



# DATA SHEETS

## YACHT PAINTS

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## MAY 2003

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# EXPLANATORY NOTES TO PRODUCT DATA SHEETS

The product data sheets comprise descriptions of the products, product data, and guidelines/recommendations for their use. The purpose is to contribute to the best possible results when using the products.

## PRODUCT NAMES, QUALITY NUMBERS, AND SHADE NUMBERS.

**PRODUCT NAMES:** Generally the proprietary name of a Hempel paint is a collective name denoting the group and the generic type to which it belongs.

**Note:** Where a proprietary name is not used, the product name is preceded by HEMPEL'S.

**QUALITY NUMBERS:** Each Hempel product is identified by a 5-digit quality number. The first two digits relate to the principal function and the generic type. The remaining digits are serial numbers.

| First digit  | Function   |
|--------------|--|
| 0 - - - -    | Clear varnish, thinner   |
| 1 - - - -    | Primer for steel and other metals  |
| 2 - - - -    | Primer for non-metallic substrates   |
| 3 - - - -    | Paste product, high-solids material  |
| 4 - - - -    | Intermediate coating, high-build coating used with/without primer and finishing coat |
| 5 - - - -    | Finishing coat   |
| 6 - - - -    | Miscellaneous  |
| 7 - - - -    | Antifouling paint  |
| 8 - - - -    | Miscellaneous  |
| 9 - - - -    | Miscellaneous  |
| Second digit | Generic type   |
| - 0 - - -    | Asphalt, pitch, bitumen, tar   |
| - 1 - - -    | Oil, oil varnish, long-oil alkyd   |
| - 2 - - -    | Medium to long-oil alkyd   |
| - 3 - - -    | Short-oil alkyd, styrenated alkyd, epoxyester, silicone alkyd, urethane alkyd        |
| - 4 - - -    | Miscellaneous  |
| - 5 - - -    | Reactive binder (non-oxidative), one or two-component                                |
| - 6 - - -    | Physically drying binder (solvent-borne) (other than - 0 - - -)                      |
| - 7 - - -    | Miscellaneous  |
| - 8 - - -    | Aqueous dispersion, thinner  |
| - 9 - - -    | Miscellaneous  |

Third, fourth and possibly fifth digit is used to distinguish between the qualities.

**SHADE NUMBERS:**

Hempel paints are supplied in colours identified by a 5-digit, standard shade number as follows:

|                     |   |             |
|---------------------|---|-------------|
| White               | : | 10000       |
| Whitish, grey       | : | 10010-19980 |
| Black               | : | 19990       |
| Yellow, cream, buff | : | 20010-29990 |
| Blue, violet        | : | 30010-39990 |
| Green               | : | 40010-49990 |
| Red, orange, pink   | : | 50010-59990 |
| Brown               | : | 60010-69990 |

HEMPEL's standard shade numbers do not directly correlate to official colour standard numbers. However, colours corresponding to specific official standard colours may be established.

Frequently used colours/shades are displayed in HEMPEL's colour cards.

The fifth digit may be used to identify specific formulas with the same shade, but a different type of pigments used, eg conformity to (local) legislation. 0 indicates a standard formulation, 6 lead-containing pigments.

**Note:** The shades of primers, many intermediates and antifoulings may fluctuate as a distinct shade is not important for such products.

**Description:**

A short description of the product with emphasis on generic type, pigmentation, principal properties, and certain limitations.

**Recommended use:**

The purpose(s) for which the product is designed or particularly well suited. The product may be specified for other uses in tailor-made paint systems for specific purposes.

**Availability:**

Delivery of certain products require notice in advance for logistic reasons. This is indicated by the expression "Subject to confirmation".

**PHYSICAL CONSTANTS****Finish:**

The appearance of the paint film after drying under optimum conditions in laboratory, given as high gloss (>90), glossy (60-90), semi-gloss (30-60), semi-flat (15-30), or flat (<15). All figures are in gloss units and according to ASTM D 523-67 (specular gloss, 60 degree geometry). The actual appearance will depend on the conditions during application and drying/curing.

The finish indicated in the product data sheet is according to optimal conditions (ie application and measurements under standardized laboratory conditions).

**Colours/shade nos:**

See SHADE NUMBERS. Certain physical constants may vary from one colour to another especially in the case of glossy topcoats.

**Volume solids:**

The Volume Solids (VS) figure expresses in percentage the ratio:

$$\frac{\text{Dry film thickness}}{\text{Wet film thickness}}$$

The stated figure has been determined as the ratio between dry and wet film thickness of the coating applied in the indicated thickness under laboratory conditions, where no paint loss has been encountered.

For selected paints not drying too fast an alternative airless spray procedure is:

A paint is applied by airless spray in the indicated thickness to a smooth, degreased steel panel. Application and drying/curing conditions of the paint are (approx) 23°C/73°F and 50% RH. A number of wet film thickness measurements are taken immediately after application followed by a similar number of dry film thickness measurements 7 days (approx 23°C/73°F, 50% RH) after application.

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Volume solids are usually slightly higher than the theoretical value, which is found by a calculation based on the paint composition taking specific gravity and solid content of each individual raw material into consideration.

Volume solids take into account that small amounts of solvents are usually retained, and that air may be entrapped in the dry paint film either in the form of vacuoles or as interstices in zinc silicates.

Volume solids are in better agreement with practical measurements of dry film thickness than the theoretical value.

**Theoretical spreading rate:**

The theoretical spreading rate of the paint in a given dry film thickness on a completely smooth surface is calculated as follows:

$$\frac{\text{Volume solids\%} \times 10}{\text{Dry film thickness (micron)}} = \text{m}^2/\text{litre}$$

or

$$\frac{\text{Volume solids\%} \times 16.04}{\text{Dry film thickness (mils)}} = \text{sq.ft./US gallon}$$

1 mil is rounded off to 25 micron - the exact value is 25.4 micron.

In the product data sheet the Theoretical spreading rate is stated for an indicated dry film thickness (dft) that is usually specified for the product. Some products may be specified in different dry film thicknesses for different purposes affecting the spreading rate accordingly. Theoretical spreading rate cannot be given for paint materials used for saturation of an absorbing substrate, wood, etc.

The Practical spreading rate is not given in the product data sheet as the variation is too great to be represented by one single figure.

**Consumption factor:**

The practical consumption is estimated by multiplying the theoretical consumption with a relevant Consumption Factor (CF).

The Consumption Factor depends on a number of external conditions and cannot be stated in the product data sheet as the variation is too great to be represented by one single figure.

$$\text{Practical consumption} = \frac{\text{Area} \times \text{CF}}{\text{Theoretical spreading rate}}$$

The variation in the Consumption Factor is largely attributed to the following:

1) Waviness of paint film:

In order to ensure the specified minimum film thickness, a manually applied paint film will unavoidably a) show some waviness of the surface and b) a thickness distribution with an average value somewhat higher than the specified dry film thickness in order to fulfil eg an 80:20 rule. This leads to a higher consumption than theoretically calculated.

2) Complexity and size/shape of the surface to be calculated:

Complex, odd-shaped and small-sized surfaces are virtually impossible to paint without overspray and will therefore lead to higher consumption than theoretically calculated from the area square in question.

3) Surface roughness of the substrate:

Surface roughness of the substrate gives a "dead volume" to be filled up or in the case of shopprimers a "surface area ratio" greater than one and will therefore cause a higher consumption than theoretically calculated for a smooth substrate.

4) Physical losses:

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Factors such as residues in cans, pumps and hoses, discarded paint due to exceeded pot life, wind loss, etc. will all contribute to a higher consumption.

The Practical spreading rate thus varies with method of application, skill of the painter, shape of the object to be painted, texture of the substrate, film thickness applied, and working conditions.

In any case it is not beneficial to stretch the paint as much as possible, but rather to try to obtain the specified thickness of the applied paint on the entire area.

**Flash point:**

The lowest temperature at which a liquid liberates sufficient vapour to form a mixture with the air near its surface which, if ignited, will make a small flash, but not catch fire.

The flash points of HEMPEL'S paints are measured according to the Setaflash method (closed cup). For two-component products flash points are normally given for the mixed products. The figures are given as a guidance with a view to local regulations for precautions against fire during use.

**Adding THINNER to a paint may change the flash point of the diluted material.**

**Specific gravity:**

The weight in kilogramme per litre at 25°C/77°F. An equivalent figure is given in lbs per US gallon.

For two-component products the specific gravity is given for the mixed product.

The specific gravity may in practice vary in an interval of a few percent compared to the theoretical value indicated in the product data sheet.

**Dry to touch:**

Drying time in the product data sheet is "dry to touch" unless otherwise indicated.

Drying times refer to a temperature of 20°C/68°F, 60-70% relative humidity, with adequate ventilation.

"Dry to touch": A slight pressure with a finger does not leave a mark and the surface does not feel sticky

The drying process until "dry to touch" is - for solvent (or water) containing paints - first and foremost dependent on ventilation. Furthermore it depends on the temperature and on the film thickness of each coat applied.

All surfaces should be ventilated. It should be noted that waterborne paints have higher requirements to ventilation than do solventborne paints.

In the case of physically drying paints, drying time is also influenced by the number of coats, the total film thickness of the system and the film thickness per coat. As a rough rule of thumb, twice the film thickness of a given single coat will require approx 4 times the drying time with the same amount of ventilation. This goes for both solvent and waterborne paints.

It should be stressed that when apply applying more coats, entrapped solvents may result in a softer film than if only one coat is applied. This is especially relevant in the case of physically drying paints.

Also temperature has much influence on the drying/curing time. A temperature drop to 10°C/18°F will roughly require twice the drying time for physically drying paints.

**Fully cured:**

The curing time is given for two-component products at a (steel) temperature of 20°C/68°F and provided adequate ventilation. The curing is accelerated at higher temperatures and retarded at lower temperatures. For some products the curing times at different temperatures are given as a table in the product data sheet/in the Application Instructions. For products where the curing time is given at 20°C/68°F only, the following rough rule of thumb can be utilized:

The curing time is roughly halved at an increase in temperature of 10°C/18°F, and doubled at a decrease in temperature of 10°C/18°F.

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Curing will stop almost completely below the temperature stated under application conditions as the lowest temperature at which the paint should be applied.

**V.O.C.:**

The calculated weight of volatile organic content in gramme per litre. An equivalent figure is given in lbs per US gallon.

Alternatively, VOC can be indicated by a measured value.

For water-borne paints, two VOC figures are indicated:

1. VOC calculated on total wet paint.
2. VOC calculated omitting the water content in the wet paint (according to ASTM D 3960).

**Shelf life:**

The time the product will keep in good condition when stored under cover in original, sealed containers under normal storage conditions. Shelf life is indicated only if it is one year or less at 25°C/77°F. It will decrease at higher temperatures, eg will be almost halved at 35°C/95°F.

If no specific limitation is given, a paint should not be stored for more than five years at 25°C/77°F or three years at 35°C/95°F for one-component products and three years at 25°C/77°F or two years at 35°C/95°F for two-component products from the date of production.

Long-term storage and storage at high temperatures may require careful remixing of the paint prior to application due to (slight) sediment in the can.

If storage conditions are unknown and in any other case in doubt about suitability of a paint material this can be rather easily verified by checking the following:

- a. no corrosion of the inside unopened, undamaged cans
- b. apparent viscosity in can: after remix, paint must not appear gelatinous or require excessive thinning prior to proper application
- c. application in specified film thickness: a uniform, closed paint film is to be demonstrated
- d. drying time to be within the limit specified in the product data sheet

The date of production is indicated in the first 3 digits of the batch number: The first digit indicates the year of production, the second and third digits indicate the month of production.

**APPLICATION DETAILS****Mixing ratio:**

Two-component, chemically curing products are supplied as BASE and CURING AGENT in the correct mixing ratio. **The mixing ratio must be strictly adhered to, also when sub-dividing.** As a general rule, add the CURING AGENT to the BASE 30 minutes (induction time) before use (at 20°C/68°F), unless the pot life is (very) short, and stir well. This is especially of importance when applying paints to low-temperature surfaces. In certain cases, more specific advice is given as to induction time.

It is very important for two component products that the prescribed amount of CURING AGENT is added to the BASE. In order to ensure this the indicated thinner may in most cases beneficially be used to flush the CURING AGENT can. Once the material has been mixed the curing will proceed. Therefore, only the quantity needed within the pot life of the mixture should be mixed at a time.

**Application method:**

Gives the possible or recommended method(s) of application. As a general rule, the first coat of a rust-preventing primer should be applied by brush or airless spray to obtain best possible wetting and penetration into the substrate.

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Application by brush or roller usually demands more coats applied to achieve the specified film thickness than application by airless spray equipment.

**Thinner (max.vol):**

HEMPEL'S paints are delivered in such a way, that they are ready for application at 20°C/68°F by brush or airless spray after stirring (for two-component products after mixing of BASE and CURING AGENT). This goes for a given normal application range of dry film thickness. If the paint is too thick, eg in cold weather or for special purposes eg application in lower film thickness, the THINNER(S) indicated under this heading may be added to give the required viscosity. The amount of thinner to be added, depends on prevailing temperature, spray method, etc. The usual maximum percentage is indicated for the respective application method. If more thinning is deemed necessary under special circumstances, consult nearest HEMPEL office.

Adding a small percentage of thinner will give no measurable difference in the film thickness. There are cases, however, when a higher degree of thinning is necessary and justified. It should then be kept in mind that adding thinner increases the quantity of liquid paint without contributing to the solids content. Consequently, a proportionally higher wet film thickness must be applied when adding any significant amount of thinner in order to obtain the specified dry film thickness.

$$\text{VS\% after thinning} = \frac{\text{VS\%} \times 100}{\% \text{ THINNER added} + 100}$$

**Example:** If 0.5 litre of THINNER is added to 20 litres of paint, then % THINNER added equals

$$\frac{0.5 \times 100}{20} = 2.5\%$$

VS% after thinning equals

$$\frac{\text{VS\%} \times 100}{102.5}$$

**Note: Avoid unnecessary eg habitual thinning.**

**Pot life:**

Roughly speaking, the pot life **for solvent-borne** paints depends on the paint temperature as follows:

The pot life is halved at an increase in temperature of 10°C/18°F, and doubled at a decrease in temperature of 10°C/18°F.

For HEMPADUR products the pot life is usually shorter for application by airless spray than for brush application. This is due to the fact that the anti-sagging properties are gradually lost after expiration of the pot life indicated for airless application. Thus the high dry film thickness usually specified by airless spray application is only obtainable **within** the pot life indicated for airless application.

**Note: Pot life cannot be extended by thinning.**

In the case of **water-borne**, two-component epoxy products this rule of thumb will not fit. The temperature's influence on the pot life is noted in the relevant data sheets.

**Nozzle orifice:**

A typical nozzle orifice (or a range of nozzle orifices) is indicated.

**Nozzle pressure:**

A nozzle pressure generally suitable is given.

**Note:** Airless spray data are offered as a guidance and are subject to adjustment to suit the work at hand.

**Cleaning of tools:**

Normally the indicated HEMPEL THINNER can be used for cleaning of tools after use. Where special cleaning agents are recommended it is indicated on the product data sheet.

Tools used in connection with waterborne paints may be difficult to clean. Therefore, it is especially important to follow the instructions stated in the product data sheets.

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**Indicated film thickness, dry:** Dry film thickness (dft) is indicated in a thickness frequently used in specifications.  
**Note:** Several products are **specified** in different film thicknesses for different purposes.

Checking of dry film thicknesses is, generally, done with gauges calibrated on smooth reference steel panels. Shopprimers are controlled according to a special procedure, which is available at your nearest Hempel office.

**Indicated film thickness, wet:** Wet film thickness (wft) is indicated in multiple of 25 micron (1 mil) in order to facilitate the practical measurements with the wet film thickness gauge (comb gauge). These values are rounded off to the multiple of 25 which is regarded most relevant in each case.

**Recoat interval:** The time required or allowed to pass at 20°C/ 68°F or the relevant temperature range for the product in question before the subsequent coat is applied. The intervals are related to the temperature, film thickness, number of coats, type of future (in service) exposure and will be affected correspondingly. For maximum intervals the temperature in this context is the highest surface temperature during the period. For some products the interval is more critical in regard to intercoat adhesion than others. If the maximum interval is exceeded it may be necessary to roughen the surface to ensure adhesion of the next coat. On the other hand, for some paint types the interval may not be critical in respect of adhesion, but a primer coat should not be left unprotected for too long in an aggressive environment.

If nothing else is mentioned the indicated intervals refer to recoating with the same paint. Other paints of different types may require other (recoating) intervals.

Minimum and any maximum intervals should always be adhered to if the paint system is to provide maximum protection.

Furthermore, beware of undesired influence of moisture and carbon dioxide on epoxy and polyurethane paints, which especially occurs at low temperatures and high humidity. This will result in a greasy surface preventing any adhesion of the subsequent coat.

After exposure of any painted surface in polluted environment thorough cleaning by high pressure fresh water hosing or another appropriate measure is always recommended before recoating.

**SURFACE PREPARATION:** The recommended degree of cleaning of the surface before painting. The degrees of cleaning refer to ISO 8501-1:1988. Pictorial Surface Preparation Standards for Painting of Steel Surfaces, unless otherwise indicated.

For some products a minimum surface profile is mandatory. The profile so specified is given with reference to one or more of the roughness comparators: Rugotest No. 3, Keane-Tator Comparator, or the ISO Comparator.

For previously painted surfaces the method and degree of preparatory cleaning is generally indicated.

**APPLICATION CONDITIONS:** If climatic or other limits, beyond what is dictated by normal good painting practice, apply to the use of a particular quality of paint, this is indicated under this heading. As a general rule, paint should never be applied under adverse weather conditions. Even if the weather seems fit for painting there will be condensation if the temperature of the substrate is at or below the dew point (the temperature at which the atmospheric humidity condenses, e.g. as dew). To compensate for fluctuations the temperature of the surface should be at least a few degrees above the dew point during painting and drying. 3°C/5°F is often quoted as safe.

Beware of ice on the surface at temperatures below the freezing point.

In confined spaces it may be necessary to remove solvent vapours or water vapours by providing an adequate amount of fresh air constantly during application and drying, both for reasons of safety and health, and to assist evaporation.

Keep the paint tempered (room temperature) when applying during winter. If not, the paint will require excessive thinning leading to an increased risk of sagging. Viscosity in any paint will increase if the temperature decreases.



- PRECEDING COAT:** Recommendations of some preceding paint(s) known to be compatible with the product. No limitation is implied. Other compatible products may be specified depending on the purpose. In this context, shopprimers are regarded an integral part of the surface preparation.
- SUBSEQUENT COAT:** Recommendations of some subsequent paint(s) known to be compatible with the product. No limitation is implied. Other compatible products may be specified depending on the purpose.
- REMARKS:** Under this heading other relevant data or information are included.
- SAFETY:** Under this heading **general** safety precautions when handling or working with the product are given. Packings are provided with applicable safety labels which should be observed. In addition, Material Safety Data Sheets, national or local safety regulations should always be followed.
- ISSUED:** Month and year of issue, current formula.
- Note:** The product data sheets are subject to change without notice and automatically void five years from issue.



# CONVERSION TABLES

| To convert   | From                       | To                          | Multiply by |  |
|--------------|----------------------------|-----------------------------|-------------|--|
| Distance:    | mil                        | micron                      | 25          | (25.4 is the correct value,<br>but rounded in this book) |
|              | micron                     | mill                        | 0.04        |  |
|              | inches                     | centimetre (cm)             | 2.54        |  |
|              | centimetre (cm)            | inches                      | 0.3937      |  |
|              | feet                       | metre                       | 0.3048      |  |
|              | metre                      | feet                        | 3.2808      |  |
|              | yards                      | metre                       | 0.9144      |  |
|              | metre                      | yards                       | 1.0936      |  |
|              | nautical mile              | km                          | 1.853       |  |
| km           | nautical mile              | 0.5396                      |             |  |
| Area:        | sq.ft.                     | sq. metre (m <sup>2</sup> ) | 0.0929      |  |
|              | sq.metre (m <sup>2</sup> ) | sq.ft.                      | 10.764      |  |
| Volume:      | US gallon                  | litre                       | 3.785       |  |
|              | litre                      | US gallon                   | 0.264       |  |
|              | Imp. gallon                | litre                       | 4.55        |  |
|              | litre                      | Imp. gallon                 | 0.22        |  |
|              | litre                      | cu.ft.                      | 0.0353      |  |
|              | cu.ft.                     | litre                       | 28.32       |  |
| Area/Volume: | m <sup>2</sup> /litre      | sq.ft./US gallon            | 40.74       |  |
|              | sq.ft./US gallon           | m <sup>2</sup> /litre       | 0.0245      |  |
|              | m <sup>2</sup> /litre      | sq.ft./Imp. gallon          | 48.93       |  |
|              | sq.ft./Imp. gallon         | m <sup>2</sup> /liter       | 0.0204      |  |
| Weight:      | lbs                        | kg                          | 0.4536      |  |
|              | kg                         | lbs                         | 2.2046      |  |
| Density:     | kg/litre                   | lbs/US gallon               | 8.344       |  |
|              | lbs/US gallon              | kg/litre                    | 0.1198      |  |
| V.O.C.:      | g/litre                    | lbs/US gallon               | 0.0083      |  |
| Pressure:    | atm.                       | bar                         | 1.013       |  |
|              | atm.                       | kp/cm <sup>2</sup>          | 1.033       |  |
|              | atm.                       | p.s.i.                      | 14.70       |  |
|              | bar                        | atm.                        | 0.987       |  |
|              | bar                        | kp/cm <sup>2</sup>          | 1.02        |  |
|              | bar                        | p.s.i.                      | 14.50       |  |
|              | kp/cm <sup>2</sup>         | atm.                        | 0.968       |  |
|              | kp/cm <sup>2</sup>         | bar                         | 0.981       |  |
|              | kp/cm <sup>2</sup>         | p.s.i.                      | 14.22       |  |
|              | kp/cm <sup>2</sup>         | MPa                         | 0.098       |  |
|              | p.s.i.                     | atm.                        | 0.068       |  |
|              | p.s.i.                     | bar                         | 0.069       |  |
|              | p.s.i.                     | kp/cm <sup>2</sup>          | 0.07        |  |

- Notes:
- atm. is the so called physical atmosphere (the pressure of 760 mm mercury). The technical atmosphere, at, is identical to kp/cm<sup>2</sup>.
  - 1 bar = 10<sup>5</sup> Pa (Pascal) = 10<sup>5</sup> Newton/m<sup>2</sup>.
  - MPa = MegaPascal = 10<sup>6</sup> Pascal = MegaNewton/m<sup>2</sup>.
  - The so-called kilogram forces/cm<sup>2</sup> is considered equal to Kp/cm<sup>2</sup>.



| To convert                  | From                  | To                    | Calculate  |
|-----------------------------|-----------------------|-----------------------|--|
| Temperature:                | Celcius<br>Fahrenheit | Fahrenheit<br>Celcius | $(9/5 \times ^\circ\text{C}) + 32$<br>$5/9 \times (^\circ\text{F} - 32)$ |
| Film thickness:<br>(micron) | Wet                   | Dry                   | $\frac{\text{wft} \times \text{VS}\%}{100}$                              |
|                             | Dry                   | Wet                   | $\frac{\text{dft} \times 100}{\text{VS}\%}$                              |

wft = wet film thickness, dft = dry film thickness, VS% = Volume Solids

### CALCULATION OF

#### Theoretical Spreading Rate (on completely smooth surface)

$$\text{In m}^2 \text{ per litre} = \frac{\text{VS}\% \times 10}{\text{desired dft (micron)}} \quad \text{In sq.ft. per US gallon} = \frac{\text{VS}\% \times 16.04}{\text{desired dft (mil)}}$$

#### Theoretical Paint Consumption (on completely smooth surface)

$$\text{In litre} = \frac{\text{area (m}^2\text{)} \times \text{desired dft (micron)}}{\text{VS}\% \times 10}$$

$$\text{In US gallon} = \frac{\text{area (sq.ft.)} \times \text{desired dft (mil)}}{\text{VS}\% \times 16.04}$$



# Product Data

## HEMPEL'S YACHT VARNISH 1-2-3

01231

|                             |   |
|-----------------------------|---|
| <b>Description:</b>         | HEMPEL'S YACHT VARNISH 1-2-3 is an air-drying, clear urethane alkyd varnish. It has good resistance to seawater, sunlight and adverse weather conditions. |
| <b>Recommended use:</b>     | On new wood as well as on previously varnished wood, interior and exterior, above the waterline.  |
| <b>Availability:</b>        | Subject to confirmation.  |
| <b>PHYSICAL CONSTANTS:</b>  |   |
| Colours/Shade nos:          | Transparent/00000   |
| Finish:                     | Glossy  |
| Volume solids, %:           | 50 ± 1  |
| Theoretical spreading rate: | 16.7 m <sup>2</sup> /litre - 30 micron<br>668 sq.ft./US gallon - 1.2 mils   |
| Flash point:                | 38°C/100°F  |
| Specific gravity:           | 0.9 kg/litre - 7.5 lbs/US gallon  |
| Dry to touch:               | 6 (app) hours at 20°C/68°F<br>12 (app) hours at 10°C/50°F   |
| V.O.C.                      | 400 g/litre - 3.3 lbs/US gallon   |

