Hempel's Silic One 77450

Product characteristics

Description
Hempel's Silic One is a biocide free, high solid, fouling release coating. Based on silicone, a hydro gel micro layer provides a smooth, low friction surface which prevents organisms attaching to the hull and propellers. Service life of Silic One on the hull is 2 years.

Recommended use
For use as a fouling release system for boats of glass fibre, steel, aluminium and plywood. For use below the waterline.

Service temperature:
- Minimum, recommended by Hempel for dry exposure: -50°C [-58°F].

Features
- Seasonal maintenance:
- Option 1 – Silic One recoat: every 2 years for maximum, long-lasting protection
- Option 2 – Infinity recharge: Apply Hempel's Infinity for a quick recharge of your Silic One system – no sanding, no masking, no painting. One easy coat gives you another full season of performance.

Product safety

Flash point 47°C [117°F]

VOC content

Legislation	Value
EU	117 g/L [0.98 lb/US gal]

VOC values may vary with shade, please consult the Safety Data Sheet, section 9.

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.

Product data

Product code: 77450

Standard shade* / code: Jet black / Black 19990

Gloss: Glossy

Volume solids: 78 ± 2%

Specific gravity: 1 kg/L [9 lb/US gal]

Reference dry film thickness: 80 micron [3.2 mils]

Surface preparation

Cleanliness
- Remove oil, grease and other contaminants by suitable detergent cleaning.

New build:
- Not for uncoated surfaces.
- Only apply Hempel's Silic One over Hempel's Silic One Tiecoat.

Maintenance and Repair
- Damaged Silicone surface: If there is minor damage to the topcoating and if the yellow tiecoat is visible: Apply one coat of Silic One onto a slightly larger area than the damaged surface. Apply one coat of Silic One to entire underwater surface when repainting.

Application

Thinner
No thinning

Cleaner
Hempel's Thinner 808 08081

Pot life

Product temperature	20°C [68°F]
Pot life	60 min

* There might be a slight difference in colour from batch to batch. Mix before painting.

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Application method

Tool	Thinning max vol.	Application parameters
Brush/Roller	No thinning	-

Thinning is not allowed.

Film thickness

	Recommended
Dry film thickness	80 micron [3.2 mils]
Wet film thickness	102 micron [4.1 mils]
Theoretical spreading rate	10 m²/L [407 sq ft/US gal]

Application conditions
- Surface temperature must be above 10°C [50°F] during application and curing.

Relative Humidity:
- Relative humidity must be in the range 30-85% during curing.
- Relative humidity must be in the range 30-85% during application.

Application remarks
- Stir well before use.
- First time application: Apply two coats of the product.
- Product application onto Hempel's Silic One Tiecoat should be applied within a max. 48 hours / min. 8 hours at 20°C (min. 16 hours at 10°C).
- Pour paint into paint tray and replace lid. Fully load roller/brush with paint and apply with soft easy strokes to ensure complete coverage. Paint runs can be evened out before the paint dries.
- General maintenance: Clean with a dense sponge or high pressure fresh water (max 200 bar).
- Seasonal maintenance: Clean the surface with a soft sponge with soap, rinse the surface with fresh water and let the surface dry. Apply one coat of Silic One to entire underwater surface.

Drying and overcoating

Product compatibility
- Previous coat: Recommended product is: Hempel's Silic One Tiecoat

Drying time

Surface temperature		10°C [50°F]	20°C [68°F]	30°C [86°F]
Hard dry	hours	4	2	1
Fully cured	days	5	3	2

Determined for dry film thickness 80 micron [3.2 mils] at standard conditions, see Hempel's Explanatory Notes for details. Time to immersion: Minimum: 24 Hours 20°C ; Maximum 1 month

Overcoating

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

Quality name		10°C [50°F]	20°C [68°F]	30°C [86°F]
		Immersion		
Hempel's Silic One 77450	Min	16 h	16 h	16 h
	Max	No max	No max	No max

Drying conditions
- To obtain the drying time stated, it is important to maintain sufficient ventilation during application, drying and curing.
- Condensation on the freshly applied coating should be avoided.

Overcoating details
- If the overcoating interval is exceeded between the tiecoat and the topcoat, then a new coat of tiecoat must be applied.

Other remarks
- The surface must be clean before overcoating.

Storage

Shelf life

Ambient temperature	25°C [77°F]
Product	18 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. The shelf life printed on product labels is based on regional climate conditions. For advice, please consult Hempel.

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Storage conditions

- Product must be stored according to local legislation, at minimum 5°C [41°F], without direct sunlight and protected from rain and snow.
- 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)	10.5 g CO_2e/m^2	0.055 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.

Additional documents

Additional information is available at the Knowledge Center: https://www.hempel.com/knowledge-center . The documents below can be found in the Technical Guidelines section: https://www.hempel.com/knowledge-center/technical-guidelines or at the Hempel website.

- Explanatory Notes for Product Data Sheet.
- Application methods.
- Further information: Hempel Yacht Paint Manual and hempelyacht.com

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.