

# Hempel's Diamond Varnish

## Product characteristics

### Description

Hempel's Diamond Varnish is a clear non-yellowing two-component polyurethane varnish. It gives a hard, durable, glossy long-lasting finish. Good resistance to weathering, abrasion and chemicals.

### Recommended use

Hempel's Diamond Varnish is recommended for use on new wood as well as on previously varnished wood, interior and exterior, above the waterline. Not recommended for carvel or clinker built wooden hulls.

## Product safety

**Flash point** 33°C [91°F]

### VOC content mixed product

Legislation	Value
EU	461 g/L [3.85 lb/US gal]

According to specific legislation, see details in the Explanatory Notes available at Hempel website, [hempel.com](http://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

05140

### Product components

Base 05149

Curing Agent 95370

### Standard shade / code

Transparent 00000

### Gloss

High-gloss

### Volume solids

50 ± 2%

### Specific gravity

1 kg/L [9 lb/US gal]

### Reference dry film thickness

40 micron [1.6 mils]

## Surface preparation

### Cleanliness

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

### New build:

- Uncoated surface: Sand and remove all dust.
- New wood: Saturate the dry, clean surface with a suitable wood treatment, allow to dry.
- Plywood: Seal the dry, clean surface with suitable wood sealer.
- The surface must be dry and clean prior to application.
- Moisture content of the wood must be below 16%.

### Maintenance and Repair

- Previously coated surface: Abrade, clean and dry the surface.

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## Application

### Mixing ratio

Base 05149 : Curing Agent 95370  
(2 : 1 by volume)

Stir the Base, add Curing Agent and mix well. Allow mixed paint to rest for several minutes before use to allow air bubbles to escape. Do not open or mix the cans before the paint will be applied.

### Thinner

Hempel's Thinner 08510  
Hempel's Thinner 08710

### Cleaner

Hempel's Thinner 08510  
Hempel's Thinner 08710

### Pot life

Product temperature	10°C [50°F]
Pot life	10 hours

### Application method

Tool	Thinning max vol.
Roller	20%
Brush	20%

Keep thinning at an absolute minimum. The product can be applied by spray. Contact Hempel for more information.

### Film thickness

	Recommended
Dry film thickness	40 micron [1.6 mils]
Wet film thickness	79 micron [3.2 mils]
Theoretical spreading rate	13 m <sup>2</sup> /L [530 sq ft/US gal]

For best performance, avoid excessive film thickness.

### Application conditions

- Surface temperature must be above 10°C [50°F] during application and curing.
- The film formation may be adversely affected by light rain, high humidity and/or condensation during application and the following interval after application: "4-6 hours, 20°C/68°F".

### Relative Humidity:

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

### Application remarks

- Apply first coat of the product thinned with specified Hempel's Thinner: max. 20%.
- Apply a second coat of the product thinned: max.10%.
- Finally apply 3 coats of the undiluted product.
- Add thinner to assist application if necessary: max 5%.
- To obtain a smooth surface, sanding between coats is recommended (remove dust).
- Previously coated surface: Apply 3 coats of the undiluted product.

## Drying and overcoating

### Product compatibility

- Previous coat: Recommended products are: Hempel's Wood Impreg (for new wood), Hempel's Sealer (for plywood)
- Subsequent coat: None.

### Drying time

Surface temperature		10°C [50°F]	20°C [68°F]
Touch dry	hours	16	8
Ready to sand	hours	-	24
Fully cured	days	14	7

Determined for dry film thickness 40 micron [1.6 mils] at standard conditions, see Hempel's Explanatory Notes for details. Any masking tape used during paint application should be removed while the paint is still in the wet condition.

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## Overcoating

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

Quality name		10°C [50°F]	20°C [68°F]
		Atmospheric medium	
Hempel's Diamond Varnish	Min	24 h	16 h
	Max	10 d	5 d

## 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 maximum overcoating interval is exceeded, roughening of the surface is necessary to ensure intercoat adhesion.

## Other remarks

- The surface must be clean before overcoating.

## Storage

### Shelf life

Ambient temperature	25°C [77°F]
Base	36 months
Curing Agent	24 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 curing agent is sensitive to moisture. Store in a dry place and keep the can tightly closed until use.

## Carbon Footprint

Dry film thickness	1 µm	1 mil
GWP (Global Warming Potential)	14.7 g CO <sub>2</sub> e/m <sup>2</sup>	0.077 lb CO <sub>2</sub> e/ft <sup>2</sup>

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.
- Further information: Hempel Yacht Paint Manual and [hempelyacht.com](http://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](http://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 <a href="http://www.hempel.com">www.hempel.com</a> and contain relevant information about the Product testing parameters
5.	Application Instruction	Where available, at <a href="http://www.hempel.com">www.hempel.com</a>
6.	Generic technical guidelines (e.g. on application and surface preparation)	Where available, at <a href="http://www.hempel.com">www.hempel.com</a>

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](http://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.