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |  |
|--------------------------------|--|
| Application method:            | Best result will be obtained with a flat varnish brush or paint pad. Spray application is possible with most types of spray equipment after thinning, but this application method is mainly subject to specific local conditions, so no general guidelines can be given. |
| Thinner (max.vol.):            | HEMPEL'S THINNER 08230 (See REMARKS overleaf)  |
| Cleaning of tools:             | HEMPEL'S THINNER 08230   |
| Indicated film thickness, dry: | 30 micron/1.2 mils   |
| Indicated film thickness, wet: | 75 micron/3 mils   |
| Recoat interval, min:          | 6 hours (20°C/68°F)<br>12 hours (10°C/50°F)  |
| Recoat interval, max:          | 48 hours (20°C/68°F)<br>4 days (10°C/50°F)   |

|                |  |
|----------------|--|
| <b>Safety:</b> | Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas. |
|----------------|--|

Issued: April 2003

**HEMPEL'S YACHT VARNISH 1-2-3, 01231**

|                          |  |
|--------------------------|--|
| SURFACE PREPARATION:     | <p><b>New wood (except plywood and teak):</b> Sanding (remove dust). Saturate the dry surface with HEMPITOX 67220. Apply one coat of HEMPEL'S YACHT VARNISH 1-2-3 thinned with 20% THINNER 08230. Apply a second coat of HEMPEL'S YACHT VARNISH 1-2-3 thinned 5-10%. Sanding (remove dust). Finally apply 3-5 coats of HEMPEL'S YACHT VARNISH 1-2-3 undiluted. To obtain a smooth surface, sanding between coats is recommended (remove dust).</p> <p><b>Plywood:</b> Sanding (remove dust). Seal off with HEMPADUR SEALER 599 (avoid formation of a continuous layer on the surface). Continue as for other types of new wood.</p> <p><b>Teak:</b> Sanding (remove dust). Degrease the surface thoroughly with HEMPEL'S DEGREASER 99611. Continue as for other types of new wood.</p> <p><b>Previously varnished wood:</b> Wash surface with suitable cleaning agent. Do not use detergents unless they are removed completely, as otherwise residues can spoil the drying properties and give adhesion problems. Grind the surface with sandpaper grain size 220. Proceed as for new wood. In some cases, the treatment of the surface and the first thinned coats can be omitted.</p> <p><b>Note:</b> Ammonia water may discolour oak, mahogany and teak.</p> |
| APPLICATION: CONDITIONS: | <p>The surface must be completely clean and dry and the temperature should preferably be above 5°C/41°F. Do not apply in strong sunlight, on hot surfaces, or under humid conditions. The temperature of the surface must be above the dew point to avoid condensation. The moisture content in the wood should not exceed 16%. In confined spaces provide adequate ventilation during application and drying. Varnishing should be finished 4-6 hours at 20°C/68°F, 8-12 hours at 10°C/50°F, at the latest before dewfall.</p>  |
| SUBSEQUENT COAT:         | None.  |
| REMARKS:                 | <p>When diluting with THINNER 08230, stir carefully, do not shake the can, as this will produce air bubbles in the varnish. If maximum recoat interval is exceeded, rub down surface to ensure adhesion.</p> <p>HEMPEL'S YACHT VARNISH 1-2-3 is dry for sanding after app 12 hours at 20°C/68°F, 24 hours at 10°C/50°F.</p>  |
| Note:                    | <b>The information given in the Technical Data Sheet is intended for commercial use.</b>   |
| ISSUED:                  | April 2003 - 0123000000C0007<br>HEMPEL A/S   |

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# Product Data

## HEMPEL'S MARINE VARNISH 222

02221

|                             |   |
|-----------------------------|---|
| <b>Description:</b>         | HEMPEL'S MARINE VARNISH 222 is a quick-drying, clear urethane alkyd varnish. It has good resistance to seawater, sunlight and adverse weather conditions. |
| <b>Recommended use:</b>     | On new wood as well as on previously varnished wood, interior and exterior, above the water line.   |
| <b>Availability:</b>        | Subject to confirmation.  |
| <b>PHYSICAL CONTANTS:</b>   |   |
| Colours/Shade nos:          | Transparent/00000   |
| Finish:                     | Glossy  |
| Volume solids, %:           | 46 ± 1  |
| Theoretical spreading rate: | 18.4 m <sup>2</sup> /litre - 25 micron<br>738 sq.ft./US gallon - 1 mil  |
| Flash point:                | 38°C/100°F  |
| Specific gravity:           | 0.9 kg/litre - 7.5 lbs/US gallon  |
| Dry to touch:               | 2-3 hours at 20°C/68°F<br>4-6 hours at 10°C/50°F  |
| V.O.C.:                     | 430 g/litre - 3.6 lbs/US gallon   |

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |   |
|--------------------------------|---|
| Application method:            | Best results will be obtained with a flat varnish brush or paint pad. Spray application is possible with most types of spray equipment after thinning, but this application method is mainly subject to specific local conditions, so no general guidelines can be given. |
| Thinner (max. vol.):           | HEMPEL'S THINNER 08230 (See REMARKS overleaf)   |
| Cleaning of tools:             | HEMPEL'S THINNER 08230  |
| Indicated film thickness, dry: | 25 micron/1 mil   |
| Indicated film thickness, wet: | 50 micron/2 mils  |
| Recoat interval, min:          | 6 hours (20°C/68°F)<br>12 hours (10°C/50°F)   |
| Recoat interval, max:          | 48 hours (20°C/68°F) (See REMARKS overleaf)<br>4 days (10°C/50°F) (See REMARKS overleaf)  |

|                |  |
|----------------|--|
| <b>Safety:</b> | Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas. |
|----------------|--|

Issued: April 2003

**HEMPEL'S MARINE VARNISH 222, 02221**

|                         |   |
|-------------------------|---|
| SURFACE PREPARATION:    | <p><b>New wood (except plywood and teak):</b> Sanding (remove dust). Saturate the dry surface with HEMPITOX 67220. Apply one coat of HEMPEL'S MARINE VARNISH 222 thinned with 20% THINNER 08230. Apply a second coat of HEMPEL'S MARINE VARNISH 222 thinned 5-10%. Sanding (remove dust). Finally apply 3 coats of HEMPEL'S MARINE VARNISH 222 undiluted. To obtain a smooth surface, sanding between coats is recommended (remove dust).</p> <p><b>Plywood:</b> Sanding (remove dust). Seal off with HEMPADUR SEALER 599 (avoid formation of a continuous layer on the surface). Continue as for other types of new wood.</p> <p><b>Teak:</b> Sanding (remove dust). Degrease the surface thoroughly with HEMPEL'S DEGREASER 99611. Continue as for other types of new wood.</p> <p><b>Previously varnished wood:</b> Wash surface with suitable cleaning agent. Do not use detergents unless they are removed completely, as otherwise residues can spoil the drying properties and give adhesion problems. Grind the surface with sandpaper grain size 220. Proceed as for new wood. In some cases the antimould treatment with HEMPITOX 67220 and the first thinned coats can be omitted.</p> <p><b>Note:</b> Ammonia water may discolour oak, mahogany and teak.</p> |
| APPLICATION CONDITIONS: | The surface must be completely clean and dry and the temperature should preferably be above 5°C/41°F. Do not apply in strong sunlight, on hot surfaces, or under humid conditions. The temperature of the surface must be above the dew point to avoid condensation. The moisture content in the wood should not exceed 16%. In confined spaces provide adequate ventilation during application and drying. Varnishing should be finished 3-4 hours at 20°C/68°F, 6-8 hours at 10°C/50°F, at the latest before dewfall.   |
| SUBSEQUENT COAT:        | None, or use HEMPEL'S SILK VARNISH 224 for the last coat if a silk-gloss/flat finish is desired.  |
| REMARKS:                | When diluting with THINNER 08230, stir carefully, do not shake the can, as this will produce airbubbles in the varnish. If maximum recoat interval is exceeded, rub down surface to ensure adhesion.<br>HEMPEL'S MARINE VARNISH 222 is dry for sanding after approx. 6 hours at 20°C/68°F, app 12 hours at 10°C/50°F.   |
| Note:                   | <b>The information given in the Technical Data Sheet is intended for commercial use.</b>  |
| ISSUED:                 | April 2003 - 0222000000C0010<br>HEMPEL A/S  |

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***Product data are subject to change without notice and become void five years from the date of issue.***



# Product Data

## HEMPEL'S SILK VARNISH 224

02240

|                             |  |
|-----------------------------|--|
| <b>Description:</b>         | HEMPEL'S SILK VARNISH 224 is a quick-drying, silk gloss urethane alkyd varnish. It has good resistance to seawater, sunlight and adverse weather conditions. The quality is related to HEMPEL'S MARINE VARNISH 222 but with a silk gloss finish. |
| <b>Recommended use:</b>     | On new wood as well as previously varnished wood, interior and exterior, above the waterline.  |
| <b>Availability:</b>        | Subject to confirmation.   |
| <b>PHYSICAL CONTANTS:</b>   |  |
| Colours/Shade nos:          | Transparent/00000  |
| Finish:                     | Silk gloss   |
| Volume solids, %:           | 44 ± 1   |
| Theoretical spreading rate: | 17.6 m <sup>2</sup> /liter - 25 micron<br>706 sq.ft./US gallon - 1 mil   |
| Flash point:                | 38°C/100°F   |
| Specific gravity:           | 0.9 kg/litre - 7.5 lbs/US gallon   |
| Dry to touch:               | 2-3 hours at 20°C/68°F<br>4-6 hours at 10°C/50°F   |
| Dry to sand:                | 6 (app) hours at 20°C/68°F<br>12 (app) hours at 10°C/50°F  |
| V.O.C.:                     | 440 g/litre - 3.7 lbs/US gallon  |

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |   |
|--------------------------------|---|
| Application method:            | Best results will be obtained with a flat varnish brush or paint pad. Spray application is possible with most types of spray equipment after thinning, but this application method is mainly subject to specific local conditions, so no general guidelines can be given. Gloss is dependent on film thickness for which reason it is important to apply the recommended 25 micron/1 mil. |
| Thinner (max.vol.):            | HEMPEL'S THINNER 08230 (See REMARKS overleaf)   |
| Cleaning of tools:             | HEMPEL'S THINNER 08230  |
| Indicated film thickness, dry: | 25 micron/ 1 mil  |
| Indicated film thickness, wet: | 50 micron/2 mils  |
| Recoat interval, min:          | 6 hours (20°C/68°F)<br>12 hours (10°C/50°F)   |
| Recoat interval, max:          | 48 hours (20°C/68°F) (See REMARKS overleaf)<br>4 days (10°C/50°F) (See REMARKS overleaf)  |

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued: April 2003

**HEMPEL'S SILK VARNISH 224, 02240**

|                         |  |
|-------------------------|--|
| SURFACE PREPARATION:    | <b>Priming with HEMPEL'S MARINE VARNISH 222:</b> Please see data sheet for HEMPEL'S MARINE VARNISH 222.<br>After careful sanding apply 1-2 coats of HEMPEL'S SILK VARNISH 224.<br><b>Previously varnished wood:</b> Wash surface with suitable cleaning agent. Do not use detergents unless they are removed completely, as otherwise residues can spoil the drying properties and give adhesion problems. Proceed as for new wood.<br><b>Note:</b> Ammonia water may discolour oak, mahogany and teak.                  |
| APPLICATION CONDITIONS: | The surface must be completely clean and dry and the temperature should preferably be above 5°C/41°F. Do not apply in strong sunlight, on hot surfaces, or under humid conditions. The temperature of the surface must be above the dew point to avoid condensation. The moisture content in the wood should not exceed 16%. In confined spaces provide adequate ventilation during application and drying. Varnishing should be finished 3-4 hours at 20°C/68°F, 6-8 hours at 10°C/ 50°F, at the latest before dewfall. |
| SUBSEQUENT COAT:        | None.  |
| REMARKS:                | When diluting with THINNER 08230, stir carefully, do not shake the can, as this will produce airbubbles in the varnish. If maximum recoat interval is exceeded, rub down surface to ensure adhesion.   |
| Note:                   | <b>The information given in the Technical Data Sheet is intended for commercial use.</b>   |
| ISSUED:                 | April 2003 - 0224000000CS001<br>HEMPEL A/S   |

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# Product Data

## HEMPEL'S IMPREG 1

02410

**Description:** HEMPEL'S IMPREG 1 is a clear alkyd oil based wood preservative. Good penetration and wood-preserving properties.

**Recommended use:** As impregnation for wooden boats and hardwood above the waterline. Excellent to saturate wood before application of HEMPEL'S IMPREG 2.

**Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

Colours/Shade nos: Transparent/00000  
Finish: Transparent (See REMARKS overleaf)  
Volume solids, % 27 ± 1  
Theoretical spreading rate: See REMARKS overleaf  
Flash point: 38°C/100°F  
Specific gravity: 0.8 kg/litre - 6.7 lbs/US gallon  
Dry to touch: 6-8 hours at 20°C/68°F  
12-16 hours at 10°C/50°F  
V.O.C.: 575 g/litre - 4.8 lbs/US gallon

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

Application method: Brush  
Thinner (max. vol.): HEMPEL'S THINNER 08230 (20%)  
Cleaning of tools: HEMPEL'S THINNER 08230  
Indicated film thickness: Not relevant (see REMARKS overleaf)  
Recoat interval, min: 24 hours (20°C/68°F)  
48 hours (10°C/50°F)  
Recoat interval, max: None

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued: April 2003

**HEMPEL'S IMPREG 1, 02410**

|                         |   |
|-------------------------|---|
| SURFACE PREPARATION:    | <b>Untreated wood:</b><br>Remove any oil, grease etc. with HEMPEL'S YACHT CLEANER 67601, hose down with clean fresh water. Allow to dry and abrade the surface to remove any loose material. Rough surfaces may possibly be grinded with paper no. 120, remove dust.<br><b>Previously treated wood:</b><br>Remove any oil, grease, etc. with HEMPEL'S YACHT CLEANER 67601. Hose down the surface with clean fresh water, allow to dry. Remove any loose material.                                       |
| APPLICATION CONDITIONS: | The surface should be completely clean and dry. Apply only in dry weather and at temperatures above 5°C/41°F. The temperature of the surface should be above the dew point to avoid condensation. Do not apply in strong sunlight, on hot surfaces, or under humid conditions. The temperature of the surface must be above the dew point to avoid condensation. The moisture content in the wood should not exceed 16%. In confined spaces provide adequate ventilation during application and drying. |
| SUBSEQUENT COAT:        | HEMPEL'S IMPREG 2.  |
| REMARKS:                | Apply HEMPEL'S IMPREG 1 abundantly wet in wet with a brush, normally 3-6 coats depending on the porosity of the wood. Allow the wood to absorb the oil for some minutes before any surplus is removed with clean lint-free rags to avoid a glossy film after drying. Depending on porosity of wooden surface, practical consumption will accordingly correspond to a spreading rate of 3-6 sq.m per litre.<br><b>Used rags should be burned or put into water due to the risk of autoignition</b>       |
| Note:                   | <b>The information given in the Product Data Sheet is intended for professional use.</b>  |
| ISSUED:                 | April 2003 - 0241000000CS002<br>HEMPEL A/S  |

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# Product Data

## HEMPEL'S IMPREG 2

02420

|                             |   |
|-----------------------------|---|
| <b>Description:</b>         | HEMPEL'S IMPREG 2 is a quick-drying, clear urethane alkyd varnish. It has good resistance to seawater, sunlight and adverse weather conditions. |
| <b>Recommended use:</b>     | On new wood as well as on previously varnished wood, interior and exterior, above the waterline.  |
| <b>Availability:</b>        | Subject to confirmation.  |
| <b>PHYSICAL CONTANTS:</b>   |   |
| Colours/Shade nos:          | Transparent/00000   |
| Finish:                     | Glossy  |
| Volume solids, %:           | 48 ± 1  |
| Theoretical spreading rate: | 19.2 m <sup>2</sup> /litre - 25 micron<br>770 sq.ft./US gallon - 1 mil  |
| Flash point:                | 38°C/100°F  |
| Specific gravity:           | 0.9 kg/litre - 7.5 lbs/US gallon  |
| Dry to touch:               | 6 hours at 20°C/68°F<br>12 hours at 10°C/50°F   |
| V.O.C.:                     | 415 g/litre - 3.4 lbs/US gallon   |

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |   |
|--------------------------------|---|
| Application method:            | Best results will be obtained with a flat varnish brush or paint pad. Spray application is possible with most types of spray equipment after thinning, but this application method is mainly subject to specific local conditions, so no general guidelines can be given. |
| Thinner (max. vol.):           | HEMPEL'S THINNER 08230 (20%) (See REMARKS overleaf)   |
| Cleaning of tools:             | HEMPEL'S THINNER 08230  |
| Indicated film thickness, dry: | 25 micron/1 mil   |
| Indicated film thickness, wet: | 50 micron/2 mils  |
| Recoat interval, min:          | 12 hours (20°C/68°F)<br>24 hours (10°C/50°F)  |
| Recoat interval, max:          | None (See REMARKS overleaf)   |

|                |  |
|----------------|--|
| <b>Safety:</b> | Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas. |
|----------------|--|

Issued: April 2003

**HEMPEL'S IMPREG 2, 02420**

|                         |  |
|-------------------------|--|
| SURFACE PREPARATION:    | <p><b>New wood (except plywood and teak):</b> Sanding (remove dust). Saturate the dry surface completely with HEMPEL'S IMPREG 1. However, any surplus to be removed. Apply 4 coats of HEMPEL'S IMPREG 2. To obtain a smooth surface, sanding with sandpaper of grain size 320 between coats is recommended (remove dust).</p> <p><b>Plywood:</b> Sanding (remove dust). Seal off with HEMPADUR SEALER 599 (avoid formation of a continuous layer on the surface). Continue as for other types of new wood.</p> <p><b>Teak:</b> Sanding (remove dust). Degrease the surface thoroughly with HEMPEL'S DEGREASER 99611. Continue as for other types of new wood.</p> <p><b>Previously varnished wood:</b> Wash surface with suitable cleaning agent. Do not use detergents unless they are removed completely, as otherwise residues can spoil the drying properties and give adhesion problems. Grind the surface with sandpaper grain size 220. For exposed bare wood proceed as for new wood with HEMPEL'S IMPREG 1.</p> <p><b>Note:</b> Ammonia water may discolour oak, mahogany and teak.</p> |
| APPLICATION CONDITIONS: | <p>The surface must be completely clean and dry and the temperature should preferably be above 5°C/41°F. The temperature of the surface should be above the dew point to avoid condensation. Do not apply in strong sunlight, on hot surfaces, or under humid conditions. The temperature of the surface must be above the dew point to avoid condensation. The moisture content in the wood should not exceed 16%. In confined spaces provide adequate ventilation during application and drying. Varnishing should be finished 3-4 hours at 20°C/68°C, 6-8 hours at 10°C/50°F, before dew fall at the latest.</p>  |
| SUBSEQUENT COAT:        | None.  |
| REMARKS:                | <p>When diluting with THINNER 08230, stir carefully, do not shake the can, as this will produce airbubbles in the varnish.</p> <p>HEMPEL'S IMPREG 2 is dry for sanding after approx. 12 hours at 20°C/68°F, approx. 24 hours at 10°C/50°F.</p>   |
| Recoating:              | For optimum performance, max 2 days at 20°C/68°F, 4 days at 10°C/50°F, between coats are recommended.  |
| Note:                   | <b>The information given in the Technical Data Sheet is intended for commercial use.</b>   |
| ISSUED:                 | April 2003 - 0242000000CS002<br>HEMPEL A/S   |

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# Product Data

## HEMPEL'S POLYVARNISH 510

05100

BASE 05109 with CURING AGENT 95370

|                         |   |
|-------------------------|---|
| <b>Description:</b>     | HEMPEL'S POLYVARNISH 510 is a clear non-yellowing two-component polyurethane varnish. It gives a durable, mirrorlike finish, resistant to weathering. |
| <b>Recommended use:</b> | Above the waterline, interior and exterior, on teak, plywood and other wood which does not "work" too much.   |
| <b>Availability:</b>    | Subject to confirmation.  |

### PHYSICAL CONSTANTS:

|                             |   |
|-----------------------------|---|
| Colours/Shade nos:          | Transparent/00000   |
| Finish:                     | High-gloss  |
| Volume solids, %:           | 50 ± 1  |
| Theoretical spreading rate: | 12.5 m <sup>2</sup> /litre - 40 micron<br>501 sq.ft./US gallon - 1.6 mils |
| Flash point:                | 35°C/95°F   |
| Specific gravity:           | 1.1 kg/litre - 9.2 lbs/US gallon  |
| Dry to touch:               | 6-8 hours at 20°C/68°F<br>12-16 hours at 10°C/50°F                        |
| Dry to sand:                | 24 (app) hours at 20°C/68°F<br>48 (app) hours at 10°C/50°F                |
| Fully cured:                | 7 days at 20°C/68°F<br>14 days at 10°C/50°F                               |
| V.O.C.:                     | 500 g/litre - 4.2 lbs/US gallon   |

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |  |
|--------------------------------|--|
| Mixing ratio for 05100:        | Base 05109 : Curing agent 95370<br>2 : 1 by volume   |
| Application method:            | Best results will be obtained with a flat varnish brush. Air spray application is possible after thinning (See REMARKS overleaf) |
| Thinner (max.vol.):            | HEMPEL'S THINNER 08710 or 08510 (See REMARKS overleaf)   |
| Pot life:                      | 5 hours (20°C/68°F)<br>10 hours (10°C/50°F)  |
| Cleaning of tools:             | HEMPEL'S THINNER 08710 or 08510  |
| Indicated film thickness, dry: | 40 micron/1.6 mils   |
| Indicated film thickness, wet: | 100 micron/4 mils  |
| Recoat interval, min:          | 16 hours (20°C/68°F)<br>32 hours (10°C/50°F)   |
| Recoat interval, max:          | 5 days (20°C/68°F) (See REMARKS overleaf)<br>10 days (10°C/50°F) (See REMARKS overleaf)  |

|                |  |
|----------------|--|
| <b>Safety:</b> | Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas. |
|----------------|--|

Issued: April 2003

**HEMPEL'S POLYVARNISH 510**

|                            |   |
|----------------------------|---|
| SURFACE:<br>PREPARATION:   | <p><b>New wood (except plywood and teak):</b> Sanding (remove dust). Apply one coat of HEMPEL'S POLYVARNISH 510 thinned with 25-50% THINNER 08710. Apply a second coat of HEMPEL'S POLYVARNISH 510 thinned 5-10%. Sanding (remove dust). Finally apply 2-3 coats of HEMPEL'S POLYVARNISH 510 undiluted.</p> <p><b>Plywood:</b> Sanding (remove dust). Seal off with HEMPADUR SEALER 599 (avoid formation of a continuous layer on the surface). Continue as for other types of new wood.</p> <p><b>Teak:</b> Sanding (remove dust). Degrease the surface thoroughly with HEMPEL'S DEGREASER 99611. Continue as for other types of new wood.</p> <p><b>Previously varnished wood:</b> If the old varnish of other type is hard and intact, and more than one year old, it may be possible to apply HEMPEL'S POLYVARNISH 510 on top. It is advisable first to try on a small area. Wash the surface with a solution of one part ammonia water in six parts of fresh water. Do not use detergents unless they are removed completely, as otherwise residues may have an adverse influence on the curing properties and the adhesion of the varnish. Sand the old varnish. Touch up bare spots with HEMPEL'S POLYVARNISH 510 diluted 25-50% with HEMPEL'S THINNER 08710. Proceed as for new wood, omitting the first thinned coats.</p> <p><b>Note:</b> Ammonia water may discolour oak, mahogany and teak.</p>   |
| APPLICATION<br>CONDITIONS: | <p>The surface must be completely clean and dry. Do not apply in strong sunlight, on hot surfaces, under humid conditions or at temperatures below 2°C/36°F. The temperature of the surface must be above the dew point to avoid condensation. High relative humidity or condensation within the first 24 hours after application at 20°C/68°F - 48 hours at 10°C/50°F, may impair the film formation. The moisture content of the wood should not exceed 16%. In confined spaces provide adequate ventilation during application and drying.</p>   |
| SUBSEQUENT<br>COAT:        | None.   |
| REMARKS:                   | <p><b>Note:</b> CURING AGENT 95370 reacts with humidity in the air which can render it unfit for use. Do not open can until immediately before use. Also traces of water in the mixed varnish will shorten the pot life and give film defects. When diluting with THINNER 08710 stir carefully, do not shake the can as this will produce airbubbles in the varnish. If only part of the CURING AGENT is to be used, do not remove the lid, but make two holes in the bottom of the can. After use, close the holes tightly with tape. The cans should be opened with care as there may be risk of overpressure, especially in the can containing the CURING AGENT. Do not fix the lid on cans containing mixed paint.</p> <p>The amount of thinner depends on the application conditions: Spraying methods, temperatures, ventilation and substrate. As a basis for the amount of thinner, 15-20% by airless spraying is recommended. Larger amounts than 25 vol% may be relevant under extreme conditions. When applying by air spray, thin to 17-20 seconds/DIN4 (approx. 35 vol%). Use lowest possible air pressure and a small nozzle. The best finish by spray application is obtained by applying a mist coat before application of the rest of the specified dry film thickness. Thin with HEMPEL'S THINNER 08510 when applying by spray.</p> <p>It is very important that the surface is absolutely clean before overcoating. In case of doubt and/or in case of long recoating intervals it is recommended to sand the old surface.</p> |
| Note:                      | <b>The information given in the Technical Data Sheet is intended for commercial use.</b>  |
| ISSUED:                    | April 2003 - 0510000000CS003<br>HEMPEL A/S  |

