

Hempel's Marine Varnish

Product characteristics

Description

Hempel's Marine Varnish 02220 is a quick-drying clear urethane alkyd varnish.

Recommended use

Hempel's Marine Varnish 02220 is for use on new wood as well as over previously varnished wood, interior and exterior, above the waterline.

Product safety

Flash point 38°C [100°F]

VOC content

Legislation	Value
EU	433 g/L [3.61 lb/US gal]
US (coatings)	433 g/L [3.61 lb/US gal]
US (regulatory)	433 g/L [3.61 lb/US gal]
China	433 g/L [3.61 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

02220

Standard shade / code

Transparent 00000

Gloss

Glossy

Volume solids

45 ± 2%

Specific gravity

0.9 kg/L [8 lb/US gal]

Reference dry film thickness

25 micron [1.0 mils]

Surface preparation

Cleanliness

- The surface must be dry and clean prior to application.
- Moisture content of the wood must be below 16%.

New build:

- New wood/uncoated wood: saturate with suitable wood preservative (except teak and vacuum impregnated wood).
- Sand surface and remove dust between coats for smooth finish.

Maintenance and Repair

- Varnished wood: wash the surface with a solution of one part ammonia in six parts of fresh water.
- Remove detergent residues and any other contaminants prior to painting.
- Remove dust, loose material and any other contamination.
- Note: Ammonia water may discolour oak, mahogany and teak.

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

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Application

Mixing ratio

Stir well before use.

Thinner

Hempel's Thinner 08230

Application method

Tool	Application parameters
Brush	Not Applicable.

Film thickness

Specification range	Low	High	Recommended
Dry film thickness	25 micron [1.0 mils]	25 micron [1.0 mils]	25 micron [1.0 mils]
Wet film thickness	56 micron [2.2 mils]	56 micron [2.2 mils]	56 micron [2.2 mils]
Theoretical spreading rate	18 m ² /L [733 sq ft/US gal]	18 m ² /L [733 sq ft/US gal]	18 m ² /L [733 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. For best performance, avoid excessive film thickness.

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.
- Surface temperature must be above 5°C [41°F] during application and curing.
- Provide adequate ventilation during application and drying.

Drying and overcoating

Product compatibility

- Previous coat: None.
- Subsequent coat: None.

Drying time

Surface temperature		20°C [68°F]
Hard dry	hours	2½
Ready to sand	hours	24

Determined for dry film thickness 25 micron [1.0 mils] at standard conditions, see Hempel's Explanatory Notes for details.

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.

Other remarks

- Hempel's Specification supersedes any recommendations given in the Product Data Sheets.

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. For advice, please consult Hempel.

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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)	10.8 g CO ₂ e/m ²	0.056 lb CO ₂ e/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 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.