

Hempel's High Protect II

Product characteristics

Description

Hempel's High Protect II is a two component, solvent free, high-build epoxy for osmosis protection and treatment. Easy to apply with good tolerance to environmental conditions. Forms a hard, tough, water-resistant coating.

Recommended use

For use as a primer below the waterline on boats made of glass fibre or steel. Prevention and repair of osmotic blistering in the glass fibre both above and below the waterline.

Features

- Can be a substitute for Hempel's Light Primer where solvent emissions are a consideration.

Product safety

Flash point 129°C [264°F]

VOC content mixed product

| Legislation | Value |
|-------------|-------------------------|
| EU | 34 g/L [0.28 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

35780

Product components

Base 35789

Curing Agent 95078

Standard shade* / code

Grey 13700

Gloss

High-gloss

Volume solids

99 ± 1%

Specific gravity

1.3 kg/L [11 lb/US gal]

Reference dry film thickness

150 micron [5.9 mils]

Surface preparation

Cleanliness

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

New build:

- Uncoated surface: Sand and remove all dust.
- Steel: Remove salt and other contaminants by (high pressure) fresh water cleaning. Remove all rust and loose material by abrasive blasting or power tool cleaning. Dust off residues.

Maintenance and Repair

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

Hempel's High Protect II

Application

Mixing ratio

Base 35789 : Curing Agent 95078
(3 : 2 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.

Thinner

No thinning

Pot life

| Product temperature | 10°C [50°F] | 20°C [68°F] |
|---------------------|----------------|----------------|
| Pot life | 60 min | 45 min |

Application method

| Tool | Thinning max vol. | Application parameters |
|--------|-------------------|------------------------|
| Brush | No thinning | Not Applicable. |
| Roller | No thinning | Not Applicable. |

Do not use thinner in conjunction with this product. The product can be applied by spray. Contact Hempel for more information.

Film thickness

| | Recommended |
|----------------------------|-----------------------------|
| Dry film thickness | 150 micron [5.9 mils] |
| Wet film thickness | 150 micron [6 mils] |
| Theoretical spreading rate | 6.6 m²/L [270 sq ft/US gal] |

It is vital that the specified minimum dry film thickness is uniformly achieved. Ensure that the film is free from pores. It is recommended to level out roller marks with a brush.

Application conditions

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

Relative Humidity:

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

Application remarks

- For protection: Glass fibre: Ensure new gelcoats are thoroughly cleaned and on previously coated surfaces, ensure all old paint layers are removed.
- Apply 1 coat at 150 micron. Allow to dry. Fill and fair where necessary. Apply 1 coat at 150 micron.
- Steel: Apply 3 coats at 150 micron dry film thickness each.
- For treatment: Remove gelcoat and allow hull to dry out.
- Apply 1 coat at 150 micron. Allow to dry. Fill and fair where necessary. Apply 3 coats at 150 micron each.
- Overcoat with specified Hempel's primer/tiecoat and chosen topcoat/antifouling.

Drying and overcoating

Product compatibility

- Previous coat: None.
- Subsequent coat: Recommended products are: Hempel's Underwater Primer 26030, Hempel's Light Primer 45550/1

Drying time

| Surface temperature | | 10°C [50°F] | 20°C [68°F] |
|---------------------|-------|----------------|----------------|
| Touch dry | hours | 24 | 12 |
| Ready to sand | hours | - | 24 |

Determined for dry film thickness 150 micron [5.9 mils] at standard conditions, see Hempel's Explanatory Notes for details.

Hempel's High Protect II

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 Underwater Primer 26030 | Min | 20 h | 8 h | 4 h |
| | Max | 30 h | 12 h | 6 h |
| Hempel's High Protect II | Min | 20 h | 8 h | 4 h |
| | Max | 12 d | 5 d | 60 h |
| Hempel's Light Primer 45550 | Min | 20 h | 8 h | 4 h |
| | Max | 12 d | 5 d | 60 h |
| Hempel's Light Primer 45551 | Min | - | - | - |
| | 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 maximum overcoating interval is exceeded, roughening of the surface is necessary to ensure intercoat adhesion.
- The surface must be clean before overcoating.

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.
- Product must be stored according to local legislation, at maximum 35°C [95°F], without direct sunlight and protected from rain and snow.

Carbon Footprint

| Dry film thickness | 1 µm | 1 mil |
|--------------------------------|--|---|
| GWP (Global Warming Potential) | 7.7 g CO ₂ e/m ² | 0.04 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.

Hempel's High Protect II

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

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.