***This Product Data Sheet supersedes those previously issued. For definition and scope, see explanatory notes to applicable Product Data Sheets.***

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***Product data are subject to change without notice and become void five years from the date of issue.***



# Product Data

## HEMPEL'S SINGLE-PACK POLYVARNISH 520

05200

|                             |  |
|-----------------------------|--|
| <b>Description:</b>         | HEMPEL'S SINGLE-PACK POLYVARNISH 520 is a moisture-curing, one-component polyurethane varnish. It gives a durable finish, resistant to weathering. |
| <b>Recommended use:</b>     | Above the waterline, interior and exterior, on teak, plywood and other wood which does not "work" too much.  |
| <b>Availability:</b>        | Subject to confirmation.   |
| <b>PHYSICAL CONSTANTS:</b>  |  |
| Colours/Shade nos:          | Transparent/00000  |
| Finish:                     | Glossy   |
| Volume solids, %:           | 53 ± 1   |
| Theoretical spreading rate: | 13.3 m <sup>2</sup> /litre - 40 micron<br>531 sq.ft./US gallon - 1.6 mils  |
| Flash point:                | 36°C/97°F  |
| Specific gravity:           | 1.1 kg/litre - 9.2 lbs/US gallon   |
| Dry to touch:               | 2 (app) hours at 20°C/68°F (40-70% RH)<br>4 (app) hours at 10°C/50°F (40-70% RH)   |
| Dry to sand:                | 4 (app) hours at 20°C/68°F (40-70% RH)<br>8 (app) hours at 10°C/50°F (40-70% RH)   |
| Fully cured:                | 7 days at 20°C/68°F (40-70% RH)<br>14 days at 10°C/50°F (40-70% RH)  |
| V.O.C.:                     | 440 g/litre - 3.7 lbs/US gallon  |

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |  |
|--------------------------------|--|
| Application method:            | Best results will be obtained with a flat varnish brush. Air spray application is possible after thinning (See REMARKS overleaf) |
| Thinner (max.vol.):            | HEMPEL'S THINNER 08710 or 08510 (See REMARKS overleaf)   |
| Cleaning of tools:             | HEMPEL'S THINNER 08710 or 08510  |
| Indicated film thickness, dry: | 40 micron/1.6 mils   |
| Indicated film thickness, wet: | 75 micron/3 mils   |
| Recoat interval, min:          | 4 hours (20°C/68°F) (40-70% RH)<br>8 hours (10°C/50°F) (40-70% RH)   |
| Recoat interval, max:          | 24 hours (20°C/68°F) (40-70% RH) (See REMARKS overleaf)<br>48 hours (10°C/50°F) (40-70% RH) (See REMARKS overleaf)               |

|                |  |
|----------------|--|
| <b>Safety:</b> | Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas. |
|----------------|--|

Issued: April 2003

**HEMPEL'S SINGLE-PACK POLYVARNISH 520**

|                            |   |
|----------------------------|---|
| SURFACE:<br>PREPARATION:   | <p><b>New wood (except plywood and teak):</b> Sanding (remove dust). Apply one coat of HEMPEL'S SINGLE-PACK POLYVARNISH 520 thinned with 25-50% THINNER 08710. Apply a second coat of HEMPEL'S SINGLE-PACK POLYVARNISH 520 thinned 5-10%. Sanding (remove dust). Finally apply 2-3 coats of HEMPEL'S SINGLE-PACK POLYVARNISH 520 undiluted.</p> <p><b>Plywood:</b> Sanding (remove dust). Seal off with HEMPADUR SEALER 599 (avoid formation of a continuous layer on the surface). Continue as for other types of new wood.</p> <p><b>Teak:</b> Sanding (remove dust). Degrease the surface thoroughly with HEMPEL'S DEGREASER 99611. Continue as for other types of new wood.</p> <p><b>Previously varnished wood:</b> If the old varnish of other type is hard and intact, and more than one year old, it may be possible to apply HEMPEL'S SINGLE-PACK POLYVARNISH 520 on top. It is advisable first to try on a small area. Wash the surface with a solution of one part ammonia water in six parts of fresh water. Do not use detergents unless they are removed completely, as otherwise residues may have an adverse influence on the curing properties and the adhesion of the varnish. Sand the old varnish. Touch up bare spots with HEMPEL'S SINGLE-PACK POLYVARNISH 520 diluted 25-50% with HEMPEL'S THINNER 08710. Proceed as for new wood, omitting the first thinned coats.</p> <p><b>Note:</b> Ammonia water may discolour oak, mahogany and teak.</p> |
| APPLICATION<br>CONDITIONS: | <p>The surface must be completely clean and dry. Do not apply in strong sunlight, on hot surfaces, under humid conditions or at temperatures below 2°C/36°F. Relative humidity should be below 70% for good film formation, and the temperature of the surface must be above the dew point to avoid condensation. High relative humidity or condensation within the first 24 hours after application at 20°C/68°F, 48 hours at 10°C/50°F, may impair the film formation. The moisture content of the wood should not exceed 16%. In confined spaces provide adequate ventilation during application and drying.</p>   |
| SUBSEQUENT<br>COAT:        | None.   |
| REMARKS:                   | <p><b>Note:</b> HEMPEL'S SINGLE-PACK POLYVARNISH 520 reacts with humidity in the air which can render it unfit for use. Do not open can until immediately before use. <b>The cans should be opened with care as there may be risk of overpressure.</b> When diluting with THINNER 08710 stir carefully, do not shake the can as this will produce airbubbles in the varnish. If only part of HEMPEL'S SINGLE-PACK POLYVARNISH 520 is to be used, do not remove the lid, but make two holes in the bottom of the can. After use, close the holes tightly with tape.</p> <p>The amount of thinner depends on the application conditions: Spraying methods, temperatures, ventilation and substrate. As a basis for the amount of thinner, 15-20% by airless spraying is recommended. Larger amounts than 25 vol% may be relevant under extreme conditions. When applying by air spray, thin to 17-20 seconds/DIN4 (approx. 35 vol%). Use lowest possible air pressure and a small nozzle. The best finish by spray application is obtained by applying a mist coat before application of the rest of the specified dry film thickness. Thin with HEMPEL'S THINNER 08510 when applying by spray.</p> <p>It is very important that the surface is absolutely clean before overcoating. In case of doubt and/or in case of long recoating intervals it is recommended to sand the old surface.</p>   |
| Note:                      | <b>The information given in the Technical Data Sheet is intended for commercial use.</b>  |
| ISSUED:                    | April 2003 - 0520000000CR002<br>HEMPEL A/S  |

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# Product Data

## HEMPADUR® SPECIAL ADHESIVE 05674

CURING AGENT 95670

**Description:** HEMPADUR ADHESIVE 05674 is a two-component polyamine adduct cured epoxy glue. Low viscosity and with good penetration properties.

**Recommended use:** For gluing of metal, china, sandwich constructions, polypropylen, deck covering, etc.

**Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

Finish: Glossy  
Colours/Shade nos: Transparent/00000  
Volume solids, %: 92 ± 1  
Theoretically spreading rate: See REMARKS overleaf  
Flash point: 35°C/95°F  
Specific gravity: 1.1 kg/litre - 9.2 lbs/US gallon  
Dry to touch: 6-8 hours at 20°C/68°F  
15-20 hours at 10°C/50°F  
Fully cured: 7 days at 20°C/68°F  
14 days at 10°C/50°F  
V.O.C.: 80 g/litre - 0.7 lbs/US gallon

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

Mixing ratio: Base 05679 : Curing agent 95670  
1 : 1 by volume  
Application method: Brush, Spatula or similar  
Thinner (max.vol.): Do not dilute  
Pot life: 2 hours (20°C/68°F)  
4 hours (10°C/50°F)  
Cleaning of tools: HEMPEL'S THINNER 08450 or HEMPEL'S DEGREASER 99611

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued: April 2003

**HEMPADUR SPECIAL ADHESIVE 05674**SURFACE  
PREPARATION:

**Glass fibre:** All loose/defect gel coat must be removed and any absorbed moisture must have evaporated before applying HEMPADUR SPECIAL ADHESIVE 05674.

**Ferro-cement:** Any loose surface layer (e.g. laitance) must be removed by sanding or abrasive sweeping. The moisture content of the concrete must be below 3%.

**Wood:** The wood must be completely dry, moisture content below 16%, and should not be primed with any ordinary priming oils or commercial antimould fluids. Only copper naphthenate based impregnating fluid can be used. Let it dry minimum 24 hours (20°C/68°F). As a general rule, the surface must be clean, free from rust, dirt, loose matter, oil, grease etc.

**Porous, absorbing surfaces** should be sealed with HEMPADUR SEALER 599 or with HEMPADUR SPECIAL ADHESIVE 05674 diluted approximately 50% with HEMPEL'S THINNER 08450.

APPLICATION  
CONDITIONS:

The surface must be completely clean and dry and its temperature at least 3°C/5°F above the dew point. Use only where application and curing can proceed at temperatures above 10°C/50°F. The temperature of the surface and that of the glue itself must also be above this limit.

For porous surface apply the glue on both sides before joining. For deck coverings apply the glue only on the deck surface and allow the glue to be tacky before mounting. In other cases the glued parts have to be held tightly together for 24 hours at 20°C/68°F, 48 hours at 10°C/50°F. Any surplus of the glue must be removed immediately by using HEMPEL'S THINNER 08450.

## REMARKS:

Do not mix more than what is to be used within 2 hours at 20°C/68°F - 4 hours at 10°C/50°F. Pour the Curing Agent into the Base while stirring. The practical spreading rate is approximately 10 m<sup>2</sup>/litre (400 sq.ft/US gallon), however, much depending on porosity and roughness of the surface and method of application.

## Note:

**The information given in the Technical Data Sheet is intended for commercial use.**

## ISSUED:

April 2003 - 0567000000C0005  
HEMPEL A/S

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# Product Data

## HEMPADUR® SEALER 599

05991

CURING AGENT 95040

**Description:** HEMPADUR SEALER 599 is a two-component epoxy-polyamide varnish with low viscosity and good penetration ability.

**Recommended use:** For saturation of glass fibre laminate, when gel coat has been removed (repair of osmosis damage). For priming of ferro-cement boats and boats of wood that can absorb the sealer.

**Availability:** Subject to confirmation.

### PSYICAL CONSTANTS:

Colours/Shade nos: Transparent/00000  
Volume solids, %: 29 ± 1  
Theoretical spreading rate: See REMARKS overleaf  
Flash point: 25°C/77°F  
Specific gravity: 0.9 kg/litre - 7.5 lbs/US gallon  
Dry to touch: 3-4 hours at 20°C/68°F  
6-8 hours at 10°C/50°F  
Fully cured: 7 days at 20°C/68°F  
14 days at 10°C/50°F  
V.O.C.: 610 g/litre - 5.1 lbs/US gallon

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

Mixing ratio for 05991: Base 05999 : Curing agent 95040  
4 : 1 by volume  
Application method: Brush  
Thinner (max. vol.): 08450 (5%)  
Pot life: 8 hours (20°C/68°F)  
Cleaning of tools: HEMPEL'S THINNER 08450 or HEMPEL'S DEGREASER 99611  
Indicated film thickness: The sealer must penetrate into the substrate, saturate and seal porous material, and not leave a glossy surface film.  
Recoat interval, min.: 4 hours (20°C/68°F)  
8 hours (10°C/50°F)  
Recoat interval, max.: None (See REMARKS overleaf)

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued: April 2003

**HEMPADUR SEALER 599**

|                         |   |
|-------------------------|---|
| SURFACE PREPARATION:    | <b>Glass fibre:</b> All loose/defect gel coat must be removed and any absorbed moisture must have evaporated before applying HEMPADUR SEALER 599.<br><b>Ferro-cement:</b> Any loose surface layer (eg laitance) must be removed by sanding or abrasive sweeping. The moisture content of the concrete must be below 3%.<br><b>Wood:</b> The wood must be completely dry, moisture content below 16%, and should not be primed with any ordinary priming oils or commercial antimould fluids. The wood must be capable of absorbing the sealer completely.   |
| APPLICATION CONDITIONS: | The surface must be completely clean and dry and its temperature at least 3°C/5°F above the dew point. Use only where application and curing can proceed at temperatures above 10°C/50°F. The temperature of the surface and that of the sealer itself must also be above this limit. Brush is recommended to ensure the sealer being worked into the substrate. Absorbing surfaces must be treated several times until saturation. In any case a glossy surface must not appear and such a surplus of HEMPADUR SEALER 599 must be removed by sanding before painting takes place. In confined spaces provide adequate ventilation during application and drying. |
| SUBSEQUENT COAT:        | HEMPEL'S LIGHT PRIMER 45551 or according to specification.  |
| REMARKS:                | HEMPADUR SEALER 599 is used for saturation of absorbent material. For practical purposes, approx. 10 m <sup>2</sup> /litre (410 sq.ft./US gallon) is indicated depending on surface roughness, porosity of the surface and application method.<br>When mixing add the curing agent to the base while stirring. Let the mixture react for 15 minutes before use. Only the mixture must be diluted.<br>No maximum recoating interval demands a flat surface with no surplus of HEMPADUR SEALER 599. Otherwise sanding is necessary.   |
| Note:                   | <b>The information given in the Technical Data Sheet is intended for commercial use.</b>  |
| ISSUED:                 | April 2003 - 0599000000C0005<br>HEMPEL A/S  |

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# Product Data

## HEMPEL'S THINNERS 08...

HEMPEL PAINT is produced and supplied in such a way that thinning is normally not necessary provided the paint is properly mixed/stirred. However, if the paint is to be applied in a low film thickness (for instance as a "sealer coat") or if the paint has become too thick, e.g. in cold weather, the HEMPEL THINNER(s) indicated on the product data sheet may be added to obtain a consistency most suitable for application. As a general rule, thinning should be kept at a minimum as the quality of the paint work will suffer from too liberal thinning. However, if application is to take place at high temperatures (air and/or steel), thinning may even beyond the limits mentioned on the data sheets exceptionally be necessary in order to avoid dry-spray and poor film formation.

HEMPEL'S THINNERS are blended to give the best results with regard to brushability, spray properties, etc.

In some cases ordinary solvents may substitute. As such products are beyond our control, we disclaim any responsibility for the results.

In each case the respective product data sheet and - when available - the APPLICATION INSTRUCTIONS should be consulted. As regards the use of THINNERS for cleaning of tools, see REMARKS overleaf.

| HEMPEL'S THINNER NO. | FLASH POINT (Setaflash closed cup) | EXAMPLES OF GENERAL USE  |
|----------------------|------------------------------------|--|
| 08080                | 25°C/77°F                          | HEMPEL'S ANTIFOULINGS:<br>71000 BLAKE'S CRUISING<br>7110E HEMPEL'S MILLE OCEAN<br>7110H HEMPEL'S MILLE SOLO<br>71150 HEMPEL'S MILLE WHITE<br>7120D HEMPEL'S ALU SAFE<br>71350 HEMPEL'S MILLE RACING<br>71400 HEMPEL'S MILLE LIGHT<br>7142E HEMPEL'S HARD RACING OCEAN<br>7142H HEMPEL'S HARD RACING SOLO<br>71600 HEMPEL'S MILLE DYNAMIC<br>71700 HEMPEL'S MILLE DYNAMIC<br>76111 HEMPEL'S YACHT CLASSIC<br>76300 HEMPEL'S HARD RACING WHITE<br>76480 HEMPEL'S HARD RACING |
| 08230                | 32°C/90°F                          | Brush thinner where THINNER 08080 is specified as spray thinner only. Thinner for one-pack varnishes. ALKYD PRIMER 13201, HEMPEL'S YACHT PRIMER 26030, FARVOLIN 51120, YACHT ENAMEL 52182.   |
| 08450                | 23°C/73°F                          | HEMPEL'S LIGHT PRIMER 45551. Cleaning of tools used for SPECIAL ADHESIVE 05674, HEMPADUR SEALER 599 and for HIGH PROTECT 35651.  |
| 08510                | 3°C/37°F<br>HIGHLY<br>FLAMMABLE    | Spray thinner for POLYVARNISH 510, SINGLE-PACK POLYVARNISH 520 and POLY BEST 55551.  |
| 08710                | 47°C/116°F                         | Brush thinner for POLYVARNISH 510, SINGLE-PACK POLYVARNISH 520 and POLY BEST 55551.  |

Issued:

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**HEMPEL'S THINNERS 08..**

|          |  |   |
|----------|--|---|
| REMARKS: | Tools can usually be cleaned with the THINNER prescribed for the product or as described in the product data sheet.  |   |
| Note:    | <b>The information given in the Technical Data Sheet is intended for commercial use.</b>   |   |
| SAFETY:  | Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas. |   |
| ISSUED:  | April 2003<br>HEMPEL A/S   | 0808000000C0004<br>0823000000C0005<br>0845000000C0009<br>0851000000C0002<br>0871000000C0002 |

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***Product data are subject to change without notice and become void five years from the date of issue.***



# Product Data

## HEMPEL'S SEATECH® GLOSS VARNISH 901

09010

|                             |  |
|-----------------------------|--|
| <b>Description:</b>         | HEMPEL'S SEATECH GLOSS VARNISH 901 is quick drying, water-borne, one-component, clear modified polyurethane varnish, which forms a tough and durable film. |
| <b>Recommended use:</b>     | On new as well as previously varnished wood, interior and exterior and above the waterline.  |
| <b>Availability:</b>        | Subject to confirmation.   |
| <b>PHYSICAL CONSTANTS:</b>  |  |
| Colour/Shade nos:           | Transparent/00000  |
| Finish:                     | Glossy   |
| Volume solids, %:           | 35 ± 1   |
| Theoretical spreading rate: | 11.7 m <sup>2</sup> /litre - 30 micron   |
| spreading rate:             | 468 sq.ft./US gallon - 1.2 mils  |
| Flash point:                | > 100°C/212°F  |
| Specific gravity:           | 1.0 kg/litre - 8.3 lbs/US gallon   |
| Dry to touch:               | 1-2 hours at 20°C/68°F<br>2-4 hours at 10°C/50°F   |
| Fully cured:                | 7 days at 20°C/68°F<br>14 days at 10°C/50°F  |
| V.O.C. (water reduced):     | 220 g/litre - 1.9 lbs/US gallon  |
| V.O.C.:                     | 100 g/litre - 0.8 lbs/US gallon  |

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |   |                   |
|--------------------------------|---|-------------------|
| Application method:            | Airless spray   | Brush/roller      |
| Thinner (max.vol.):            | Fresh water (5%)  | Fresh water (10%) |
| Nozzle orifice:                | .013"-.017"   |                   |
| Nozzle pressure:               | 130 bar/1900 psi<br><i>(Airless spray data are indicative and subject to adjustment)</i>                |                   |
| Cleaning of tools:             | Fresh water <i>(See REMARKS overleaf)</i>   |                   |
| Indicated film thickness, dry: | 30 micron/1.2 mils  |                   |
| Indicated film thickness, wet: | 100 micron/4 mils   |                   |
| Recoat interval, min:          | 2 hours (20°C/68°F)<br>4 hours (10°C/50°F)  |                   |
| Recoat interval, max:          | 6 hours (20°C/68°F) <i>(See REMARKS overleaf)</i><br>12 hours (10°C/50°F) <i>(See REMARKS overleaf)</i> |                   |

|                |  |
|----------------|--|
| <b>Safety:</b> | Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas. |
|----------------|--|

Issued: April 2003

**HEMPEL'S SEATECH GLOSS VARNISH 901**

|                         |   |
|-------------------------|---|
| SURFACE PREPARATION:    | <p><b>New wood:</b> Apply one coat of HEMPEL'S SEATECH GLOSS VARNISH 901 thinned 20% with fresh water. Apply a second coat of HEMPEL'S SEATECH GLOSS VARNISH 901 thinned 5-10%. Finally apply 3-5 coats of HEMPEL'S SEATECH GLOSS VARNISH 901 undiluted.</p> <p>To obtain a smooth finish, rub with dry or wet fine sandpaper and dust off between coats. Dry to sand after 2-3 hours at 20°C/68°F, 4-6 hours at 10°C/50°F.</p> <p><b>Previously varnished wood:</b> Wash the surface with HEMPEL'S YACHT CLEANER 67601. Remove any residues carefully as any remains of the cleaning agent can otherwise cause adhesion problems. Flatten the old surface with sandpaper (no. 150). Depending on the condition of the surface, apply 3-5 coats of HEMPEL'S SEATECH GLOSS VARNISH 901 undiluted.</p>                          |
| APPLICATION CONDITIONS: | <p>Use only where application and drying can proceed at temperatures above 5°C/41°F, preferably above 10°C/50°F.</p> <p><b>Apply only on a clean and dry surface</b> having a temperature above the dew point to avoid condensation.</p> <p>During application cover for direct sunlight and wind to avoid brush marks.</p> <p><b>Relative humidity:</b> During drying below 80%, preferably between 40-60%.</p> <p>Sufficient ventilation during application and drying is necessary.</p> <p>During drying it is of the utmost importance that all parts of the painted surfaces are sufficiently ventilated. Ventilation requirements to remove water vapours liberated during application and drying are approximately 75 m<sup>3</sup>/litre of the paint at 20°C/68°F. (Relative humidity of the air supply is 40%).</p> |
| SUBSEQUENT COAT:        | None.   |
| REMARKS:                | <p>Clean tools carefully with fresh water or lukewarm soap water immediately after use.</p> <p>Dried remains of paint can be removed with HEMPEL'S DEGREASER 99611.</p> <p>If the maximum recoat interval is exceeded, rub down the surface to ensure adhesion.</p> <p>Store at temperatures between 5-40°C/41-104°F. Shelf life is reduced at temperatures above 30°C/86°F. Do not expose to frost during storage and transport or before the coating is dry.</p>  |
| Note:                   | <b>The information given in the Technical Data Sheet is intended for commercial use.</b>  |
| ISSUED:                 | April 2003 - 0901000000CR002<br>HEMPEL A/S  |

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# Product Data

## HEMPEL'S SEATECH® SATIN VARNISH 924

09240

|                             |   |
|-----------------------------|---|
| <b>Description:</b>         | HEMPEL'S SEATECH SATIN VARNISH 924 is quick drying, water-borne, one-component, clear polyurethane varnish, which forms a tough and durable film. |
| <b>Recommended use:</b>     | On new as well as previously varnished wood, interior and exterior and above the waterline.   |
| <b>Availability:</b>        | Subject to confirmation   |
| <b>PHYSICAL CONSTANTS:</b>  |   |
| Colour/Shade nos:           | Transparent/00000   |
| Finish:                     | Silk glossy   |
| Volume solids, %:           | 36 ± 1  |
| Theoretical spreading rate: | 12.0 m <sup>2</sup> /litre - 30 micron<br>481 sq.ft./US gallon - 1.2 mils   |
| Flash point:                | > 100°C/212°F   |
| Specific gravity:           | 1.0 kg/litre - 8.3 lbs/US gallon  |
| Dry to touch:               | 1-2 hours at 20°C/68°F<br>2-4 hours at 10°C/50°F  |
| Fully cured:                | 7 days at 20°C/68°F<br>14 days at 10°C/50°F   |
| V.O.C. (water reduced):     | 215 g/litre - 1.8 lbs/US gallon   |
| V.O.C.:                     | 100 g/litre - 0.8 lbs/US gallon   |

