of the existing antifouling.

Consult Hempel's separate Surface Preparation Guidelines for more details.

Application

Mixing ratio
This product contains heavy particles. Stir well before use. Consult Hempel regarding thinning.

Thinner
Hempel's Thinner 08080

Cleaner
Hempel's Thinner 08080

Application method

Tool	Application parameters
Airless spray	Nozzle pressure: 270 bar [3900 psi] Nozzle orifice: 0.027-0.031"

Filter: surge tank filter and tip filter should be removed. Never thin more than allowed according to local environmental legislation. Spray data are indicative and subject to adjustment. Pressure is for a material temperature of 20°C [68°F].

Film thickness

Specification range	Low	High	Recommended
Dry film thickness	80 micron [3.2 mils]	175 micron [7.0 mils]	100 micron [4.0 mils]
Wet film thickness	125 micron [5.0 mils]	273 micron [11 mils]	156 micron [6.3 mils]
Theoretical spreading rate	8 m²/L [326 sq ft/US gal]	3.7 m²/L [151 sq ft/US gal]	6.4 m²/L [261 sq ft/US gal]

Product may be specified in another film thickness than indicated depending on purpose and area of use. This will alter spreading rate, drying and curing time and overcoating interval. The designed performance of the antifouling can only be achieved when applied in the specified film thicknesses.

Application conditions
- To avoid condensation, apply on a clean and dry surface with a temperature that is at least 3°C [5°F] above the dew point.

Relative Humidity:
- Relative humidity must be below 85% during drying and curing.

Application remarks
- Copper containing antifouling must not have any electrical contact with aluminium hull and other aluminium components.

Drying and overcoating

Product compatibility
- Previous coat: According to Hempel's Specification. Recommended products are: Hempadur 45812, Hempadur 47182, Hempadur Tiecoat 49183.
- Subsequent coat: None or according to Hempel's specification.

Drying time

Surface temperature		10°C [50°F]	20°C [68°F]
Hard dry	min	120	60

Determined for dry film thickness 100 micron [4.0 mils] at standard conditions, see Hempel's Explanatory Notes for details.

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Overcoating

Hempel's specification supersedes any guidelines indicated in the overcoating table

Quality name		0°C [32°F]	10°C [50°F]	20°C [68°F]	30°C [86°F]
		Immersion			
Hempel's AntiFouling Oceanic Flex+	Min	31 h	16 h	7½ h	5½ h
	Max	No max	No max	No max	No max

Overcoating times are indicative for products of the same generic chemistry. Consult Hempel's specification for more information.

Drying conditions

- To obtain the drying time stated, it is important to maintain sufficient ventilation during application, drying and curing.

Overcoating details

- The surface must be dry and clean prior to application.
- Consult Hempel for specific details

Other remarks

- Consult Hempel for information on the minimum undocking time.

Storage

Shelf life

Ambient temperature	25°C [77°F]
Product	36 months

Shelf life from date of production, when stored in original, unopened containers. Thereafter, the product quality must be re-inspected. Storage at elevated temperatures may reduce shelf life. For advice, please consult Hempel.

Storage conditions

- The product must be stored in accordance with Safety Data Sheet, label and local regulations. Keep the containers in a dry, shaded, cool, well-ventilated space and away from sources of heat and ignition. Containers must be kept tightly closed. Handle with care.

Carbon Footprint

Dry film thickness	1 µm	1 mil
GWP (Global Warming Potential)	12.6 g CO_2e/m^2	0.065 lb CO_2e/ft^2

The carbon footprint is for 1 square meter / square foot of surface area with a dry film thickness of 1 micron / mil.

The scope includes raw materials, in-bound transport to the Hempel factory, Hempel manufacturing processes, and any Volatile Organic Compounds emitted during and after the application of the product.

It is calculated based on the standard shade defined in this PDS. Values may vary with shade.

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Additional documents

Additional information is available at the Hempel website https://www.hempel.com/service-and-support/technical-guidelines or at your local Hempel website:

- Explanatory Notes for Product Data Sheet.
- Application methods.
- General Application Guidelines

This Product Data Sheet ("**PDS**") relates to the supplied product ("**Product**") and is subject to updating from time-to-time. Accordingly, the buyer/applicator should have regard to the PDS supplied together with the relevant batch of the Product (and not an earlier version). In addition to the PDS, the buyer/applicator may receive some or all of the following specifications, statements and/or guidelines as listed below or as are available from the Hempel website under 'Products' at www.hempel.com (the "**Additional documents**"):

No.	Document description	Location/comments
1.	Technical Statement	One-off specific advice provided on request for specific projects
2.	Specification	Only issued for specific projects
3.	PDS	This document
4.	Explanatory Notes to the PDS	Available at www.hempel.com and contain relevant information about the Product testing parameters
5.	Application Instruction	Where available, at www.hempel.com
6.	Generic technical guidelines (e.g. on application and surface preparation)	Where available, at www.hempel.com

In the event of a conflict of information between the PDS and the Additional documents, the order of priority of information shall be in the order as set out above. In such event you should also contact your representative at Hempel for clarification. Furthermore, the buyer/applicator must have full regard to the relevant Safety Data Sheet provided with each Product and which can also be downloaded from www.hempel.com.

Hempel shall not be liable for defects where the application of the Product has not been made fully in accordance with the recommendations and requirements set out in the relevant PDS and the Additional Documents. The information and terms of this disclaimer apply to this PDS, the Additional documents and any other documents supplied by Hempel in respect of the Product. In addition, the Product is supplied and all technical assistance is given subject to Hempel's General Conditions of Sale, Delivery and Service, unless otherwise expressly agreed in writing.