Hempel's Hard Racing 7668E

Product characteristics

Description
Hempel's Hard Racing is a high performance, hard antifouling providing excellent fouling protection all season.

Recommended use
For use as an antifouling for boats of glass fibre, wood, plywood and steel. Do not use on aluminium or other light-alloy metals. Risk of corrosion in case of direct contact. For power boats and regatta yachts.

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

Features
- High mechanical strength for excellent crack resistance.
- Suitable for dry sailing or mud berthed.

Product safety

Flash point 31°C [88°F]

VOC content

Legislation	Value
EU	433 g/L [3.61 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: 7668E

Standard shade* / code: Jet black / Black 19990

Gloss: Semi-flat

Volume solids: 50 ± 2%

Specific gravity: 1.6 kg/L [14 lb/US gal]

Reference dry film thickness: 40 micron [1.6 mils]

Surface preparation

Cleanliness
- Remove salts, detergents, contaminants and marine growth by high pressure fresh water cleaning.

New build:
- Uncoated surface: Prime prepared surface with Hempel's Light Primer and apply a tiecoat of Hempel's Underwater Primer whilst the surface is still tacky.

Maintenance and Repair
- Existing old self-polishing or traditional antifouling: Remove loose matter and contaminants by high pressure fresh water cleaning.
- Existing old hard matrix antifouling or an unknown antifouling: High pressure fresh water clean, wet abrade, remove dust.
- Clean and dry the surface.
- If condition of previous antifouling is poor, seal with 1 coat of Hempel's Underwater Primer.
- If previous antifouling is in general bad condition, it is recommended to remove previous coats and prime before applying antifouling.

Application

Thinner
Hempel's Thinner 08080

Cleaner
Hempel's Thinner 08080
Hempel's Thinner 808 08081

* 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.
Brush/Roller	5%
Paint pad	5%

Keep thinning at an absolute minimum.

Film thickness

	Recommended
Dry film thickness	40 micron [1.6 mils]
Wet film thickness	80 micron [3.2 mils]
Theoretical spreading rate	13 m²/L [530 sq ft/US gal]

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 application.

Application remarks
- Copper containing antifouling must not have any electrical contact with aluminium hull and other aluminium components.
- Apply 2 coats of the Antifouling paint at 40 µm dry film thickness each. Apply an additional coat around the waterline and high wear areas. Wear protective gloves/clothing and eye/face protection.
- Stir well before use.

Drying and overcoating

Product compatibility
- Previous coat: Recommended products are: Hempel's Light Primer, Hempel's Underwater Primer
- Subsequent coat: None.

Drying time

Surface temperature		10°C [50°F]	20°C [68°F]	30°C [86°F]
Touch dry	min	30	15	9
Surface dry	hours	8	4	2

Determined for dry film thickness 40 micron [1.6 mils] at standard conditions, see Hempel's Explanatory Notes for details. Time to immersion: Minimum: 24 Hours 20°C ; Maximum 6 months

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 Hard Racing 7668E	Min	8 h	4 h	3 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
- No maximum overcoat interval, but after prolonged exposure to polluted atmosphere, remove accumulated contamination by high pressure fresh water cleaning and allow to dry before applying next coat.

Other remarks
- The surface must be clean before overcoating.

Storage

Shelf life

Ambient temperature	25°C [77°F]
Product	60 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.

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.

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Carbon Footprint

Dry film thickness	1 µm	1 mil
GWP (Global Warming Potential)	13.3 g CO_2e/m^2	0.069 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.

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.