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |   |                   |
|--------------------------------|---|-------------------|
| Application method:            | Airless spray   | Brush/roller      |
| Thinner (max.vol.):            | Fresh water (5%)  | Fresh water (10%) |
| Nozzle orifice:                | .013"-.017"   |                   |
| Nozzle pressure:               | 130 bar/1900 psi<br>(Airless spray data are indicative and subject to adjustment)         |                   |
| Cleaning of tools:             | Fresh water (See REMARKS overleaf)  |                   |
| Indicated film thickness, dry: | 30 micron/1.2 mils  |                   |
| Indicated film thickness, wet: | 100 micron/4 mils   |                   |
| Recoat interval, min:          | 2 hours (20°C/68°F)<br>4 hours (10°C/50°F)  |                   |
| Recoat interval, max:          | 6 hours (20°C/68°F) (See REMARKS overleaf)<br>12 hours (10°C/50°F) (See REMARKS overleaf) |                   |

|                |  |
|----------------|--|
| <b>Safety:</b> | Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas. |
|----------------|--|

Issued: April 2003

**HEMPEL'S SEATECH SATIN VARNISH 09240**

|                         |   |
|-------------------------|---|
| SURFACE PREPARATION:    | <p><b>New wood:</b> Apply one coat of HEMPEL'S SEATECH GLOSS VARNISH 901 thinned 20% with fresh water. Apply a second coat of HEMPEL'S SEATECH GLOSS VARNISH 901 thinned 5-10%. Finally apply 1-3 coats of HEMPEL'S SEATECH GLOSS VARNISH 901 undiluted and 2 coats of HEMPEL'S SEATECH SATIN VARNISH 924.</p> <p>To obtain a smooth finish, rub with dry or wet fine sandpaper and dust off between coats. Dry to sand after 2-3 hours at 20°C/68°F, 4-6 hours at 10°C/50°F.</p> <p><b>Previously varnished wood:</b> Wash the surface with suitable cleaning agent. Remove any residues carefully as any remains of the cleaning agent can otherwise cause adhesion problems. Flatten the old surface with sandpaper (no. 150). Depending on the condition of the surface, apply 1-3 coats of HEMPEL'S SEATECH GLOSS VARNISH 901 undiluted and 2 coats of HEMPEL'S SEATECH SATIN VARNISH 924.</p> |
| APPLICATION CONDITIONS: | <p>Use only where application and drying can proceed at temperatures above 5°C/41°F, preferably above 10°C/50°F.</p> <p>Apply only on a clean and dry surface having a temperature above the dew point to avoid condensation.</p> <p>During application cover for direct sunlight and wind to avoid brush marks.</p> <p><b>Relative humidity:</b> During drying below 80%, preferably between 40-60%. Sufficient ventilation during application and drying is necessary.</p> <p>During drying it is of the utmost importance that all parts of the painted surfaces are sufficiently ventilated. Ventilation requirements to remove water vapours liberated during application and drying are approximately 75 m<sup>3</sup>/litre of the paint at 20°C/68°F. (Relative humidity of the air supply is 40%).</p>   |
| SUBSEQUENT COAT:        | None.   |
| REMARKS:                | <p>Clean tools carefully with fresh water or lukewarm soap water immediately after use. Dried remains of paint can be removed with HEMPEL'S DEGREASER 99611.</p> <p>If the maximum recoat interval is exceeded, rub down the surface to ensure adhesion. Store at temperatures between 5-40°C/41-104°F. Shelf life is reduced at temperatures above 30°C/86°F. Do not expose to frost during storage and transport or before the coating is dry.</p>  |
| Note:                   | <b>The information given in the Technical Data Sheet is intended for commercial use.</b>  |
| ISSUED:                 | April 2003 - 0924000000CR002<br>HEMPEL A/S  |

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# Product Data

## HEMPEL'S PLATIN PRIMER 10001

- Description:** HEMPEL'S PLATIN PRIMER 10001 is a modified bituminous primer. Pigmented with aluminium flakes.
- Recommended use:** Maintenance of wooden ship bottoms and as a sealer coat for conventional antifouling paint.
- Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

- Colour/Shade nos: Dark-alu/19930  
 Finish: Semi-flat  
 Volume solids, %: 42 ± 1  
 Theoretical spreading rate: 10.5 m<sup>2</sup>/litre - 40 micron  
 421 sq.ft./US gallon - 1.6 mils  
 Flash point: 25°C/77°F  
 Specific gravity: 1.2 kg/litre - 10.0 lbs/US gallon  
 Dry to touch: 3 (app) hours at 20°C/68°F  
 6 (app) hours at 10°C/50°F  
 V.O.C.: 492 g/litre - 4.1 lbs/US gallon

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

- |                                |   |           |              |
|--------------------------------|---|-----------|--------------|
| Application method:            | Airless spray   | Airspray  | Brush/roller |
| Thinner (max.vol.):            | 08080 (5%)  | 08080 15% | 08080 (5%)   |
| Nozzle orifice:                | .018"-.021"   |           |              |
| Nozzle pressure:               | 150 bar/2200 psi<br>(Airless spray data are indicative and subject to adjustment)       |           |              |
| Cleaning of tools:             | HEMPEL'S THINNER 08081  |           |              |
| Indicated film thickness, dry: | 40 micron/1.6 mils  |           |              |
| Indicated film thickness, wet: | 100 micron/4 mils   |           |              |
| Recoat interval, min:          | 4 hours (20°C/68°F)<br>8 hours (10°C/50°F)  |           |              |
| Recoat interval, max:          | 5 days (20°C/68°F) (See REMARKS overleaf)<br>10 days (10°C/50°F) (See REMARKS overleaf) |           |              |

- Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

**HEMPEL'S PLATIN PRIMER 10001**

|                         |   |
|-------------------------|---|
| SURFACE PREPARATION:    | Careful cleaning is a must. Remove oil and grease etc. with HEMPEL'S YACHT CLEANER 67601. Remove salt and other contaminants by (high pressure) fresh water cleaning. Remove all loose material. Dust off residues. Touch up to full film thickness.        |
| APPLICATION CONDITIONS: | The surface must be clean and dry. Application should only take place in dry weather and the temperature of the surface should be above the dew point to avoid condensation. In confined spaces provide adequate ventilation during application and drying. |
| SUBSEQUENT COAT:        | HEMPEL'S ANTIFOULING CLASSIC 71100 or according to specification.   |
| REMARKS:                | Before overcoating after exposure in contaminated environment, clean the surface thoroughly by (high pressure) fresh water hosing and allow to dry.   |
| Note:                   | <b>The information given in the Technical Data Sheet is intended for commercial use.</b>  |
| ISSUED:                 | April 2003 - 1000119930C0008<br>HEMPEL A/S  |

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# Product Data

## HEMPEL'S ALKYD PRIMER 13201

|                              |   |
|------------------------------|---|
| <b>Description:</b>          | HEMPEL'S ALKYD PRIMER 13201 is a quick-drying, urethane-modified alkyd primer with zinc phosphate pigments.               |
| <b>Recommended use:</b>      | General purpose primer for alkyd systems on well cleaned interior and exterior steel. Not suited for permanent immersion. |
| <b>Service temperatures:</b> | Maximum, dry: 120°C/248°F   |
| <b>Availability:</b>         | Subject to confirmation.  |
| <b>PHYSICAL CONSTANTS:</b>   |   |
| Colours/Shade nos:           | White/10000   |
| Finish:                      | Flat  |
| Volume solids, %:            | 44 ± 1  |
| Theoretical spreading rate:  | 11.0 m <sup>2</sup> /litre - 40 micron<br>441 sq.ft./US gallon - 1.6 mils   |
| Flash point:                 | 31°C/88°F   |
| Specific gravity:            | 1.3 kg/litre - 10.9 lbs/US gallon   |
| Dry to touch:                | 3 (app) hours at 20°C/68°F<br>6 (app) hours at 10°C/50°F  |
| V.O.C.:                      | 450 g/litre - 3.7 lbs/US gallon   |

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |  |             |              |
|--------------------------------|--|-------------|--------------|
| Application method:            | Airless spray  | Air spray   | Brush/Roller |
| Thinner (max.vol.):            | 08230 (5%)   | 08230 (15%) | 08230 (5%)   |
| Nozzle orifice:                | .021"-.023"  |             |              |
| Nozzle pressure:               | 200 bar/2900 psi<br><i>(Airless spray data are indicative and subject to adjustment)</i>             |             |              |
| Cleaning of tools:             | THINNER 08230  |             |              |
| Indicated film thickness, dry: | 40 micron/1.6 mils   |             |              |
| Indicated film thickness, wet: | 100 micron/4 mils  |             |              |
| Recoat interval, min:          | 4 hours (20°C/68°F)<br>8 hours (10°C/50°F)   |             |              |
| Recoat interval, max:          | 3 days (20°C/68°F) <i>(See REMARKS overleaf)</i><br>6 days (10°C/50°F) <i>(See REMARKS overleaf)</i> |             |              |

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

**HEMPEL'S ALKYD PRIMER 13201**

|                         |   |
|-------------------------|---|
| SURFACE PREPARATION:    | <b>New steel:</b> Remove oil and grease, etc. with HEMPEL'S YACHT CLEANER 67601. Remove salt and other contaminants by (high pressure) fresh water cleaning. For repair and touch-up use HEMPEL'S ALKYD PRIMER 13201.<br><b>Maintenance:</b> Remove oil and grease, etc. with suitable detergent. 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. Touch up to full film thickness. |
| APPLICATION CONDITIONS: | As dictated by normal good painting practice.<br>In confined spaces provide adequate ventilation during application and drying.   |
| SUBSEQUENT COAT:        | HEMPEL'S FARVOLIN 51120 or HEMPEL'S YACHT ENAMEL 52182.   |
| REMARKS:                | If the maximum recoat interval is exceeded, roughening of the surface is necessary to ensure intercoat adhesion.<br>Before overcoating after exposure in contaminated environment, clean the surface thoroughly with (high pressure) fresh water and allow to dry.  |
| Note:                   | <b>The information given in the Technical Data Sheet is intended for commercial use.</b>  |
| ISSUED:                 | April 2003 - 1320110000DK300<br>HEMPEL A/S  |

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# Product Data

## HEMPEL'S SEATECH® PRIMER 18502

CURING AGENT 97701

|                             |  |
|-----------------------------|--|
| <b>Description:</b>         | HEMPEL'S SEATECH PRIMER 18502 is a water-borne two-component polyamine cured epoxy primer. |
| <b>Recommended use:</b>     | As a tie coat for water-borne antifoulings.<br>As a primer above waterline.                |
| <b>Availability:</b>        | Subject to confirmation.   |
| <b>PHYSICAL CONSTANTS:</b>  |  |
| Colours/Shade nos:          | Grey/12170   |
| Finish:                     | Semi-flat  |
| Volume solids, %:           | 45 ± 1   |
| Theoretical spreading rate: | 9.0 m <sup>2</sup> /litre - 50 micron<br>361 sq.ft./US gallon - 2 mils                     |
| Flash point:                | > 66°C/151°F   |
| Specific gravity:           | 1.3 kg/litre - 10.8 lbs/US gallon  |
| Dry to touch:               | 4 (app) hours at 20°C/68°F<br>10 (app) hours at 10°C/50°F                                  |
| Fully cured:                | 7 days at 20°C/68°F<br>14 days at 10°C/50°F  |
| V.O.C.:                     | 20 g/litre - 0.2 lbs/US gallon (ASTM D 3960)   |

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |  |
|--------------------------------|--|
| Mixing ratio for 18502:        | Base 18508 : Curing agent 97701<br>3 : 2 by volume   |
| Application method:            | Airless spray                      Brush   |
| Thinner (max.vol.):            | Fresh water (5%)                  Fresh water (5%)   |
| Pot life:                      | 4 hours (20°C/68°F) (See REMARKS overleaf)<br>1 hour (10°C/50°F) (See REMARKS overleaf)    |
| Nozzle orifice:                | .015"-.019"  |
| Nozzle pressure:               | Min. 150 bar/2200 psi<br>(Airless spray data are indicative and subject to adjustment)     |
| Cleaning of tools:             | Fresh water (See REMARKS overleaf)   |
| Indicated film thickness, dry: | 50 micron/2 mils   |
| Indicated film thickness, wet: | 125 micron/5 mils  |
| Recoat interval, min:          | 4 hours (20°C/68°F)<br>10 hours (10°C/50°F)  |
| Recoat interval, max:          | 24 hours (20°C/68°F) (See REMARKS overleaf)<br>60 hours (10°C/50°F) (See REMARKS overleaf) |

|                |  |
|----------------|--|
| <b>Safety:</b> | Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas. |
|----------------|--|

Issued: April 2003

**HEMPEL'S SEATECH PRIMER 18502**

|                         |   |
|-------------------------|---|
| SURFACE                 | <b>Repair:</b> Remove oil and grease etc. with HEMPEL'S YACHT CLEANER 67601. Remove salt and other  |
| PREPARATION:            | contaminants by (high pressure) fresh water cleaning. Remove rust and loose paint by abrasive blasting or power tool cleaning to St 3 (spots) before overcoating. Touch up bare spots with HEMPEL'S SEATECH PRIMER 18502 or HEMPEL'S LIGHT PRIMER 45551 depending on area of use.   |
| APPLICATION CONDITIONS: | Use only where application and curing can proceed at 10°C/50°F or above.<br>Apply on a clean and dry surface with a temperature above the dew point to avoid condensation. Relative humidity during drying below 80%, preferably between 40-60%.<br>Good ventilation during application and drying is necessary.<br>During drying it is of utmost importance that sufficient ventilation is covering all parts of the surfaces painted. Ventilation requirements to remove the water vapours liberated during application and drying are approx. 75 m <sup>3</sup> /litre of paint at 20°C/68°F. (Relative humidity of the air supply approx 40%.)  |
| PRECEDING COAT:         | HEMPADUR SEALER 599 or HEMPEL'S LIGHT PRIMER 45551.   |
| SUBSEQUENT COAT:        | HEMPEL'S DECOLAY 67490 or according to specification.   |
| REMARKS:                | The optimal intercoat adhesion is obtained when recoating is done while HEMPEL'S SEATECH PRIMER 18502 is still slightly tacky.<br>HEMPEL'S SEATECH PRIMER 18502 must cure for 7 days at 20°C/68°F, 18 days at 10°C/50°F, before possible launching.<br><b>The pot life time is not indicated eg by an increase in viscosity. Although the paint still looks usable after 4 hours at 20°C/68°F, it is important that the paint is no longer used as its protective properties are dramatically reduced after this time. Be aware that the pot life will decrease when the temperature decreases, eg to 1 hour at 10°C/50°F. Use eg an alarm clock to indicate when the pot life has been exceeded.</b><br>Tools must be cleaned immediately with fresh water or lukewarm soap water. Dried paint residues can be removed by use of suitable detergent or HEMPEL'S DEGREASER 99611.<br>Store at temperatures between 5-40°C/41-105°F. The shelf life is reduced at temperatures above 30°C/86°F. Do not expose to frost during storage and transport. |
| Note:                   | <b>The information given in the Technical Data Sheet is intended for commercial use.</b>  |
| ISSUED:                 | April 2003 - 1850212170DK103<br>HEMPEL A/S  |

***This Product Data Sheet supersedes those previously issued. For definition and scope, see explanatory notes to applicable Product Data Sheets.***

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***Product data are subject to change without notice and become void five years from the date of issue.***



# Product Data

## HEMPEL'S WOODSEAL 25200

|                             |  |
|-----------------------------|--|
| <b>Description:</b>         | HEMPEL'S WOOD SEAL 25200 is a clear moisture cured, one-component polyurethane sealer.   |
| <b>Recommended use:</b>     | As a sealer for wood prior to priming with one or two-component, high performance paints or varnishes.<br>Above the waterline, interior and exterior, on teak, plywood and similar types of hard wood. |
| <b>Availability:</b>        | Subject to confirmation.   |
| <b>PHYSICAL CONSTANTS:</b>  |  |
| Colours/Shade nos:          | Transparent/00000  |
| Finish:                     | Glossy   |
| Volume solids, %:           | 34 ± 1   |
| Theoretical spreading rate: | See REMARKS overleaf   |
| Flash point:                | 35°C/95°F  |
| Specific gravity:           | 1.0 kg/litre - 8.3 lbs/US gallon   |
| Dry to touch:               | 5 (app) hours at 20°C/68°F (70% RH)<br>11 (app) hours at 10°C/50°F (70% RH)  |
| Dry to sand:                | 8 (app) hours at 20°C/68°F (70% RH)<br>18 (app) hours at 10°C/50°F (70% RH)  |
| Fully cured:                | 7 days at 20°C/68°F (70% RH)<br>14 days at 10°C/50°F (70% RH)  |
| V.O.C.:                     | 605 g/litre - 5.0 lbs/US gallon  |

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |  |
|--------------------------------|--|
| Application method:            | Brush  |
| Thinner (max.vol.):            | HEMPEL'S THINNER 08710 (20%)   |
| Cleaning of tools:             | HEMPEL'S THINNER 08710   |
| Indicated film thickness, dry: | See REMARKS overleaf   |
| Indicated film thickness, wet: | See REMARKS overleaf   |
| Recoat interval, min:          | 8 hours (20°C/68°F) (70% RH)<br>18 hours (10°C/50°F) (70% RH)                              |
| Recoat interval, max:          | 16 hours (20°C/68°F) (See REMARKS overleaf)<br>36 hours (10°C/50°F) (See REMARKS overleaf) |

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued: April 2003

**HEMPEL'S WOODSEAL 25200**

|                         |  |
|-------------------------|--|
| SURFACE PREPARATION:    | Sand (remove dust) and saturate the dry surface with HEMPEL'S WOODSEAL 25200.  |
| APPLICATION CONDITIONS: | The surface should be completely clean and dry. Do not apply in strong sunlight, on hot surfaces or at temperatures below 2°C/36°F. Relative humidity should be minimum 50% and maximum 85% to obtain good curing, and the temperature of the surface should be above the dew point to avoid condensation. Condensation within the first 24 hours after application (20°C/68°F), 54 hours (10°C/50°F), may impair the properties. The moisture content of the wood should not exceed 16%. In confined spaces provide adequate ventilation during application and drying. |
| SUBSEQUENT COAT:        | HEMPEL'S POLYVARNISH 510, HEMPEL'S SINGLE-PACK POLYVARNISH 520 or according to specification.  |
| REMARKS:                | HEMPEL'S WOODSEAL 25200 reacts with humidity in the air which can render it unfit for use. Do not open can until immediately before use. If only part of HEMPEL'S WOODSEAL 25200 is to be used, open the lid and decant the amount required, wipe the lid and seal. <b>The cans should be opened with care as there may be risk of overpressure.</b><br>The surface should only be saturated with HEMPEL'S WOODSEAL 25200, no film should be built up. Estimated consumption 0.1 litre per square metre.   |
| Note:                   | <b>The information given in the Technical Data Sheet is intended for commercial use.</b>   |
| ISSUED:                 | April 2003 - 2520000000CR002<br>HEMPEL A/S   |

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# Product Data

## HEMPEL'S YACHT PRIMER 26030

**Description:** HEMPEL'S YACHT PRIMER 26030 is a physically drying paint dissolved in mineral spirit and pigmented with aluminium flakes.

**Recommended use:** As a maintenance primer for antifouling coatings on wooden ship bottoms.

**Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

Colours/Shade nos: Aluminium/19000  
 Finish: Flat  
 Solids by volume, %: 38 ± 1  
 Theoretical spreading rate: 7.6 m<sup>2</sup>/litre - 50 micron  
 305 sq.ft/US gallon - 2 mils  
 Flash Point: 35°C/95°F  
 Specific gravity: 1.2 kg/litre - 10.0 lbs/US gallon  
 Dry to touch: 2-3 hours at 20°C/68°F  
 4-6 hours at 10°C/50°F  
 V.O.C.: 495 g/litre - 4.0 lbs/US gallon

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |  |             |              |
|--------------------------------|--|-------------|--------------|
| Application method:            | Airless spray  | Air spray   | Brush/Roller |
| Thinner (max. vol):            | 08230 (5%)   | 08230 (15%) | 08230 (5%)   |
| Nozzle orifice:                | .018"  |             |              |
| Nozzle pressure:               | 150 bar/2175 psi   |             |              |
|                                | <i>(Airless spray data are indicative and subject to adjustment)</i> |             |              |
| Cleaning of tools:             | HEMPEL'S THINNER 08230   |             |              |
| Indicated film thickness, wet: | 125 micron/5 mils  |             |              |
| Indicated film thickness, dry: | 50 micron/2 mils   |             |              |
| Recoat interval, min.:         | 3 hours (20°/68°F)   |             |              |
|                                | 6 hours (10°/50°F)   |             |              |
| Recoat interval, max.:         | None   |             |              |

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued: April 2003

**HEMPEL'S YACHT PRIMER 26030**

|                         |   |
|-------------------------|---|
| APPLICATION CONDITIONS: | Remove all contaminants with HEMPEL'S YACHT CLEANER 67601 followed by fresh water rinsing. Remove loose paint and foreign matters. Allow the wood to dry, sand bare spots, and remove dust completely. Touch-up with HEMPEL'S YACHT PRIMER 26030. |
| SURFACE PREPARATION:    | The surface must be completely clean and dry. The temperature of the surface should be above the dew point to avoid condensation. In confined spaces provide adequate ventilation during application and drying.                                  |
| PRECEDING COAT:         | None or according to specification.   |
| SUBSEQUENT COAT:        | HEMPEL'S CLASSIC YACHT 7110H or according to specification.   |
| REMARKS:                | Before overcoating after exposure in contaminated environment clean surface thoroughly by high pressure fresh water hosing or by hosing down with fresh water and scrubbing with a stiff brush and allow to dry.                                  |
| NOTE:                   | <b>The information given in the Technical Data Sheet is intended for commercial use.</b>  |
| ISSUED:                 | April 2003 - 2603019000C0008<br>HEMPEL A/S  |

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# Product Data

## HEMPADUR® EPOXY FILLER 35250

CURING AGENT 95250

**Description:**

HEMPADUR EPOXY FILLER 35250 is a two-component, solvent-free epoxy filler which, when fully cured, is resistant to water, aliphatic hydrocarbons and related products.

**Recommended use:**

1. As a filler for metals, hardwood, ferro-cement, glass fibre and other rigid materials. On large surfaces especially suited for smooth filling.
2. For filling of minor pinholes in weldings, cavities in ship propellers, keels and similar.
3. Repair of osmosis damage in glass fibre reinforced polyester hulls.

**Availability:**

Subject to confirmation.

**PHYSICAL CONSTANTS:**

|                    |  |
|--------------------|--|
| Colours/Shade nos: | Light grey/19810   |
| Finish:            | Semigloss  |
| Volume solids, %:  | 100  |
| Flash point:       | 92°C/198°F   |
| Specific gravity:  | 1.6 kg/litre - 13.4 lbs/US gallon                          |
| Dry to touch:      | 8 (app) hours at 20°C/68°F<br>18 (app) hours at 10°C/50°F  |
| Dry to sand:       | 16 (app) hours at 20°C/68°F<br>36 (app) hours at 10°C/50°F |
| Fully cured:       | 5 days at 20°C/68°F - 12 days at 10°C/50°F                 |

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances. Further reference is made to "Explanatory Notes" in the HEMPEL book. The theoretical spreading rate has been calculated on the basis of a 100% solids volume.*

**APPLICATION DETAILS:**

|                         |  |
|-------------------------|--|
| Mixing ratio for 35250: | Base 35259 : Curing agent 95250<br>1 : 1 by volume   |
| Application method.:    | Putty knife or similar   |
| Thinner (max.vol.):     | Do not dilute  |
| Pot life:               | 1 hour (20°C/68°F) - 2 hours (10°C/50°F)   |
| Cleaning of tools:      | HEMPEL'S DEGREASER 99611 or HEMPEL'S THINNER 08450   |
| Recoat interval, min:   | 8 hours (20°C/68°F)<br>18 hours (10°C/50°F)  |
| Recoat interval, max:   | 24 hours (20°C/68°F) (See REMARKS overleaf)<br>54 hours (10°C/50°F) (See REMARKS overleaf) |

**Safety:**

Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued:

April 2003

**HEMPADUR EPOXY FILLER 35250**

|                         |   |
|-------------------------|---|
| SURFACE PREPARATION:    | <b>Metal:</b> Remove oil and grease, etc. with HEMPEL'S YACHT CLEANER 67601. Remove salt and other contaminants by (high pressure) fresh water cleaning. Abrasive blasting, power tool cleaning or sanding, depending on material and condition of the surface. Pitted steel should be blast cleaned and/or ground with high speed burrs. Round off sharp edges. Finally, clean the area with THINNER 08450. Priming can be done with a thin layer of eg HEMPEL'S LIGHT PRIMER 45551.<br><b>Ferro-cement:</b> See data sheet for HEMPADUR SEALER 599.   |
| APPLICATION CONDITIONS: | Use only where application and curing can proceed at temperatures above 5°C/41°F. The temperature of the substrate should also be above this limit. Apply only on a dry and clean surface with a temperature above the dew point to avoid condensation.   |
| SUBSEQUENT COAT:        | Can be overcoated with HEMPEL'S LIGHT PRIMER 45551 or according to specification. High-gloss finishes such as HEMPEL'S POLY BEST 55551 should not be applied directly on top of HEMPADUR EPOXY FILLER 35250.  |
| REMARKS:                | Mix and stir the two components (base light red, curing agent green) thoroughly until an even light grey colour is achieved where-after the filler is ready for use.<br>Do not mix more than is necessary for use within the pot life.<br>Final smoothing shall take place while it is still possible to make finger prints in the filler and it is still tacky.<br>If the maximum recoat interval is exceeded, roughening of the surface is necessary to ensure intercoat adhesion.<br>When recoating with HEMPEL'S LIGHT PRIMER 45551, maximum recoating intervals are 30 days at 20°C/68°F - 60 days at 10°C/50°F. |
| NOTE:                   | <b>The information given in the Product Data Sheet is intended for professional use.</b>  |
| ISSUED:                 | April 2003 - 3525019810C0006<br>HEMPEL A/S  |

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# Product Data

## HEMPEL'S HIGH PROTECT 35651

CURING AGENT 97351

|                             |   |
|-----------------------------|---|
| <b>Description:</b>         | HEMPEL'S HIGH PROTECT 35651 is a two-component amine adduct cured solvent-free epoxy high build primer. It forms a hard, tough and water-resistant coating.                               |
| <b>Recommended use:</b>     | As a primer below the waterline on boats made of glass fibre reinforced polyester or steel. Also for prevention and repair of osmotic blistering in the glass fibre reinforced polyester. |
| <b>Availability:</b>        | Subject to confirmation.  |
| <b>PHYSICAL CONSTANTS:</b>  |   |
| Colours/Shade nos:          | Grey/13700 - Cream/24700  |
| Finish:                     | High gloss  |
| Solids content:             | 100%  |
| Theoretical spreading rate: | 2.9 m <sup>2</sup> /litre - 350 micron<br>115 sq.ft./US gallon - 14 mils  |
| Flash point:                | > 100°C/212°F   |
| Specific gravity:           | 1.3 kg/litre - 10.9 lbs/US gallon   |
| Dry to touch:               | 10-12 hours at 20°C/68°F<br>22-27 hours at 10°C/50°F  |
| Dry to sand:                | 24 (app) hours at 20°C/68°F<br>54 (app) hours at 10°C/50°F  |
| Fully cured:                | 7 days at 20°C/68°F<br>14 days at 10°C/50°F   |
| V.O.C.:                     | 10 g/litre - 0.1 lbs/US gallon  |

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances. Further reference is made to "Explanatory Notes" in the HEMPEL book. The theoretical spreading rate has been calculated on the basis of a 100% solids volume.*

### APPLICATION DETAILS:

|                                |  |
|--------------------------------|--|
| Mixing ratio for 35651:        | Base 35659 : Curing agent 97351<br>3 : 2 by volume                                     |
| Application method.:           | Airless spray                      Brush/Foam roller                                   |
| Thinner:                       | <b>Do not dilute</b> <b>Do not dilute</b>  |
| Pot life:                      | 45 minutes (20°C/68°F)<br>60 minutes (15°C/59°F)                                       |
| Nozzle orifice:                | .023"  |
| Nozzle pressure:               | min. 250 bar/3600 psi<br>(Airless spray data are indicative and subject to adjustment) |
| Cleaning of tools:             | HEMPEL'S THINNER 08450 - the roller is scrapped after use                              |
| Indicated film thickness, dry: | 350 micron/14 mils   |
| Indicated film thickness, wet: | 350 micron/14 mils   |
| Recoat interval:               | See REMARKS overleaf   |

|                |  |
|----------------|--|
| <b>Safety:</b> | Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas. |
|----------------|--|

Issued: April 2003

**HEMPEL'S HIGH PROTECT 35651**

**SURFACE PREPARATION:** Remove oil and grease, etc. with HEMPEL'S YACHT CLEANER 67601. Remove salt and other contaminants by (high pressure) fresh water cleaning.  
**Glass fibre:** The surface to be abraded to an even roughness (grinding paper, grain size 100). Remove dust.  
**Steel:** Abrasive blasting to Sa 2½, ISO 8501-1: 1988, surface profile corresponding to Rugotest No. 3, BN11.

**APPLICATION CONDITIONS:** Use only where application and curing can proceed at temperatures above 10°C/50°F. The temperature of the paint itself should be 15°C/59°F or above to secure proper application properties. The surface must be clean and dry and its temperature must be above the dew point to avoid condensation.  
**Glass fibre:** For osmosis repair apply minimum 2 coats of 350 micron/14 mils dry film thickness each (for roller application minimum 4 coats of 150 micron/6 mils dry film thickness each). In case of preventive treatment apply minimum 1 x 350 micron/14 mils dry film thickness (for roller application minimum 2 coats of 150 micron/6 mils dry film thickness each).  
**Steel:** Minimum 3 coats of each 150 micron/6 mils dry film thickness.

**SUBSEQUENT COAT:** According to specification.

**REMARKS:** The curing agent is highly thixotropic. Add the 2 parts CURING AGENT to the 3 parts BASE and mix carefully.  
 It is recommended to use ½" hoses between pump and spray gun to avoid drop in pressure and if possible to remove suction hose.  
 HEMPEL'S HIGH PROTECT 35651 may be specified in another film thickness than indicated depending on purpose and area of use. This will alter spreading rate.  
 If applied by roller, it is of the utmost importance to be sure that the specified film thickness is obtained in a film free from pores.

**Recoating intervals:**

| Recoated with<br>(only quality no.) | 20°C/68°F |          | 10°C/50°F |          |
|-------------------------------------|-----------|----------|-----------|----------|
|                                     | Minimum   | Maximum  | Minimum   | Maximum  |
| 26030                               | 8 hours   | 12 hours | 18 hours  | 27 hours |
| 35651, 45551, 35250, 35370          | 8 hours   | 5 days   | 18 hours  | 11 days  |

If the interval is exceeded, a thin coat of HEMPEL'S LIGHT PRIMER 45551 must be applied. Before overcoating after exposure in contaminated environment clean surface thoroughly by (high pressure) fresh water hosing and allow to dry. Launching should not take place until the last coat of HEMPEL'S HIGH PROTECT 35651 has cured for 1 week at 20°C/68°F, 2 weeks at 10°C/50°F.

**NOTE:** **The information given in the Product Data Sheet is intended for professional use.**

**ISSUED:** April 2003 - 3565113700CS004  
HEMPEL A/S

***This Product Data Sheet supersedes those previously issued. For definition and scope, see explanatory notes to applicable Product Data Sheets.***

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# Product Data

## HEMPEL'S LIGHT PRIMER 45551

CURING AGENT 95360

**Description:** HEMPEL'S LIGHT PRIMER 45551 is a two-component polyamide adduct cured epoxy high build paint. It forms a hard and tough coating resistant to water and petroleum products.

**Recommended use:** As a primer under and above the water line on boats made of aluminium, glass fibre reinforced polyester, plywood, steel and ferro-cement. Also for prevention and repair of osmotic blistering in the glass fibre reinforced polyester, and for protection of keels and rudders.

**Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

|                             |   |   |
|-----------------------------|---|---|
| Colours/Shade nos:          | Off-white/11630   | Grey/12170  |
| Finish:                     | Flat  | Flat  |
| Volume solids, %:           | 52 ± 1  | 51 ± 1  |
| Theoretical spreading rate: | 5.2 m <sup>2</sup> /litre - 100 micron<br>209 sq.ft./US gallon - 4 mils | 5.1 m <sup>2</sup> /litre - 100 micron<br>205 sq.ft./US gallon - 4 mils |
| Flash point:                | 25°C/77°F   | 25°C/77°F   |
| Specific gravity:           | 1.3 kg/litre - 10.9 lbs/US gallon                                       | 1.3 kg/litre - 10.9 lbs/US gallon                                       |
| Dry to touch:               | 3-4 hours at 20°C/68°F<br>6-8 hours at 10°C/50°F                        | 3-4 hours at 20°C/68°F<br>6-8 hours at 10°C/50°F                        |
| Fully cured:                | 7 days at 20°C/68°F<br>14 days at 10°C/50°F                             | 7 days at 20°C/68°F<br>14 days at 10°C/50°F                             |
| V.O.C.:                     | 445 g/litre - 3.7 lbs/US gallon   | 450 g/litre - 3.7 lbs/US gallon   |

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |   |                     |
|--------------------------------|---|---------------------|
| Mixing ratio for 45551:        | Base 45559 : Curing agent 95360<br>2 : 1 by volume                                |                     |
| Application method.:           | Airless spray   | Brush/Roller        |
| Thinner:                       | 08450 (5%)  | 08450 (5%)          |
| Pot life:                      | 2 hours (20°C/68°F)   | 6 hours (20°C/68°F) |
| Nozzle orifice:                | .019"-.023"   |                     |
| Nozzle pressure:               | 175 bar/2450 psi<br>(Airless spray data are indicative and subject to adjustment) |                     |
| Cleaning of tools:             | HEMPEL'S THINNER 08450, HEMPEL'S DEGREASER 99611                                  |                     |
| Indicated film thickness, dry: | 100 micron/4 mils   |                     |
| Indicated film thickness, wet: | 200 micron/8 mils   |                     |
| Recoat interval min:           | See separate APPLICATION INSTRUCTIONS   |                     |
| Recoat interval max:           | See separate APPLICATION INSTRUCTIONS   |                     |

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued: April 2003

**HEMPEL'S LIGHT PRIMER 45551**

|                         |  |
|-------------------------|--|
| SURFACE PREPARATION:    | Depends on the type of surface. See separate APPLICATION INSTRUCTIONS.   |
| APPLICATION CONDITIONS: | Apply only where application and curing can proceed at temperatures above -10°C/14°F. At the freezing point and below be aware of the risk of ice on the surface, which will hinder the adhesion. The temperature of the paint itself should be 15°C/59°F or above to secure proper application properties. Best result is obtained at temperatures between 15-20°C/59-68°F. The surface must be clean and dry and its temperature must be above the dew point to avoid condensation. In confined spaces provide adequate ventilation during application and drying.   |
| SUBSEQUENT COAT:        | HEMPEL'S MILLE DYNAMIC 71600, HEMPEL'S MILLE DYNAMIC 71700, HEMPEL'S HARD RACING 76380, HEMPEL'S HARD RACING 76480, HEMPEL'S POLY BEST 55551, HEMPEL'S ALU-SAFE 71200 or according to specification.   |
| REMARKS:                | May be specified in another film thickness than indicated depending on purpose and area of use. This will alter spreading rate and may influence drying time and recoat interval. Launching should not take place until the last coat of HEMPEL'S LIGHT PRIMER 45551 has cured for 1 week at 20°C/68°F, 2 weeks at 10°C/50°F. The first coat of the chosen antifouling/enamel must be applied after the last coat of HEMPEL'S LIGHT PRIMER 45551 according to the interval given in separate APPLICATION INSTRUCTIONS. If this interval is exceeded, the surface must be sanded and a new thin coat of HEMPEL'S LIGHT PRIMER 45551 must be applied. Before overcoating after exposure in contaminated environment clean surface thoroughly by high pressure fresh water hosing and allow to dry. |
| NOTE:                   | <b>The information given in the Technical Data Sheet is intended for commercial use.</b>   |
| ISSUED:                 | April 2003 - 4555011630CR002<br>HEMPEL A/S   |

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***Product data are subject to change without notice and become void five years from the date of issue.***



# APPLICATION INSTRUCTIONS

For product description refer to the product data sheet

## HEMPEL'S LIGHT PRIMER 45551

CURING AGENT 95360

### Scope:

These APPLICATION INSTRUCTIONS cover surface preparation, application equipment, and application details for HEMPEL'S LIGHT PRIMER 45551.

### Surface preparation:

**Iron and steel:** Remove oil and grease etc. with suitable detergent. Remove salt and other contaminants by (high pressure) fresh water cleaning. Abrasive blasting to Sa 2½, SPC-SP10. Small areas may be mechanically grinded to leave a metallicly clean and rough surface.

**Aluminium:** Remove oil and grease etc. with suitable detergent for aluminium surfaces, eg HEMPEL'S YACHT CLEANER 67601, followed by (high pressure) fresh water cleaning. Abrasive sweeping with non-metallic abrasive to produce a uniformly roughened surface.

**Plywood:** Sand the surface carefully and remove dust. Saturate the surface, especially the edges, with HEMPADUR SEALER 599 - remove surplus to avoid a glossy layer of sealer after drying.

**Ferro-cement:** Abrasive blast or high pressure water jet the surface to obtain a rough and firm surface free of scum layer and contamination. Remove dust and loose material. If mechanical treatment is impossible the surface may be acid etched. For this purpose an approximately 5% w/w nitric or phosphoric acid solution is recommended. **Note: Strong acids, avoid skin contact! The concrete should be saturated with fresh water prior to etching to prevent corrosion of the steel reinforcement.** Leave the acid to react 3-4 minutes and hose down the surface with fresh water - preferably with a 5% w/w sodium hydroxide solution - and scrub carefully. Hose down with fresh water. After that the surface must dry homogeneously and appear as an even, rough surface free of a loose outer layer. The surface must have a pH reaction of between 6.5 and 8.0. If any of these conditions are not fulfilled, the process must be repeated. The surface must be dried with good ventilation for at least 2 days (65% relative humidity (20°C/68°F)). The pretreatment is controlled by scraping with a strong knife. The surface shall feel solid and hard, and the knife must only leave a clear scratch mark.

Saturate the surface with HEMPADUR SEALER 599 - remove surplus to avoid a glossy layer of sealer after drying.

Full stopping of the surface with HEMPADUR EPOXY FILLER 35250 or HEMPEL'S PRO-FILLER 35370.

**Glass fibre reinforced polyester:** Degrease the surface with HEMPEL'S DEGREASER 99611. Grind the surface with sandpaper no. 180, remove dust.

**Repair and maintenance:** Remove oil and grease with suitable detergent, salt and other contaminants by (high pressure) fresh water cleaning. Clean damaged areas thoroughly by abrasive blasting, power tool cleaning, or other suitable cleaning method dictated by the substrate. Feather edges to sound and intact areas. Brush off loose material. HEMPEL'S LIGHT PRIMER 45551 should not be applied on paints of another generic type.

### Application method:

The paint may be applied by airless spray, brush, paint pad or roller. The indicated dry film thickness of 100 micron is only obtainable by airless spray.

For brush application approximately 5% thinning is recommended for good brushability. Tools should be cleaned immediately after use with HEMPEL'S THINNER 08450 or HEMPEL'S DEGREASER 99611.

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**HEMPEL'S LIGHT PRIMER 45551**

**Recoating/recoating Intervals:**

When HEMPEL'S LIGHT PRIMER 45551 is applied in 100 micron dry film thickness , typical for airless spray application, the following recoat/overcoating intervals are valid:

| Surface temperature  |         | -10°C/14°F | 0°C/32°F  | 10°C/50°F | 20°C/68°F | 30°C/86°F |
|--|---------|------------|-----------|-----------|-----------|-----------|
| HEMPEL'S LIGHT PRIMER 45551  | Minimum | 3 days     | 36 hours  | 16 hours  | 8 hours   | 6 hours   |
|  | Maximum | (90 days)  | (90 days) | 60 days   | 30 days   | 20 days   |
| HEMPADUR EPOXY FILLER 35250  | Minimum | -          | -         | 16 hours  | 8 hours   | 6 hours   |
|  | Maximum | -          | -         | 60 days   | 30 days   | 20 days   |
| HEMPEL'S CLASSIC YACHT 7110H<br>HEMPEL'S MILLE LIGHT 71400<br>HEMPEL'S MILLE DYNAMIC 71600<br>HEMPEL'S MILLE DYNAMIC 71700 | Minimum | 20 hours   | 9 hours   | 4 hours   | 2 hours   | 1½ hours  |
|  | Maximum | 36 hours   | 18 hours  | 8 hours   | 4 hours   | 3 hours   |
| HEMPEL'S ALU SAFE 7120D  | Minimum | 2 days     | 28 hours  | 12 hours  | 6 hours   | 4 hours   |
|  | Maximum | 3½ days    | 40 hours  | 18 hours  | 9 hours   | 6 hours   |
| HEMPEL'S HARD RACING 76480   | Minimum | 2 days     | 28 hours  | 12 hours  | 6 hours   | 4 hours   |
|  | Maximum | 3 days     | 36 hours  | 16 hours  | 8 hours   | 5 hours   |
| HEMPEL'S POLY BEST 55551   | Minimum | 2½ days    | 32 hours  | 14 hours  | 7 hours   | 5 hours   |
|  | Maximum | (30 days)  | 14 days   | 6 days    | 3 days    | 2 days    |
| Fully cured  |         | 2 months   | 1 month   | 14 days   | 7 days    | 5 days    |

When HEMPEL'S LIGHT PRIMER 45551 is applied in 60 micron/2.4 mils dry film thickness, typical for brush application, the following recoat/overcoating intervals are valid:

| Surface temperature  |         | -10°C/14°F | 0°C/32°F  | 10°C/50°F | 20°C/68°F | 30°C/86°F  |
|--|---------|------------|-----------|-----------|-----------|------------|
| HEMPEL'S LIGHT PRIMER 45551  | Minimum | 36 hours   | 18 hours  | 8 hours   | 4 hours   | 3 hours    |
|  | Maximum | 90 days)   | (90 days) | 60 days   | 30 days   | 20 days    |
| HEMPADUR EPOXY FILLER 35250  | Minimum | -          | -         | 8 hours   | 4 hours   | 3 hours    |
|  | Maximum | -          | -         | 60 days   | 30 days   | 20 days    |
| HEMPEL'S CLASSIC YACHT 7110H<br>HEMPEL'S MILLE LIGHT 71400<br>HEMPEL'S MILLE DYNAMIC 71600<br>HEMPEL'S MILLE DYNAMIC 71700 | Minimum | 10 hours   | 5 hours   | 2 hours   | 1 hour    | 45 minutes |
|  | Maximum | 36 hours   | 18 hours  | 8 hours   | 4 hours   | 3 hours    |
| HEMPEL'S ALU SAFE 7120D  | Minimum | 45 hours   | 23 hours  | 10 hours  | 5 hours   | 4 hours    |
|  | Maximum | 3½ days    | 40 hours  | 18 hours  | 9 hours   | 6 hours    |
| HEMPEL'S HARD RACING 76480   | Minimum | 30 hours   | 14 hours  | 6 hours   | 3 hours   | 2 hours    |
|  | Maximum | 36 hours   | 18 hours  | 8 hours   | 4 hours   | 3 hours    |
| HEMPEL'S POLY BEST 55551   | Minimum | 36 hours   | 18 hours  | 8 hours   | 4 hours   | 3 hours    |
|  | Maximum | (30 days)  | 14 days   | 6 days    | 3 days    | 2 days     |
| Fully cured  |         | 2 months   | 1 month   | 14 days   | 7 days    | 5 days     |

If the maximum recoat interval is exceeded, roughening of the surface is necessary to ensure intercoat adhesion.

If the antifouling is to be applied at a later stage than given in the tables, then a new coat of HEMPEL'S LIGHT PRIMER 45551 must be applied before the first coat of the antifouling to ensure intercoat adhesion.

Launching should only take place after the last coat of HEMPEL'S LIGHT PRIMER 45551 is fully cured. The curing time is given in the above tables.

**HEMPEL'S LIGHT PRIMER 45551**

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

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***Product data are subject to change without notice and become void five years from the date of issue.***



# Product Data

## HEMPEL'S FARVOLIN® 51120

**Description:** HEMPEL'S FARVOLIN 51120 is an alkyd based enamel which forms a weather resistant coating. It has a good brush-ability and is resistant to sunlight, salt water, spillage of mineral oil.

**Recommended use:** As an intermediate and finishing coat on areas above the waterline. Suitable on steel and wood.

**Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

|                             |   |   |
|-----------------------------|---|---|
| Colours/Shade nos:          | White/10000*  | Red/50800*  |
| Finish:                     | Semi-gloss  | Semi-gloss  |
| Volume solids, %:           | 49 ± 1  | 50 ± 1  |
| Theoretical spreading rate: | 12.3 m <sup>2</sup> /litre - 40 micron<br>491 sq.ft./US gallon - 1.6 mils | 12.5 m <sup>2</sup> /litre - 40 micron<br>501 sq.ft./US gallon - 1.6 mils |
| Flash point:                | 38°/100°F   | 38°/100°F   |
| Specific gravity:           | 1.3 kg/litre - 10.8 lbs/US gallon   | 1.1 kg/litre - 9.2 lbs/US gallon  |
| Dry to touch:               | 4-5 hours at 20°C/68°F<br>8-10 hours at 10°C/50°F                         | 4-5 hours at 20°C/68°F<br>8-10 hours at 10°C/50°F                         |
| V.O.C.:                     | 415 g/litre - 3.4 lbs/US gallon   | 405 g/litre - 3.4 lbs/US gallon   |

\*Other shades according to assortment list.

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |   |             |                        |
|--------------------------------|---|-------------|------------------------|
| Application method:            | Airless spray   | Air spray   | Brush/Roller/Paint pad |
| Thinner (max.vol.):            | 08230 (5%)  | 08230 (15%) | 08230 (5%)             |
| Nozzle orifice:                | .018"-.021"   |             |                        |
| Nozzle pressure:               | 150 bar/2175 psi<br>(Airless spray data are indicate and subject to adjustment)         |             |                        |
| Cleaning of tools:             | HEMPEL'S THINNER 08230  |             |                        |
| Indicated film thickness, dry: | 40 micron/1.6 mils  |             |                        |
| Indicated film thickness, wet: | 100 micron/4 mils   |             |                        |
| Recoat interval, min:          | 8 hours (20°C/68°F)<br>16 hours (10°C/50°F)   |             |                        |
| Recoat interval, max:          | 5 days (20°C/68°F) (See REMARKS overleaf)<br>10 days (10°C/50°F) (See REMARKS overleaf) |             |                        |

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

**HEMPEL'S FARVOLIN 51120**

|                         |  |
|-------------------------|--|
| SURFACE PREPARATION:    | <p><b>New wood:</b> Remove all contaminants with HEMPEL'S YACHT CLEANER 67601 followed by fresh water rinsing. Allow the wood to dry, sand the surface, and remove dust completely. Saturate the surface with HEMPITOX 67220 or similar compound. Apply one coat of HEMPEL'S FARVOLIN 51120 thinned with 20% HEMPEL'S THINNER 08230. Apply a second coat of HEMPEL'S FARVOLIN 51120 thinned 5-10% with HEMPEL'S THINNER 08230. Finally apply 2-3 coats of HEMPEL'S FARVOLIN 51120 undiluted.</p> <p><b>Previously painted wood:</b> Remove all contaminants with HEMPEL'S YACHT CLEANER 67601 followed by fresh water rinsing. Grind the surface to a uniformly matt appearance. Saturate bare spots with HEMPITOX 67220 or similar. Touch-up to full film thickness with HEMPEL'S FARVOLIN 51120 as described for new wood.</p> <p><b>Steel:</b> Remove oil and grease etc. with HEMPEL'S YACHT CLEANER 67601. Remove salt and other contaminants by (high pressure) fresh water cleaning. Remove all rust by abrasive blasting or power tool cleaning. Remove all dust and touch-up to full film thickness with suitable primer.</p> |
| APPLICATION CONDITIONS: | The surface must be completely clean and dry. Application should only take place at temperatures above 5°C/41°F, and the temperature of the surface should be above the dew point to avoid condensation. Avoid direct sunlight. The moisture content in wood should not exceed 16%. In confined spaces provide adequate ventilation during application and drying.   |
| PRECEDING COAT:         | None, HEMPEL'S ALKYD PRIMER 13201 or according to specification.   |
| SUBSEQUENT COAT:        | None or HEMPEL'S YACHT ENAMEL 52182 or according to specification.   |
| REMARKS:                | <p>Increased service temperatures will enhance the natural tendency to yellowing especially indoors. May be specified in another film thickness than indicated depending on purpose and area of use. Normal range is 30-40 micron/1.2-1.6 mils.</p> <p>Maximum recoat interval refers to exterior surfaces exposed to periodical immersion, splash, condensation or abrasion during service life of the coating system. On other areas no maximum recoat interval for adhesion. If maximum recoat interval is exceeded, roughening of the surface is necessary to ensure intercoat adhesion.</p> <p>Before overcoating after exposure in contaminated environment, clean the surface thoroughly by high pressure fresh water hosing or by hosing down with fresh water and scrubbing with a stiff brush and allow to dry.</p>  |
| Note:                   | <b>The information given in the Product Data Sheet is intended for professional use.</b>   |
| ISSUED:                 | April 2003 - 5112010000DK211<br>HEMPEL A/S   |

***This Product Data Sheet supersedes those previously issued. For definition and scope, see explanatory notes to applicable Product Data Sheets.***

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# Product Data

## HEMPEL'S YACHT ENAMEL 52182

|                             |   |
|-----------------------------|---|
| <b>Description:</b>         | HEMPEL'S YACHT ENAMEL 52182 is an alkyd enamel with high gloss and good colour retention. Flexible and resistant to salt water and spillage of mineral oil. |
| <b>Recommended use:</b>     | As a finishing coat in alkyd systems on interior and exterior surfaces above the water-line.  |
| <b>Availability:</b>        | Subject to confirmation.  |
| <b>PHYSICAL CONSTANTS:</b>  |   |
| Colours/Shade nos:          | White/10001*  |
| Finish:                     | High gloss  |
| Volume solids, %:           | 56 ± 1  |
| Theoretical spreading rate: | 14.0 m <sup>2</sup> /litre - 40 micron<br>561 sq.ft./US gallon - 1.6 mils   |
| Flash point:                | 38°C/100°F  |
| Specific gravity:           | 1.2 kg/litre - 9.2 lbs/US gallon  |
| Dry to touch:               | 6 (app) hours at 20°C/68°F<br>12 (app) hours at 10°C/50°F   |
| V.O.C.:                     | 360 g/litre - 3.0 lbs/US gallon   |

\*Other shades according to assortment list.

The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.

### APPLICATION DETAILS:

|                                |  |             |                        |
|--------------------------------|--|-------------|------------------------|
| Application method:            | Airless spray  | Air spray   | Brush/Roller/Paint pad |
| Thinner (max.vol.):            | 08230 (5%)   | 08230 (15%) | 08230 (5%)             |
| Nozzle orifice:                | .018"-.021"  |             |                        |
| Nozzle pressure:               | 150 bar/2200 psi<br>(Airless spray data are indicative and subject to adjustment)      |             |                        |
| Cleaning of tools:             | HEMPEL'S THINNER 08230   |             |                        |
| Indicated film thickness, dry: | 40 micron/1.6 mils   |             |                        |
| Indicated film thickness, wet: | 75 micron/3 mils   |             |                        |
| Recoat interval, min:          | 8 hours (20°C/68°F)<br>16 hours (10°C/50°F)  |             |                        |
| Recoat interval, max:          | 3 days (20°C/68°F) (See REMARKS overleaf)<br>6 days (10°C/50°F) (See REMARKS overleaf) |             |                        |

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued: April 2003

**HEMPEL'S YACHT ENAMEL 52182**

|                         |   |
|-------------------------|---|
| APPLICATION CONDITIONS: | The surface must be completely clean and dry. Application should only take place in dry weather with temperatures above 5°C/41°F and not in direct sunlight. To avoid condensation the temperature of the surface must be above the dew point.<br>In confined spaces provide adequate ventilation during application and drying.  |
| PRECEDING COAT:         | HEMPITOX 67220, HEMPEL'S ALKYD PRIMER 13201, HEMPEL'S FARVOLIN 51120 or according to specification.   |
| SUBSEQUENT COAT:        | None.   |
| REMARKS:                | Increased service temperatures will enhance the natural tendency to yellowing especially indoors. May be specified in another film thickness than indicated depending on purpose and area of use. Normal range is 30-40 micron/1.2-1.6 mils.<br>Maximum recoat interval refers to exterior surfaces exposed to periodical immersion, splash, condensation or abrasion during service life of the coating system. On other areas no maximum recoat interval for adhesion. If maximum interval is exceeded, roughening of the surface is necessary to ensure intercoat adhesion.<br>Before overcoating after exposure in contaminated environment, clean the surface thoroughly by high pressure fresh water hosing or by hosing down with fresh water and scrubbing with a stiff brush and allow to dry. |
| NOTE:                   | <b>The information given in the Product Data Sheet is intended for professional use.</b>  |
| ISSUED:                 | April 2003 - 5218210001CS003<br>HEMPEL'S MARINE PAINTS A/S  |

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# Product Data

## HEMPEL'S POLYBEST 55551

CURING AGENT 95370

**Description:** HEMPEL'S POLYBEST 55551 is a high-gloss, two-component polyurethane enamel especially suited for application by brush. It has excellent gloss and colour retention. Resistant to water, wear, and marine atmosphere.

**Recommended use:** As a finishing coat on surfaces above the waterline on glass fibre, aluminium, steel, ferro-cement, plywood and other non-yielding wooden surfaces.

**Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

|                             |   |   |
|-----------------------------|---|---|
| Colours/Shade nos:          | White/10000   | Black/19990   |
| Finish:                     | High-gloss  | High-gloss  |
| Volume solids, %:           | 58 ± 1  | 54 ± 1  |
| Theoretical spreading rate: | 16.6 m <sup>2</sup> /litre - 35 micron<br>665 sq.ft./US gallon - 1.4 mils | 15.4 m <sup>2</sup> /litre - 35 micron<br>630 sq.ft./US gallon - 1.4 mils |
| Flash point:                | 35°C/95°F   | 35°C/95°F   |
| Specific gravity:           | 1.3 kg/litre - 10.8 lbs/US gallon   | 1.1 kg/litre - 9.2 lbs/US gallon  |
| Dry to touch:               | 6-8 hours at 20°C/68°F<br>14-18 hours at 10°C/50°F                        | 6-8 hours at 20°C/68°F<br>14-18 hours at 10°C/50°F                        |
| Dry to sand:                | 24 (app) hours at 20°C/68°F<br>54 (app) hours at 10°C/50°F                | 24 (app) hours at 20°C/68°F<br>54 (app) hours at 10°C/50°F                |
| Fully cured:                | 7 days at 20°C/68°F<br>14 days at 10°C/50°F                               | 7 days at 20°C/68°F<br>14 days at 10°C/50°F                               |
| V.O.C.:                     | 415 g/litre - 3.4lbs/US gallon  | 455 g/litre - 3.8 lbs/US gallon   |

*\*Other shades according to assortment list.*

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |   |  |
|--------------------------------|---|--|
| Mixing ratio for 55551:        | Base 55559 : Curing Agent 95370<br>2 : 1 by volume                                      |  |
| Application method:            | Airspray (See REMARKS overleaf)   | Brush/Paint pad (See REMARKS overleaf) |
| Thinner (max.vol.):            | 08510 (40%)   | 08710 (10%)                            |
| Pot life:                      | 6 hours (20°C/68°F)<br>12 hours (10°C/50°F)   |  |
| Cleaning of tools:             | HEMPEL'S THINNER 08710 or 08510   |  |
| Indicated film thickness, dry: | 35 micron/1.4 mils  |  |
| Indicated film thickness, wet: | 75 micron/3 mils  |  |
| Recoat interval, min:          | 16 hours (20°C/68°F)<br>36 hours (10°C/50°F)  |  |
| Recoat interval, max:          | 5 days (20°C/68°F) (See REMARKS overleaf)<br>10 days (10°C/50°F) (See REMARKS overleaf) |  |

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued: April 2003



## HEMPEL'S POLYBEST 55551

|                         |   |
|-------------------------|---|
| APPLICATION CONDITIONS: | Apply only where application and curing can proceed at temperatures above 5°C/41°F. The surface must be clean and dry, and its temperature must be above the dew point to avoid condensation. Best results are obtained at temperatures between 15-20°C/59-68°F. High relative humidity or condensation within the first 24 hours after application (20°C/68°F) may impair the film formation. Moisture content in wood should not exceed 16%. In confined spaces provide adequate ventilation during application and drying.   |
| PRECEDING COAT:         | HEMPEL'S LIGHT PRIMER 45551 or according to specification.  |
| REMARKS:                |   |
| Service temperatures:   | <p>Dry:<br/>           Periodical, maximum: 120°C/248°F<br/>           Peak, maximum: 140°C/284°F</p> <p>At service temperatures above 100°C/212°F, slight discoloration may be expected.<br/>           May be specified in another film thickness than indicated depending on purpose and area of use.<br/>           Normal range is 30-40 micron/1.2-1.6 mils.<br/>           The amount of thinning relates to conditions of application: Method, temperature, ventilation and substrate. By airspray add THINNER 08510 until a viscosity of 17-20 seconds/DIN 4 cup (approx. 35%) is reached. Use the smallest possible nozzle and the lowest possible air pressure. The best finish is obtained by "misting" the surface first and then apply to full film thickness.<br/>           Maximum recoat interval refers to exterior surfaces exposed to periodical immersion, splash, condensation or abrasion during service life of the coating system. On other areas no maximum recoat interval for adhesion. If maximum recoat interval is exceeded, roughening of the surface is necessary to ensure intercoat adhesion. A completely clean surface is mandatory to ensure intercoat adhesion, especially at long recoat intervals. Any dirt, oil and grease have to be removed, e.g. with suitable detergent followed by (high pressure) fresh water cleaning. Salts to be removed by fresh water hosing.<br/>           To check an adequate quality of the surface cleaning a test patch is recommended before actual overcoating.<br/>           In case of overcoating with other paint materials maximum will be 1-3 days at 20°C/68°F), 2-6 days at 10°C/50°F, depending on type.<br/>           CURING AGENT 95370 is sensitive to moisture. Store in a dry place and keep the can tightly closed until use. Open curing agent cans with caution as overpressure might exist. Even small traces of water in the mixed paint will reduce the pot life and result in film defects. If only part of the CURING AGENT is to be used, do not remove the lid, but make two holes in the bottom of the can. After use, close the holes tightly with tape. The cans should be opened with care as there may be risk of overpressure, especially in the can containing the curing agent. Do not fix the lid on cans containing mixed paint.</p> |
| Note:                   | <b>The information given in the Technical Data Sheet is intended for commercial use.</b>  |
| ISSUED:                 | April 2003 - 5555010000CS008<br>HEMPEL A/S  |

***This Product Data Sheet supersedes those previously issued. For definition and scope, see explanatory notes to applicable Product Data Sheets.***

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***Product data are subject to change without notice and become void five years from the date of issue.***



# Product Data

## HEMPEL'S DECK PAINT 56200

- Description:** HEMPEL'S DECK PAINT 56200 is a CR-alkyd topcoat. Flexible and resistant to salt water.
- Recommended use:** As a topcoat on decks and walkways.
- Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

|                             |   |
|-----------------------------|---|
| Colours/Shade nos:          | Grey/12170*   |
| Finish:                     | Semi-flat   |
| Volume solids, %:           | 47 ± 1  |
| Theoretical spreading rate: | 11.8 m <sup>2</sup> /litre - 40 micron<br>471 sq.ft./US gallon - 1.6 mils |
| Flash point:                | 40°C/104°F  |
| Specific gravity:           | 1.3 kg/litre - 10.8 lbs/US gallon   |
| Dry to touch:               | 2 (app) hours at 20°C/68°F<br>4 (app) hours at 10°C/50°F                  |
| V.O.C.:                     | 470 g/litre - 3.9 lbs/US gallon   |

*\*Other shades according to assortment list.*

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |  |             |                        |
|--------------------------------|--|-------------|------------------------|
| Application method:            | Airless spray  | Air spray   | Brush/Roller/Paint pad |
| Thinner (max.vol.):            | 08080 (5%)   | 08080 (15%) | 08080 (5%)             |
| Nozzle orifice:                | .018"-.021"  |             |                        |
| Nozzle pressure:               | 150 bar/2200 psi<br><i>(Airless spray data are indicative and subject to adjustment)</i> |             |                        |
| Cleaning of tools:             | HEMPEL'S THINNER 08080   |             |                        |
| Indicated film thickness, dry: | 40 micron/1.6 mils   |             |                        |
| Indicated film thickness, wet: | 100 micron/4 mils  |             |                        |
| Recoat interval, min:          | 24 hours (20°C/68°F)<br>43 hours (10°C/50°F)   |             |                        |
| Recoat interval, max:          | None   |             |                        |

- Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued: April 2003

**HEMPEL'S DECK PAINT 56200**

|                         |  |
|-------------------------|--|
| APPLICATION CONDITIONS: | The surface should be completely clean and dry. Application should only take place in dry weather and not in direct sunlight. To avoid condensation the temperature of the surface should be above the dew point.<br>In confined spaces provide adequate ventilation during application and drying.  |
| PRECEDING COAT:         | HEMPEL'S HIGH PROTECT 35651, HEMPEL'S LIGHT PRIMER 45551 or according to specification.  |
| SUBSEQUENT COAT:        | None.  |
| REMARKS:                | Use minimum 2 coats of HEMPEL'S DECK PAINT 56200. For non-slip surfaces, add HEMPEL'S ANTI-SLIP PEARLS 67423 to the topcoat of HEMPEL'S DECK PAINT 56200.<br>Before overcoating after exposure in contaminated environment, clean the surface thoroughly by high pressure fresh water hosing or by hosing down with fresh water and scrubbing with a stiff brush and allow to dry. |
| Note:                   | <b>The information given in the Technical Data Sheet is intended for commercial use.</b>   |
| ISSUED:                 | April 2003 - 5620012170CR002<br>HEMPEL A/S   |

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# Product Data

## HEMPEL'S MAHOGANY STAIN 67101

|  |  |
|--|--|
| <b>Description:</b>  | HEMPEL'S MAHOGANY STAIN 67101 is a solution of light stable pigments.  |
| <b>Recommended use:</b>  | For colouring of new wood and plywood. For tinting of HEMPEL'S one-component, mineral spirit-based varnishes.  |
| <b>Availability:</b>   | Subject to confirmation.   |
| <b>PHYSICAL CONSTANTS:</b>   |  |
| Colours/Shade nos:   | Brown/65220  |
| Volume solids, %:  | 4 ± 1  |
| Flash point:   | 43°C/109°F   |
| Specific gravity:  | 0.9 kg/litre - 7.5 lbs/US gallon   |
| Dry to touch:  | 1 (app) hour at 20°C/68°F<br>2 (app) hours at 10°C/50°F  |
| <p><i>The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.</i></p> |  |
| <b>APPLICATION DETAILS:</b>  |  |
| Application method:  | Brush/roller/paint pad   |
| Thinner (max. vol.):   | Do not dilute  |
| Cleaning of tools:   | HEMPEL'S THINNER 08230   |
| <b>Surface preparation:</b>  | Sand with fine sandpaper (remove dust).  |
| <b>Application conditions:</b>   | The surface must be completely clean and dry and the temperature should preferably be above 5°C/41°F.  |
| <b>Remarks:</b>  | Use rubber gloves and cover surroundings with plastic sheets as the stain is difficult to remove. Allow the stain to dry for 2 hours before varnish is applied.<br>HEMPEL'S MAHOGANY STAIN 67101 can be mixed with HEMPEL's one-component, mineral spirit-based varnishes by careful tinting (maximum 10% MAHOGANY STAIN).   |
| Note:  | <b>The information given in the Product Data Sheet is intended for professional use.</b>   |
| <b>Safety:</b>   | Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas. |
| <b>Issued:</b>   | April 2003 - 6710165220<br>HEMPEL A/S  |

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# Product Data

## HEMPEL'S WASH WAX 67120

|                               |  |
|-------------------------------|--|
| <b>Description:</b>           | HEMPEL'S WASH WAX 67120 is a wax which increases the gel coat's durability. It forms a tough, durable and flexible surface layer which protects against oxidation.   |
| <b>Recommended use:</b>       | For polishing, protection and cleaning of glass fibre boats as well as painted and varnished surfaces.   |
| <b>Availability:</b>          | Subject to confirmation.   |
| <b>PHYSICAL CONSTANTS:</b>    |  |
| Shade nos:                    | 09990  |
| Flash point:                  | 52°C/126°F   |
| Specific gravity:             | 0.9 kg/litre - 7.5 lbs/US gallon   |
| Dry to touch:                 | 10 minutes (app) at 20°C/68°F (See REMARKS)<br>20 minutes (app) at 10°C/50°F   |
|                               | <i>The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.</i>  |
| <b>Surface preparation:</b>   | Remove sand and other dirt with HEMPEL'S BOAT SHAMPOO 67282 followed by fresh water hosing.<br>Allow the surface to dry. In case of oxidized or contaminated surface, polish with HEMPEL'S BOAT RUBBING 67371 or 67393.  |
| <b>Application condition:</b> | Apply HEMPEL'S WASH WAX 67120 in a thin layer with clean, soft rags. After drying, polish the surface with clean, soft rags. Treat only small areas at a time.<br>Prolong the durability by adding 25 ml HEMPEL'S WASH WAX 67120 per 10 litres of the rinsing water in connection with later washing.  |
| <b>Remarks:</b>               | The surface temperature must be above 15°C/59°F. Do not apply in direct sunlight.<br>Shake well before use.  |
| Note:                         | <b>The information given in the Product Data Sheet is intended for professional use.</b>   |
| <b>Safety:</b>                | Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas. |
| <b>Issued:</b>                | April 2003 - 6712009990<br>HEMPEL A/S  |

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# Product Data

## HEMPEL'S MAST CARE 67131

- Description:** HEMPEL'S MAST CARE 67131 is a special silicone-free oil with excellent penetration ability in wire ropes and under fittings.
- Recommended use:** For cleaning and protection of unpainted aluminium parts, steel wires, stainless steel fittings, etc.
- Availability:** Subject to confirmation.

**PHYSICAL CONSTANTS:**

- Colours/Shade nos: Transparent/00000  
Flash point: > 100°C/212°F  
Specific gravity: 0.8 kg/litre - 6.7 lbs/US gallons

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

- Application conditions:** Clean the surface with HEMPEL'S BOAT SHAMPOO 67282 or HEMPEL'S YACHT CLEANER 67601, allow to dry. Apply HEMPEL'S MAST CARE 67131 abundantly with clean, soft rags in order to let the oil penetrate under fittings, in wires and similar. Remove surplus with clean rags. Do not apply in strong sunlight, on hot surfaces, or under humid conditions.

- Remarks:** Strongly oxidized surfaces should be treated with HEMPEL'S BOAT RUBBING LIQUID 67371 or HEMPEL'S BOAT RUBBING PASTE 67393 before application of HEMPEL'S MAST CARE 67131.

Note: **The information given in the Product Data Sheet is intended for professional use.**

- Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

- Issued:** April 2003 - 6713100000  
HEMPEL A/S

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# Product Data

## HEMPEL'S BOAT SHAMPOO 67282

|                            |  |
|----------------------------|--|
| <b>Description:</b>        | HEMPEL'S BOAT SHAMPOO 67282 is a solvent-free concentrated neutral cleaner based on emulsifiers, surface-active agents and water. The product is biodegradable. Contains wax.  |
| <b>Recommended use:</b>    | Especially suited for removal of dirt, soot and u.v. light degraded surface layers.  |
| <b>Availability:</b>       | Subject to confirmation.   |
| <b>PHYSICAL CONSTANTS:</b> |  |
| Colours/Shade nos:         | Transparent/00000  |
| Flash point:               | Non-flammable  |
| Specific gravity:          | 1.0 kg/litre - 8.3 lbs/US gallon   |
| pH value:                  | 7 (app) undiluted  |
|                            | <small>The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.</small>  |
| <b>Application method:</b> | To be diluted with fresh water: 1-20 parts of fresh water to 1 part of HEMPEL'S BOAT SHAMPOO 67282. Apply with a soft brush. After 5 minutes the surface must be hosed down with fresh water and carefully scrubbed with plenty of fresh water.  |
| <b>Remarks:</b>            | Do not expose HEMPEL'S BOAT SHAMPOO 67282 to frost.  |
| Note:                      | <b>The information given in the Product Data Sheet is intended for professional use.</b>   |
| <b>Safety:</b>             | Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas. |
| <b>Issued:</b>             | April 2003 - 6728200000<br>HEMPEL A/S  |

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# Product Data

## HEMPEL'S SAIL CLEANER 67341

**Description:** HEMPEL'S SAIL CLEANER 67341 is a solvent-free concentrated alkaline cleaner based on emulsifiers, surface-active agents and water. The product is biodegradable.

**Recommended use:** For cleaning of sails, sprayhoods, huts and similar. Suited for use in high pressure cleaning equipment.

**Availability:** Subject to confirmation.

**PHYSICAL CONSTANTS:**

Colours/Shade nos: Transparent/09990  
Flash point: Non-flammable  
Specific gravity: 1.1 kg/litre - 9.2 lbs/US gallon  
pH value: 12 (approx.) undiluted

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

**Application method:** Apply by brush or by spraying using lowest possible pressure. To be diluted with fresh water: 1-20 parts of fresh water to 1 part of HEMPEL'S SAIL CLEANER 67341. After 5 minutes the surface must be high pressure hosed with fresh water or carefully scrubbed with plenty of fresh water until all residues have been removed. If HEMPEL'S SAIL CLEANER 67341 leaves a white film, it can be removed with warm water.

**Remarks:** Not suited for cleaning of aluminium.  
Do not expose to temperatures below 0°C/32°F.

**Note:** **The information given in the Product Data Sheet is intended for professional use.**

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

**Issued:** April 2003 - 6734109990  
HEMPEL A/S

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# Product Data

## HEMPEL'S BOAT RUBBING LIQUID 67371

**Description:** HEMPEL'S BOAT RUBBING LIQUID 67371 is a heavy duty polish based on a water and solvent emulsion. Suited for hand as well as machine polishing. Does not contain wax or silicone.

**Recommended use:** For rubbing and polishing of glass fibre as well as of previously painted and varnished substrates. Excellent for removal of small scratches, irregularities, dirt, stains and oxidized surfaces.

**Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

Shade nos: 09990  
Flash point: > 100°C/212°F  
Specific gravity: 1.1 kg/litre - 9.2 lbs/US gallon  
Dry to touch: 10 minutes at 20°C/68°F (See REMARKS)  
20 minutes at 10°C/50°F (See REMARKS overleaf)

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

**Surface preparation:** Cleaning of surface with HEMPEL'S BOAT SHAMPOO 67282 in order to remove contaminants followed by fresh water hosing. Allow surface to dry.

### Application conditions:

#### Gel coat substrates:

Saturate a clean, dry rag with HEMPEL'S BOAT RUBBING LIQUID 67371 and rub until almost dry. Wipe off with a clean rag. Finish with HEMPEL'S CUSTOM MARINE POLISH 67441.

#### Painted surfaces (HEMPEL'S POLY BEST 55551):

Do only treat surfaces more than 3 months old. Grind lightly with wet abrasive paper no. 1200 and rub down with HEMPEL'S BOAT RUBBING LIQUID 67371 and HEMPEL'S CUSTOMER MARINE POLISH 67441. Polish the surface thoroughly to remove all traces of polish.

**Remarks:** The surface temperature must be above 5°C/41°F, preferably 15°C/59°F. Do not apply in direct sunlight.

Note: Recommended rotating speed is approximately 2100 RPM for machine polishing.  
**The information given in the Product Data Sheet is intended for professional use.**

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

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HEMPEL A/S

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# Product Data

## HEMPEL'S BOAT RUBBING PASTE 67393

**Description:** HEMPEL'S BOAT RUBBING PASTE 67393 is an abrasive compound especially suited for flattened and eroded surfaces. Can be used for manual as well as mechanical polishing.

**Recommended use:** For polyester and polyurethane surfaces. For removal of oxidized surface layers.

**Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

Shade nos: 99980  
Flash point: > 100°C/212°F  
Specific gravity: 0.9 kg/litre - 7.5 lbs/US gallon  
Dry to touch: 10 minutes (app) at 20°C/68°F - 20 minutes at 10°C/50°F (See REMARKS)

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

**Surface preparation:** Clean with HEMPEL'S BOAT SHAMPOO 67282 in order to remove sand and dirt followed by fresh water hosing. Allow the surface to dry.

**Application conditions:** The surface temperature must be above 5°C/41°F, preferably 15°C/59°F. Do not apply HEMPEL'S BOAT PASTE 67393 in direct sunlight.

**Remarks:** Apply HEMPEL'S BOAT RUBBING PASTE 67393 uniformly on the surface with a soft rag, rubbing the surface forwards and backwards rather than in circular movements. Apply more HEMPEL'S BOAT RUBBING PASTE 67393 until the required polishing has been obtained. Remove surplus material before it dries. After-polish with a clean, dry rag. Recommended rotating speed is approximately 2100 RPM when machine polishing.

Note: **The information given in the Product Data Sheet is intended for professional use.**

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

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HEMPEL A/S

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# Product Data

## HEMPEL'S HARD WAX LIQUID 67410

**Description:** HEMPEL'S HARD WAX LIQUID 67410 is a liquid modified carnauba wax which forms a hard, abrasion resistant glossy finish.

**Recommended use:** For sealing glass fibre and varnished surfaces after polishing with HEMPEL'S CUSTOM MARINE POLISH 67441.

**Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

Shade nos: 09990  
Finish: Transparent  
Flash point: 62°C/144°F  
Specific gravity: 1.0 kg/litre - 8.3 lbs/US gallon  
Dry to touch: 5 (app) minutes at 20°C/68°F (See REMARKS)  
10 (app) minutes at 10°C/50°F (See REMARKS)

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

**Surface preparation:** Clean the surface with HEMPEL'S BOAT SHAMPOO 67282 to remove sand and other dirt. Hose with fresh water and allow to dry. If the surface is dirty or oxidized, polish with HEMPEL'S BOAT RUBBING 67371 prior to applying HEMPEL'S CUSTOM MARINE POLISH 67441 and HEMPEL'S HARD WAX LIQUID 67410.

**Application conditions:** The temperature of the surface must be above 5°C/41°F, preferably 15°C/ 59°F. Do not apply in direct sunlight.

**Remarks:** Apply HEMPEL'S HARD WAX LIQUID 67410 in a thin layer with a clean, soft cloth. After drying, polish with a clean, soft cloth. Treat only small areas at a time. In case of later repainting, it is very important to remove any traces of wax.

Note: **The information given in the Product Data Sheet is intended for professional use.**

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

**Issued:** April 2003 - 6741009990  
HEMPEL A/S

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**Product data are subject to change without notice and become void five years from the date of issue.**



# Product Data

## HEMPEL'S ANTI-SLIP PEARLS 67423

- Description:** HEMPEL'S ANTI-SLIP PEARLS 67423 is small hollow glass beads.
- Recommended use:** For mixing into HEMPEL'S POLY BEST 55551, HEMPEL'S YACHT ENAMEL 52182 and HEMPEL'S FARVOLIN 51120 for decks and other areas where a non-skid surface is required.
- Availability:** Subject to confirmation.
- PHYSICAL CONSTANTS:**  
Shade nos.: 99980
- Remarks:** Stir ANTI-SLIP PEARLS thoroughly into the paint until a uniform mixture has been obtained. Use 80 g ANTI-SLIP PEARLS for 3/4 l of paint. Usually one coat is sufficient but if a more coarse structure is required, apply one more coat.
- Note: **The information given in the Product Data Sheet is intended for professional use.**
- Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.
- Issued:** April 2003 - 6742399980  
HEMPEL A/S

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# Product Data

## HEMPEL'S CUSTOM MARINE POLISH 67441

**Description:** HEMPEL'S CUSTOM MARINE POLISH 67441 is a one-component cleaning polish based on petroleum distillates and a special silicone.

**Recommended use:** For cleaning, polishing and protection of glass fibre boats and previously painted and varnished surfaces.

**Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

Shade nos: 09990  
Flash point: 62°C/144°F  
Specific gravity: 1.0 kg/litre - 8.3 lbs/US gallon  
Ready for polishing: 10 (app) minutes at 20°C/68°F  
20 (app) minutes at 10°C/50°F  
Shelf life: 1 year at 20°C/68°F

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

Application method: Clean soft rags.  
Thinner (max.vol): Do not dilute.  
Cleaning of tools: Water or HEMPEL'S THINNER 08230

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued: April 2003

**HEMPEL'S CUSTOM MARINE POLISH 67441**

**SURFACE PREPARATION:** Wash surface thoroughly with HEMPEL'S BOAT SHAMPOO 67282. Heavily oxidized surfaces must be treated with a HEMPEL'S BOAT RUBBING LIQUID 67371 before using HEMPEL'S CUSTOM MARINE POLISH 67441.

**APPLICATION CONDITIONS:** Above the freezing point.

**SUBSEQUENT TREATMENT:** None or HEMPEL'S HARD WAX LIQUID 67410.

**REMARKS:** Shake well before use. Allow freshly painted or varnished surfaces to dry/cure for at least 90 days before applying HEMPEL'S CUSTOM MARINE POLISH 67441. Avoid polishing in direct sunlight. When used on "metallic" paints, a test polishing on a less visible area is recommended. Allow the protective film of HEMPEL'S CUSTOM MARINE POLISH 67441 to cure for at least 1 week before any detergent wash. HEMPEL'S CUSTOM MARINE POLISH 67441 cannot be removed by ordinary washing. Use HEMPEL'S DEGREASER 99611 (only on glass fibre). Painted areas to be cleaned with HEMPEL'S YACHT CLEANER 67601 followed by hosing down with fresh water.

**Note:** **The information given in the Product Data Sheet is intended for professional use.**

**Issued:** April 2003 - 6744109990  
HEMPEL A/S

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# Product Data

## HEMPEL'S TEAK COLOUR RESTORER 67462

**Description:** HEMPEL'S TEAK COLOUR RESTORER 67462 is a pigmented oil based wood preservative containing antimould agents. After application a golden colour of the wood is obtained.

**Recommended use:** On new as well as on wood previously treated with oils or wood preservatives including teak. Not for deck areas.

**Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

Colours/Shade nos: Teak/65220  
Finish: Transparent, brown  
Volume solids, %: 29 ± 1  
Theoretical spreading rate: See REMARKS overleaf  
Flash point: 50°C/122°F  
Specific gravity: 0.9 kg/litre - 7.5 lbs/US gallon  
Surface dry: 1 (app) hour at 20°C/68°F (ISO 1517)  
2 (app) hours at 10°C/50°F (ISO 1517)  
Dry to touch: 6-8 hours at 20°C/68°F  
12-16 hours at 10°C/50°F

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

Application method: Brush, dipping  
Thinner (max. vol.): Do not thin  
Cleaning of tools: HEMPEL'S THINNER 08230  
Indicated film thickness, dry: 15 micron/0,6 mil  
Indicated film thickness, wet: 50 micron/2 mils  
Recoat interval, min: When dry  
Recoat interval, max: None

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued: April 2003

**HEMPEL'S TEAK COLOUR RESTORER 67462**

|                         |  |
|-------------------------|--|
| APPLICATION CONDITIONS: | <p><b>New wood except teak and vacuum impregnated wood:</b><br/>Saturate the dry, clean surface with HEMPITOX 67220, allow to dry. Apply two coats of HEMPEL'S TEAK COLOUR RESTORER 67462 on internal areas and three coats on weather exposed areas.</p> <p><b>New teak and vacuum impregnated wood:</b><br/>Apply two coats of HEMPEL'S TEAK COLOUR RESTORER 67462 on the dry, clean surface - teak is preferably cleaned with HEMPEL'S TEAK CLEANING POWDER 67543.</p> <p><b>Previously treated wood:</b><br/>Wash the surface with suitable detergent to remove all contaminants. Remove any loose material. Treat any bare spots with HEMPITOX 67220 (not teak). Apply 1-2 full coats of HEMPEL'S TEAK COLOUR RESTORER 67462, preferably thinned 1:1 with HEMPITOX 67220 to keep the shade.</p> |
| SUBSEQUENT COAT:        | None.  |
| REMARKS:                | <p>The surface must be completely clean and dry. Do not apply under humid conditions or at temperatures below 5°C/41°F.</p> <p>The moisture content in the wood should not exceed 16%. In confined spaces provide adequate ventilation during application and drying.</p> <p>The practical spreading rate is 10-20 m<sup>2</sup>/l/408-816 sq.ft/US gallons for smooth surfaces. On rough or absorbing surfaces the spreading rate will be lower, typically 5-10 m<sup>2</sup>/l/204-408 sq.ft/US gallons.</p> <p><b>As autoignition of rags impregnated with HEMPEL'S TEAK COLOUR RESTORER 67462 is possible, they should be safely disposed after use.</b></p> <p>Avoid cleaning or grinding of the surface with steel wool or similar as this might cause rust stains.</p>                        |
| Note:                   | <b>The information given in the Product Data Sheet is intended for professional use.</b>   |
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# Product Data

## HEMPEL'S DECOLAY 67490

**Description:** HEMPEL'S DECOLAY 67490 is a water-based, deck covering. It has good resistance to wear and seawater. HEMPEL'S DECOLAY 67490 cures to a tough rubber-like paint film which does also possess silencing properties.

**Recommended use:** As non-skid covering on decks of boats and ships.

**Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

Colours/Shade nos: White/10000 - Grey/15000  
Finish: Flat  
Volume solids, %: 65 ± 1  
Theoretical spreading rate: 2.2 m<sup>2</sup>/litre - 300 micron  
87 sq.ft/US gallon - 12 mils  
Flash point: >66°C/151°F  
Specific gravity: 1.2 kg/litre - 10.0 lbs/US gallon  
Dry to touch: 4 (app) hours at 20°C/68°F (See REMARKS overleaf)  
7 (app) hours at 10°C/50°F (See REMARKS overleaf)  
Shelf life: 1 year from date of production (25°C/77°F)

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

Application method: Brush  
Thinner (max.vol): Fresh water (5%)  
Cleaning of tools: Fresh water (See REMARKS overleaf)  
Indicated film thickness, dry: 300 micron/12 mils  
Indicated film thickness, wet: 475 micron/19 mils  
Recoat interval, min: 16 hours (20°C/68°F)  
29 hours (10°C/50°F)  
Recoat interval, max: 7 days (20°C/68°F) (See REMARKS overleaf)  
13 days (10°C/50°F) (See REMARKS overleaf)

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued: April 2003

**HEMPEL'S DECOLAY 67490**

|                         |  |
|-------------------------|--|
| SURFACE PREPARATION:    | <b>Wood, polyester and previously painted surfaces:</b><br>Clean with HEMPEL'S YACHT CLEANER 67601 followed by fresh water hosing. Sanding (remove dust). Apply 1 coat of HEMPEL'S SEATECH PRIMER 18502 plus 2 x HEMPEL'S DECOLAY 67490.<br><b>Steel:</b><br>Wash surface with HEMPEL'S YACHT CLEANER 67601 followed by fresh water hosing. Abrasive blasting to Sa 2½ or grinding with a right-angle grinder followed by 2 coats of HEMPEL'S LIGHT PRIMER 45551 plus one coat of HEMPEL'S SEATECH PRIMER 18502. Finally apply 2 coats of HEMPEL'S DECOLAY 67490.  |
| APPLICATION CONDITIONS: | The surface must be completely dry and clean and the temperature should preferably be above 5°C/41°F at application as well as drying. Do not apply in direct sunlight and only in dry weather. The temperature of the surface must be above the dew point to avoid condensation.  |
| PRECEDING COAT:         | HEMPEL'S SEATECH PRIMER 18502.   |
| SUBSEQUENT COAT:        | None.  |
| REMARKS:                | HEMPEL'S DECOLAY 67490 is to be applied in two coats.<br>If the maximum recoating interval is exceeded, scrubbing of the surface is necessary to ensure intercoat adhesion. Allow surface to dry before a new coat of HEMPEL'S DECOLAY 67490 is applied.<br>Store at temperatures between 5°C-40°C/41°F-104°F. Shelf life is reduced at temperatures above 30°C/86°F. Do not expose to frost during storage and transport, or before the coating is dry.<br>Clean tools carefully with fresh water or lukewarm soap water immediately after use.<br>Dried remains of paint can be removed with a strong detergent, undiluted, or preferably with HEMPEL'S DEGREASER 99611. |
| Note:                   | <b>The information given in the Technical Data Sheet is intended for commercial use.</b>   |
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# Product Data

## HEMPEL'S GLASS FIBRE REPAIR KIT 67512

CURING AGENT BPO 67531

**Description:** HEMPEL'S GLASS FIBRE REPAIR KIT is based on a low viscosity, unsaturated polyester and is especially suited for all kinds of lamination work in connection with glass fibre. The polyester is cobalt catalyzed. The repair set contains glass fibre cloth, polyester, curing agent, mixing cup, and application instructions.

**Recommended use:** Repair of local damage on glass fibre surfaces.

**Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

Colours/Shade nos: Uncoloured/99980  
 Finish: Flat  
 Volume solids, %: 68 ± 1 for the polyester  
 Theoretical spreading rate: Not applicable  
 Flash point: 31°C/88°F  
 Specific gravity: 1.1 kg/litre - 9.2 lbs/US-gallons  
 Surface dry: 15 (app) minutes at 20°C/68°F (ISO 1517)  
 30 (app) minutes at 10°C/50°F (ISO 1517)  
 Dry to touch: 40 (app) minutes at 20°C/68°F (See REMARKS overleaf)  
 1½ (app) hours at 10°C/50°F (See REMARKS overleaf)  
 Fully cured: 75 (app) minutes at 20°C/68°F  
 2½ (app) hours at 10°C/50°F  
 Shelf life: 6 months at 20°C/68°F

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

Mixing ratio for 67512: Base 67518 : Curing agent 67531 (See REMARKS overleaf)  
 Application method: Brush/roller  
 Thinner (max. vol.): Do not dilute  
 Pot life: 15 minutes (20°C/68°F)  
 30 minutes (10°C/50°F)  
 Cleaning of tools: HEMPEL'S DEGREASER 99611  
 Recoat interval: When cured (See REMARKS overleaf)

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued: April 2003

**HEMPEL'S GLASS FIBRE REPAIR KIT 67512**

|                         |  |
|-------------------------|--|
| SURFACE PREPARATION:    | Clean the material to be repaired with HEMPEL'S YACHT CLEANER 67601. Depending on extent of damage, grinding, scraping or similar of the surface in order to remove loose gel coat and glass fibre laminate and in order to obtain a smooth overlapping to intact material. After a thorough rinsing with freshwater, degrease with HEMPEL'S DEGREASER 99611 and allow to dry. See separate APPLICATION INSTRUCTIONS, which go with the can. |
| APPLICATION CONDITIONS: | Repair to be commenced when surface is completely dry. Application should preferably take place at 15-20°C/59-68°F, absolute minimum at +5°C/41°F. Depending on extent of damage use glass fibre cloth in one or several layers. The surface should be covered with eg plastic foil in order to prevent entrance of air to the newly applied polyester. See APPLICATION INSTRUCTIONS, which go with the can.                                 |
| SUBSEQUENT COAT:        | HEMPADUR FILLER 35250, HEMPEL'S LIGHT PRIMER 45551 or HEMPEL'S POLY BEST 55551.  |
| REMARKS:                | Add 2% by volume of BPO 67531 curing agent to HEMPEL'S POLYESTER 67518. Mix carefully. Do not mix more than is necessary for use within the pot life. Follow the separate APPLICATION INSTRUCTIONS, which go with the can.<br><b>Repainting:</b> When fully cured grinding of surface before filling or paint application. No maximum interval but surface must be clean and roughened by grinding.  |
| Note:                   | <b>The information given in the Product Data Sheet is intended for professional use.</b>   |
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# Product Data

## HEMPEL'S GELCOAT CLEANER 67534

**Description:** HEMPEL'S GELCOAT CLEANER 67534 is a cleaning powder especially designed for cleaning of the gel coat surface on glass fibre.

**Recommended use:** For removal of yellowish humus layer appearing on boats mainly sailing in fresh or brackish waters.

**Availability:** Subject to confirmation.

**PHYSICAL CONSTANTS:**

Shade nos: 99980  
Flash point: Non-flammable  
Specific gravity: 2.3 kg/litre - 19.2 lbs/US gallon

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

**Application conditions:** Wet the gel coat surface with clean fresh water. Mix HEMPEL'S GELCOAT CLEANER 67534 with sufficiently fresh water to produce a paste like substance, which can be applied evenly on the surface. After approximately 10-20 minutes while the powder is still moist the surface is cleaned by brushing with a soft brush and thoroughly hosing down all powder with clean fresh water. Dependent on the application conditions, the treatment may be repeated.

**Subsequent treatment:** Polishing with HEMPEL'S CUSTOM MARINE POLISH 67441.

**Remarks:** Stainless steel parts must be protected against contact with HEMPEL'S GELCOAT CLEANER 67534 with a layer of HEMPEL'S HARD WAX LIQUID 67410.

**Note:** **The information given in the Product Data Sheet is intended for professional use.**

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

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# Product Data

## HEMPEL'S TEAK CLEANING POWDER 67543

**Description:** HEMPEL'S TEAK CLEANING POWDER 67543 is a cleaning powder for teak. Harmless to glass fibre, painted or varnished surfaces. Avoid contact with stainless steel.

**Recommended use:** For cleaning of teak. Especially suited for large areas like decks.

**Availability:** Subject to confirmation.

**PHYSICAL CONSTANTS:**

Colours/Shade nos: White/99980  
Specific gravity: 2.3 kg/litre - 19.2 lbs/US gallon

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

**Application conditions:** Wet the surface with clean fresh water and apply a layer of HEMPEL'S TEAK CLEANING POWDER 67543. Distribute the powder in a uniform layer with brush. The surface must be wetted sufficiently to keep the powder moist. After approximately 10-15 minutes when the powder is still moist the surface is thoroughly brushed with a stiff brush. Clean the surface thoroughly with clean fresh water. Depending on the application conditions the treatment may be repeated.

**Subsequent coat:** HEMPEL'S TEAK OIL 67571 or HEMPEL'S TEAK COLOUR RESTORER 67462. HEMPEL'S TEAK COLOUR RESTORER 67462 not on decks.

**Remarks:** Stainless steel parts must be protected against contact with HEMPEL'S TEAK CLEANING POWDER 67543 with a layer of HEMPEL'S HARD WAX LIQUID 67410.

**Note:** **The information given in the Product Data Sheet is intended for professional use.**

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

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# Product Data

## HEMPEL'S TEAK OIL 67571

- Description:** HEMPEL'S TEAK OIL 67571 is based on alkyd resin and drying oils with low viscosity. Good penetration ability and weather resistance. Contains antimould agents.
- Recommended use:** On new teak and teak previously treated with oil based products, interior and exterior. Not suited for varnished wood.
- Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

|                    |   |
|--------------------|---|
| Colours/Shade nos: | Transparent/00000   |
| Finish:            | Transparent   |
| Volume solids, %:  | 21 ± 1  |
| Flash point:       | 38°C/100°F  |
| Specific gravity:  | 0.8 kg/litre - 6.7 lbs/US gallon                          |
| Dry to touch:      | 8 (app) hours at 20°C/68°F<br>18 (app) hours at 10°C/50°F |

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                           |                                     |         |
|---------------------------|-------------------------------------|---------|
| Application method:       | Brush                               | Dipping |
| Thinner (max. vol.):      | Do not dilute                       |         |
| Cleaning of tools:        | HEMPEL'S THINNER 08230              |         |
| Indicated film thickness: | Not relevant (see REMARKS overleaf) |         |
| Recoat interval, min:     | When dry                            |         |

- Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

**HEMPEL'S TEAK OIL 67571**

|                         |   |
|-------------------------|---|
| SURFACE PREPARATION:    | <b>Untreated wood:</b><br>Remove any oil, grease etc. with HEMPEL'S YACHT CLEANER 67601, hose down with clean fresh water. Clean the surface with HEMPEL'S TEAK CLEANING POWDER 67543. Rough surfaces may possibly be grinded with paper 180-220, remove dust.<br><b>Previously treated wood:</b><br>Remove any oil, grease, etc. with HEMPEL'S YACHT CLEANER 67601. Hose down the surface with clean fresh water, allow to dry.  |
| APPLICATION CONDITIONS: | The surface must be completely clean and dry. Apply only in dry weather and at temperatures above 5°C/41°F. In confined spaces provide adequate ventilation during application and drying.  |
| SUBSEQUENT COAT:        | None.   |
| REMARKS:                | Apply HEMPEL'S TEAK OIL 67571 abundantly. Allow the wood to absorb the sealer for some minutes before any surplus is removed with clean rags to avoid a glossy film after drying. It is possible to grind in the still wet sealer with paper 180-220, grind parallel to veins. Spreading rate depends on the structure and absorption of the wood. Maintenance is carried out by HEMPEL'S TEAK OIL 67571, which is applied in a thin coat followed by removal of any surplus by clean rags.<br><b>As autoignition of rags impregnated with HEMPEL'S TEAK OIL 67571 is possible, they should be safely disposed after use.</b> |
| Note:                   | <b>The information given in the Product Data Sheet is intended for professional use.</b>  |
| ISSUED:                 | April 2003 - 6757100000<br>HEMPEL A/S   |

***This Product Data Sheet supersedes those previously issued. For definition and scope, see explanatory notes to applicable Product Data Sheets.***

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***Product data are subject to change without notice and become void five years from the date of issue.***



# Product Data

## HEMPEL'S UNIFILLER 67583

- Description:** HEMPEL'S UNIFILLER 67583 is a quick drying styrene alkyd based filler. Can be overcoated with one and two-component paints.
- Recommended use:** For filling of minor irregularities on interior and exterior areas above the waterline.
- Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

- Colours/Shade nos: Light grey/15000  
Finish: Flat  
Volume solids, %: 65 ± 1  
Flash point: 25°C/77°F  
Specific gravity: 2.0 kg/litre - 16.7 lbs/US gallon  
Surface dry: 30 (app) minutes at 20°C/68°F (ISO 1517)  
1 (app) hour at 10°C/50°F (ISO 1517)  
Dry to touch: 2 (app) hours at 20°C/68°F  
4½ (app) hours at 10°C/50°F  
Dry to sand: 3 (app) hours at 20°C/68°F  
7 (app) hours at 10°C/50°F

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

- Application method: Putty knife or similar  
Cleaning of tools: HEMPEL'S THINNER 08080 or HEMPEL'S DEGREASER 99611  
Recoat interval: See REMARKS overleaf

- Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

**HEMPEL'S UNIFILLER 67583**

**SURFACE PREPARATION:** Remove any oil, grease etc. with HEMPEL'S YACHT CLEANER 67601, hose down with clean fresh water. Grind the surface, depending on material and surface condition. Large areas are preferably primed with a suitable primer such as HEMPEL'S LIGHT PRIMER 45551, HEMPADUR SEALER 599 or HEMPITOX 67220 depending on substrate.

**APPLICATION CONDITIONS:** The surface must be completely clean and dry and its temperature above the dew point. Use only where application and curing can proceed at temperature above 5°C/41°F. In confined spaces provide adequate ventilation during application and drying.

**SUBSEQUENT COAT:** One as well as two-component paints.

**REMARKS:** HEMPEL'S UNIFILLER 67583 should be not applied in more than 500 micron/20 mils wet film thickness per coat. A possible second coat can be applied after 1 hour at 20°C/68°F, 2 hours at 10°C/50°F. The filler may be overcoated with white spirit or xylene-based paints after approximately 2 hours at 20°C/68°F, 4 hours at 10°C/50°F. Allow HEMPEL'S UNIFILLER 67583 to cure for at least 24 hours at 20°C/68°F, 48 hours at 10°C/50°F, before application of two-component paints. No maximum recoat interval, but surface must be clean and roughened by grinding.

**Note:** **The information given in the Product Data Sheet is intended for professional use.**

**ISSUED:** April 2003 - 6758315000  
HEMPEL A/S

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***Product data are subject to change without notice and become void five years from the date of issue.***



# Product Data

## HEMPEL'S YACHT CLEANER 67601

|                            |  |
|----------------------------|--|
| <b>Description:</b>        | HEMPEL'S YACHT CLEANER 67601 is a concentrated alkaline cleaner based on emulsifiers, surface-active agents and water.   |
| <b>Recommended use:</b>    | For cleaning and degreasing of painted surfaces before recoating. Especially suited for removal of dirt, soot and u.v. light degraded surface-layers. Suited for use in high pressure cleaning equipment.  |
| <b>Availability:</b>       | Subject to confirmation.   |
| <b>PHYSICAL CONSTANTS:</b> |  |
| Colours/Shade nos:         | Transparent/09990  |
| Flash point:               | Non-flammable  |
| Specific gravity:          | 1.0 kg/litre<br>8.3 lbs/US gallon  |
| pH value:                  | App. 10 undiluted  |
| V.O.C.:                    | 0 g/litre - 0 lbs/US gallon  |
| <b>Application method:</b> | Apply by stiff brush or by spraying using lowest possible pressure. To be diluted with fresh water: 1-20 parts of fresh water to 1 part of HEMPEL'S YACHT CLEANER 67601. After 5 minutes the surface must be high pressure hosed with fresh water or carefully scrubbed with plenty of fresh water until all residues have been removed. If HEMPEL'S YACHT CLEANER 67601 leaves a white film, it can be removed with warm water. Can be used undiluted as cleaner for brushes. |
| <b>Remarks:</b>            | Shake HEMPEL'S YACHT CLEANER 67601 before use.<br>Due to alkaline properties HEMPEL'S YACHT CLEANER 67601 is not suited for cleaning of aluminium.<br>Do not expose to frost.  |
| Note:                      | <b>HEMPEL'S YACHT CLEANER 67601 is for professional use only.</b>  |
| <b>Safety:</b>             | Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.   |
| <b>Issued:</b>             | April 2003 - 6760109990<br>HEMPEL A/S  |

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# Product Data

## HEMPEL'S PAINT REMOVER 67631

- Description:** HEMPEL'S PAINT REMOVER 67631 is based on strong solvents thickened with a thickening agent. Dissolves/loosens most kinds of old one-component paints and varnishes.
- Recommended use:** As a paint and varnish remover. Can also be used for restoring stiffened paint brushes and rollers. May be used with caution for removal of bottom paints on glass-fibre reinforced plastic.
- Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

- Colours: Transparent  
Shade nos: 09990  
Flash point: 95°/203°F  
Specific gravity: 1.0 kg/litre - 8.3 lbs/US gallon

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION METHOD:

Before applying the HEMPEL'S PAINT REMOVER 67631 the surface must be dry. Apply HEMPEL'S PAINT REMOVER 67631 liberally, cover with plastic sheets to prevent excessive evaporation of solvents, this will make the paint easier to remove. Leave to work for 1-2 hours until the paint coat dissolves or lifts. Scrape off all the paint and clean with hot water and HEMPEL'S BOAT SHAMPOO 67282. For old and thick coats it may be necessary to repeat the treatment.

**Note:** Do not use hot air pistols.

**Application temperature:** 15°C/59°F  
The best effect is achieved at 18°C/64°F.  
Store frost free

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

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HEMPEL A/S

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# Product Data

## HEMPEL'S HIGH GLOSS WAX 67641

**Description:** HEMPEL'S HIGH GLOSS WAX 67641 is a liquid wax which forms a hard, durable glossy finish.

**Recommended use:** For sealing glass fibre and varnished surfaces after polishing with HEMPEL'S CUSTOM MARINE POLISH 67441.

**Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

Shade nos: 09990  
Finish: Transparent  
Flash point: 65°C/149°F  
Specific gravity: 1.0 kg/litre - 8.3 lbs/US gallon  
Dry to touch: 10 (app) minutes at 20°C/68°F (See REMARKS)  
20 (app) minutes at 10°C/50°F (See REMARKS)

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

**Surface preparation:** Clean the surface with HEMPEL'S YACHT CLEANER 67601 to remove contamination. Hose with fresh water and allow to dry. If the surface is dirty or oxidized, polish with HEMPEL'S BOAT RUBBING 67371 prior to applying HEMPEL'S CUSTOM MARINE POLISH 67441 and HEMPEL'S HIGH GLOSS WAX 67641.

**Application conditions:** The temperature of the surface must be above 5°C/41°F, preferably 15°C/ 59°F. Do not apply in direct sunlight.

**Remarks:** Apply HEMPEL'S HIGH GLOSS WAX 67641 in a thin layer with a clean, soft cloth. After drying, polish with a clean, soft cloth. Treat only small areas at a time. In case of later repainting, it is very important to remove any traces of wax. Shake before use.

Note: **The information given in the Product Data Sheet is intended for professional use.**

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

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HEMPEL A/S

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# Product Data

## HEMPEL'S MARINE SEALANT 67673

**Description:** HEMPEL'S MARINE SEALANT 67673 is a one-component, highly elastic silicone rubber. Cures by means of the air's humidity into an elastic paste. Does not develop acetic acid during curing.

**Recommended use:** For sealing of windows and for jointing of seams and other joint and sealing works on ships.

**Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

Colours/Shade nos: Transparent/09990  
Finish: Semiflat  
Flash point: > 100°C/> 212°F  
Specific gravity: 1.0 kg/litre - 8.6 lbs/US gallon  
Surface dry: 10-20 minutes at 20°C/68°F (ISO 1517)  
20-40 minutes at 10°C/50°F (ISO 1517)  
Fully cured: 1 day at 20°C/68°F  
2 days at 10°C/50°F

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

Application method: To be applied direct from the tube followed by smoothening with putty knife.  
Nozzle orifice: Included in the tube  
Cleaning of tools: Freshly applied paste to be removed with HEMPEL'S THINNER 08080. Cured paste mechanically.  
Recoat intervals: Do not overcoat.

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued: April 2003

**HEMPEL'S MARINE SEALANT 67673**

|                         |  |
|-------------------------|--|
| SURFACE PREPARATION:    | Degrease with HEMPEL'S DEGREASER 99611.  |
| APPLICATION CONDITIONS: | The surface must be completely clean and dry and its temperature below the dew point. Use only where application and curing can proceed at temperatures above 5°C/32°F. In confined spaces provide adequate ventilation during application and drying. |
| PRECEDING COAT:         | None.  |
| SUBSEQUENT COAT:        | Do not overcoat.   |
| REMARKS:<br>Note:       | Service temperatures from -20°C/-4°F to +50°C/ +122°F.<br><b>The information given in the Product Data Sheet is intended for professional use.</b>   |
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# Product Data

## HEMPEL'S PROOF 10

67821

**Description:** HEMPEL'S PROOF 10 is a bituminous sealing compound. Remains flexible.

**Recommended use:** For caulking of wooden boats and filling of crackings below the waterline.

**Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

Colours/Shade nos: Black/19990  
Finish: Semi-flat  
Volume solids, %:  $84 \pm 1$   
Flash point: 25°C/77°F  
Specific gravity: 1.1 kg/litre - 9.2 lbs/US gallon  
Surface dry: 1 (app) hour at 20°C/68°F  
2 (app) hours at 10°C/50°F  
Dry to touch: 3 (app) hours at 20°C/68°F (See REMARKS overleaf)  
6 (app) hours at 10°C/50°F (See REMARKS overleaf)

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

Application method: Cartridge or putty knife  
Cleaning of tools: HEMPEL'S THINNER 08080 or HEMPEL'S THINNER 08230  
Recoat intervals, min.: 24 hours (20°C/68°F) - 48 hours (10°C/50°F)  
Recoat intervals, max: None

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued: April 2003

**HEMPEL'S PROOF 10, 67821**

|                         |  |
|-------------------------|--|
| SURFACE PREPARATION:    | Clean with HEMPEL'S YACHT CLEANER 67601 followed by fresh water hosing. Before applying HEMPEL'S PROOF 10, rough wood, especially old wood, must be primed with HEMPEL'S YACHT PRIMER 26030.   |
| APPLICATION CONDITIONS: | The surface must be completely clean and dry and its temperature above the dew point. Use only where application and curing can proceed at temperatures above 5°C/41°F. In confined spaces provide adequate ventilation during application and drying.   |
| PRECEDING COAT:         | None or HEMPEL'S YACHT PRIMER 26030.   |
| SUBSEQUENT COAT:        | HEMPEL'S YACHT PRIMER 26030.   |
| REMARKS:                | <b>Large crackings:</b><br>Fill with HEMPEL'S PROOF 10 by means of a cartridge or putty knife.<br>After 24 hours drying at 20°C/68°F, 48 hours at 10°C/50°F, apply HEMPEL'S YACHT PRIMER 26030 before application of antifouling.<br>HEMPEL'S PROOF 10 is not resistant to oils and chemicals but is insoluble in water.<br>HEMPEL'S PROOF 10 may discolour light-coloured antifoulings. |
| Note:                   | <b>The information given in the Product Data Sheet is intended for professional use.</b>   |
| ISSUED:                 | April 2003 - 6782119990<br>HEMPEL A/S  |

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# Product Data

## BLAKE'S CRUISING 71000

|                             |   |
|-----------------------------|---|
| <b>Description:</b>         | BLAKE'S CRUISING 71000 is a conventional antifouling with a high content cuprous oxide. It changes to final colour after approximately 1 week of exposure to water. For cold and warm waters. |
| <b>Recommended use:</b>     | As an antifouling for boats of glass fibre, wood, plywood, steel and ferro-cement. Do not use on aluminium or other light-alloy metals. Risk of corrosion in case of direct contact.          |
| <b>Availability:</b>        | Subject to confirmation.  |
| <b>PHYSICAL CONSTANTS:</b>  |   |
| Colours/Shade nos:          | Black/19990 - Red/51170*  |
| Finish:                     | Semi-flat   |
| Volume solids, %:           | 53 ± 1  |
| Theoretical spreading rate: | 13.3 m <sup>2</sup> /litre - 40 micron<br>531 sq.ft./US gallon - 1.6 mils   |
| Flash point:                | 24°C/75°F   |
| Specific gravity:           | 1.8 kg/litre - 15.0 lbs/US gallon   |
| Dry to touch:               | 4 (app) hours at 20°C/68°F<br>8 (app) hours at 10°C/50°F  |
| V.O.C.:                     | 415 g/litre - 3.4 lbs/US gallon   |

\*Other shades according to assortment list.

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |  |             |              |                        |
|--------------------------------|--|-------------|--------------|------------------------|
| Application methods:           | Airless spray  | Airspray    | Brush/Roller | (See REMARKS overleaf) |
| Thinner (max. vol.):           | 08080 (5%)   | 08080 (15%) | 08080 (5%)   |                        |
| Nozzle orifice:                | .018" - .023"  |             |              |                        |
| Nozzle pressure:               | 150 bar/2175 psi   |             |              |                        |
|                                | <i>(Airless spray data are indicative and subject to adjustment)</i> |             |              |                        |
| Cleaning of tools:             | HEMPEL'S THINNER 08080   |             |              |                        |
| Indicated film thickness, dry: | 40 micron/1.6 mils   |             |              |                        |
| Indicated film thickness, wet: | 75 micron/3 mils   |             |              |                        |
| Recoat interval, min:          | 5 hours (20°C/68°F) -<br>9 hours (10°C/50°F)                         |             |              |                        |
| Recoat interval, max:          | None (See REMARKS overleaf)  |             |              |                        |

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued: April 2003

**BLAKE'S CRUISING 71000**

|                         |   |
|-------------------------|---|
| APPLICATION CONDITIONS: | The surface must be completely clean and dry. Application should only take place in dry weather and the temperature of the surface should be above the dew point to avoid condensation. The temperature of the paint itself should be above 15°C/59°F. Avoid direct sunlight. In confined spaces provide adequate ventilation during application and drying.  |
| PRECEDING COAT:         | HEMPEL'S LIGHT PRIMER 45551 or according to specification.  |
| SUBSEQUENT COAT:        | None.   |
| REMARKS:                | Stir well before use as the product contains heavy particles.<br>Keep thinning to a minimum to ensure that correct film thickness is obtained.<br>Recommended number of coats:<br>Airless application: 2-3 coats, minimum 120 micron total dry film thickness.<br>Air spray, brush, roller, paint pad: 3-5 coats<br>Launching not before 24 hours after application of last coat. BLAKE'S CRUISING 71000 can be left out of water up to 3 months after painting. If a new coat of BLAKE'S CRUISING 71000 is applied after prolonged exposure to polluted atmosphere remove accumulated contamination by fresh water hosing and allow to dry before painting.<br>Launching not before 24 hours after application of the last coat. BLAKE'S CRUISING 71000 can be left out of water up to 1 month after painting. If a new coat of BLAKE'S CRUISING 71000 is applied after prolonged exposure to polluted atmosphere, remove accumulated contamination by fresh water hosing and allow to dry before painting.<br>When recoating after service the old antifouling should be sealed off with eg HEMPEL'S YACHT PRIMER 26030, even if it looks sound and intact. |
| Note:                   | <b>The information given in the Product Data Sheet is intended for commercial use.</b>  |
| ISSUED:                 | April 200 - 7100019990CR005<br>HEMPEL A/S   |

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***Product data are subject to change without notice and become void five years from the date of issue.***



# Product Data

## HEMPEL'S MILLE® OCEAN 7110E

COMPONENT B: OCEAN ACTIVE 71210

**Description:** HEMPEL'S MILLE OCEAN 7110E is a two-component antifouling based on biocides and cuprous oxide. It changes to final colour after approximately 1 week of exposure to water.

**Recommended use:** As an antifouling for boats of glass fibre, wood, plywood, steel and ferro-cement not exceeding a speed of 15 knots. Do not use on aluminium or other light-alloy metals. Risk of corrosion in case of direct contact.

**Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

|                             |   |   |
|-----------------------------|---|---|
| Colours/Shade nos:          | Grey/10160*   | Red/51170*  |
| Finish:                     | Semi-flat   | Semi-flat   |
| Volume solids, %:           | 52 ± 1  | 53 ± 1  |
| Theoretical spreading rate: | 13.0 m <sup>2</sup> /litre - 40 micron<br>521 sq.ft./US gallon - 1.6 mils | 13.3 m <sup>2</sup> /litre - 40 micron<br>531 sq.ft./US gallon - 1.6 mils |
| Flash point:                | 24°C/75°F   | 24°C/75°F   |
| Specific gravity:           | 1.6 kg/litre - 13.4 lbs/US gallon   | 1.6 kg/litre - 13.4 lbs/US gallon   |
| Dry to touch:               | 4 (app) hours at 20°C/68°F<br>8 (app) hours at 10°C/50°F                  | 4 (app) hours at 20°C/68°F<br>8 (app) hours at 10°C/50°F                  |
| V.O.C.:                     | 420 g/litre - 3.5 lbs/US gallon   | 415 g/litre - 3.4 lbs/US gallon   |

\*Other shades according to assortment list.

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |   |             |                                     |
|--------------------------------|---|-------------|-------------------------------------|
| Mixing ratio for 7110E:        | MILLE OCEAN 7110S: OCEAN ACTIVE 71210<br>3 : 1 volume                             |             |                                     |
| Application methods:           | Airless spray   | Airspray    | Brush/Roller (See REMARKS overleaf) |
| Thinner (max. vol.):           | 08080 (5%)  | 08080 (15%) | 08080 (5%)                          |
| Pot life:                      | 24 hours (20°C/68°F)<br>48 hours (10°C/50°F)                                      |             |                                     |
| Nozzle orifice:                | .018" - .023"   |             |                                     |
| Nozzle pressure:               | 150 bar/2175 psi<br>(Airless spray data are indicative and subject to adjustment) |             |                                     |
| Cleaning of tools:             | HEMPEL'S THINNER 08080  |             |                                     |
| Indicated film thickness, dry: | 40 micron/1.6 mils  |             |                                     |
| Indicated film thickness, wet: | 75 micron/3 mils  |             |                                     |
| Recoat interval, min:          | 5 hours (20°C/68°F) -<br>9 hours (10°C/50°F)                                      |             |                                     |
| Recoat interval, max:          | None (See REMARKS overleaf)   |             |                                     |

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued: May 2003

**HEMPEL'S MILLE OCEAN 7110E**

|                         |  |
|-------------------------|--|
| SURFACE PREPARATION:    | <b>Existing antifouling:</b> Remove possible oil and grease, etc. with HEMPEL'S YACHT CLEANER 67601 followed by (high pressure) fresh water cleaning, also to remove possible weak structure of leached antifouling. Allow the surface to dry before recoating. Sealer depends on type and condition of existing antifouling.  |
| APPLICATION CONDITIONS: | The surface must be completely clean and dry. Application should only take place in dry weather and the temperature of the surface should be above the dew point to avoid condensation. The temperature of the paint itself should be above 15°C/59°F. Avoid direct sunlight. In confined spaces provide adequate ventilation during application and drying.   |
| PRECEDING COAT:         | HEMPEL'S PLATIN PRIMER 10001, HEMPEL'S YACHT PRIMER 26030 or according to specification.   |
| SUBSEQUENT COAT:        | None.  |
| REMARKS:                | Stir well before use as the product contains heavy particles.<br>Keep thinning to a minimum to ensure that correct film thickness is obtained.<br>Launching not before 24 hours after application of the last coat. HEMPEL'S MILLE OCEAN 7110E can be left out of water up to 1 month after painting. If a new coat of HEMPEL'S MILLE OCEAN 7110E is applied after prolonged exposure to polluted atmosphere, remove accumulated contamination by fresh water hosing and allow to dry before painting. |
| Note:                   | <b>The information given in the Product Data Sheet is intended for commercial use.</b>   |
| ISSUED:                 | May 2003 - 7110E10160CR004<br>HEMPEL A/S   |

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# Product Data

## HEMPEL'S MILLE® SOLO 7110H

**Description:** HEMPEL'S MILLE SOLO 7110H is a conventional antifouling based on cuprous oxide and zinc oxide. It changes to final colour after approximately 1 week of exposure to water.

**Recommended use:** As an antifouling for boats of glass fibre, wood, plywood, steel and ferro-cement not exceeding a speed of 15 knots. Do not use on aluminium or other light-alloy metals. Risk of corrosion in case of direct contact.

**Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

|                             |   |   |
|-----------------------------|---|---|
| Colours/Shade nos:          | Blue/30390*   | Red/51170*  |
| Finish:                     | Semi-flat   | Semi-flat   |
| Volume solids, %:           | 52 ± 1  | 53 ± 1  |
| Theoretical spreading rate: | 13.0 m <sup>2</sup> /litre - 40 micron<br>521 sq.ft./US gallon - 1.6 mils | 13.3 m <sup>2</sup> /litre - 40 micron<br>531 sq.ft./US gallon - 1.6 mils |
| Flash point:                | 24°C/75°F   | 24°C/75°F   |
| Specific gravity:           | 1.7 kg/litre - 14.2 lbs/US gallon   | 1.8 kg/litre - 15.0 lbs/US gallon   |
| Dry to touch:               | 4 (app) hours at 20°C/68°F<br>8 (app) hours at 10°C/50°F                  | 4 (app) hours at 20°C/68°F<br>8 (app) hours at 10°C/50°F                  |
| V.O.C.:                     | 420 g/litre - 3.5 lbs/US gallon   | 415 g/litre - 3.4 lbs/US gallon   |

\*Other shades according to assortment list.

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |   |             |              |                        |
|--------------------------------|---|-------------|--------------|------------------------|
| Application methods:           | Airless spray   | Airspray    | Brush/Roller | (See REMARKS overleaf) |
| Thinner (max. vol.):           | 08080 (5%)  | 08080 (15%) | 08080 (5%)   |                        |
| Nozzle orifice:                | .018" - .023"   |             |              |                        |
| Nozzle pressure:               | 150 bar/2175 psi<br>(Airless spray data are indicative and subject to adjustment) |             |              |                        |
| Cleaning of tools:             | HEMPEL'S THINNER 08080  |             |              |                        |
| Indicated film thickness, dry: | 40 micron/1.6 mils  |             |              |                        |
| Indicated film thickness, wet: | 75 micron/3 mils  |             |              |                        |
| Recoat interval, min:          | 5 hours (20°C/68°F) -<br>9 hours (10°C/50°F)                                      |             |              |                        |
| Recoat interval, max:          | None (See REMARKS overleaf)   |             |              |                        |

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued: May 2003

**HEMPEL'S MILLE SOLO 7110H**

|                         |  |
|-------------------------|--|
| SURFACE PREPARATION:    | <b>Existing antifouling:</b> Remove possible oil and grease, etc. with HEMPEL'S YACHT CLEANER 67601 followed by (high pressure) fresh water cleaning, also to remove possible weak structure of leached antifouling. Allow the surface to dry before recoating. Sealer depends on type and condition of existing antifouling.  |
| APPLICATION CONDITIONS: | The surface must be completely clean and dry. Application should only take place in dry weather and the temperature of the surface should be above the dew point to avoid condensation. The temperature of the paint itself should be above 15°C/59°F. Avoid direct sunlight. In confined spaces provide adequate ventilation during application and drying.   |
| PRECEDING COAT:         | HEMPEL'S PLATIN PRIMER 10001, HEMPEL'S YACHT PRIMER 26030 or according to specification.   |
| SUBSEQUENT COAT:        | None.  |
| REMARKS:                | Stir well before use as the product contains heavy particles.<br>Keep thinning to a minimum to ensure that correct film thickness is obtained.<br>Launching not before 24 hours after application of the last coat. HEMPEL'S MILLE SOLO 7110H can be left out of water up to 1 month after painting. If a new coat of HEMPEL'S MILLE SOLO 7110H is applied after prolonged exposure to polluted atmosphere, remove accumulated contamination by fresh water hosing and allow to dry before painting. |
| Note:                   | <b>The information given in the Product Data Sheet is intended for commercial use.</b>   |
| ISSUED:                 | May 2003 - 7110H30390CR004<br>HEMPEL A/S   |

***This Product Data Sheet supersedes those previously issued. For definition and scope, see explanatory notes to applicable Product Data Sheets.***

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# Product Data

## HEMPEL'S MILLE® WHITE 71150

|                             |  |  |  |
|-----------------------------|--|--|--|
| <b>Description:</b>         | HEMPEL'S MILLE WHITE 71150 is a polishing antifouling based on a combination of cuprous compounds and organic bioactive materials. Due to its self-renewing effect this product maintains an effective bioactive surface during its entire service life. Service has a certain influence on colour. The antifouling may obtain a copper-green tinge. HEMPEL'S MILLE WHITE 71150 is for temperate waters. |  |  |
| <b>Recommended use:</b>     | As an antifouling for boats of glass fibre, wood, plywood, steel and ferro-cement. Do not use on aluminium or other light-alloy metal. Risk of corrosion in case of direct contact.  |  |  |
| <b>Availability:</b>        | Subject to confirmation.   |  |  |
| <b>PHYSICAL CONSTANTS:</b>  |  |  |  |
| Colours/Shade nos:          | White/10000  |  |  |
| Finish:                     | Semi-flat  |  |  |
| Volume solids, %:           | 54 ± 1   |  |  |
| Theoretical spreading rate: | 13.5 m <sup>2</sup> /litre - 40 micron<br>541 sq.ft./US gallon - 1.6 mils  |  |  |
| Flash point:                | 24°C/75°F  |  |  |
| Specific gravity:           | 1.4 kg/litre - 11.7 lbs/US gallon  |  |  |
| Dry to touch:               | 4 (app) hours at 20°C/68°F<br>8 (app) hours at 10°C/50°F   |  |  |
| V.O.C.:                     | 405 g/litre - 3.4 lbs/US gallon  |  |  |

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |   |             |                  |                        |
|--------------------------------|---|-------------|------------------|------------------------|
| Application methods:           | Airless spray   | Airspray    | Brush/Roller/Pad | (See REMARKS overleaf) |
| Thinner (max. vol.):           | 08080 (5%)  | 08080 (15%) | 08080 (5%)       |                        |
| Nozzle orifice:                | .018" - .023"   |             |                  |                        |
| Nozzle pressure:               | 150 bar/2175 psi<br>(Airless spray data are indicative and subject to adjustment) |             |                  |                        |
| Cleaning of tools:             | HEMPEL'S THINNER 08080  |             |                  |                        |
| Indicated film thickness, dry: | 40 micron/1.6 mils  |             |                  |                        |
| Indicated film thickness, wet: | 75 micron/3 mils  |             |                  |                        |
| Recoat interval, min:          | 5 hours (20°C/68°F)<br>9 hours (10°C/50°F)  |             |                  |                        |
| Recoat interval, max:          | None (See REMARKS overleaf)   |             |                  |                        |

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

**HEMPEL'S MILLE WHITE 71150**

|                         |  |
|-------------------------|--|
| SURFACE PREPARATION:    | <b>Existing antifouling:</b> Remove possible oil and grease, etc. with HEMPEL'S YACHT CLEANER 67601 followed by (high pressure) fresh water cleaning, also to remove possible weak structure of leached antifouling. Allow the surface to dry before recoating. Sealer depends on type and condition of existing antifouling.  |
| APPLICATION CONDITIONS: | The surface must be completely clean and dry. Application should only take place in dry weather and the temperature of the surface should be above the dew point to avoid condensation. The temperature of the paint itself should be above 15°C/59°F. Avoid direct sunlight. In confined spaces provide adequate ventilation during application and drying.   |
| PRECEDING COAT:         | Depending on the substrate. Please see data sheet for HEMPEL'S LIGHT PRIMER 45551 or HEMPEL'S YACHT PRIMER 26030.  |
| SUBSEQUENT COAT:        | None.  |
| REMARKS:                | Before recoating old HEMPEL'S MILLE WHITE 71150 clean the surface thoroughly with fresh water by high pressure hosing or by brushing with clean, bristle brushes. The bottom is most easily cleaned using diluted HEMPEL'S YACHT CLEANER 67601 followed by fresh water hosing immediately after the boat is taken out of the water.<br>The antifouling contains heavy pigments and must therefore be stirred well before and during use.<br>Recommended number of coats:<br>Airless application: 2 coats, 80-100 micron total dry film thickness.<br>Air spray, brush, roller, paint pad: 3-5 coats<br>Launching not before 24 hours after application of last coat. HEMPEL'S MILLE WHITE 71150 can be left out of water up to 1 month after painting. If a new coat of HEMPEL'S MILLE WHITE 71150 is applied after prolonged exposure to polluted atmosphere remove accumulated contamination by fresh water hosing and allow to dry before painting. |
| Note:                   | <b>The information given in the Product Data Sheet is intended for commercial use.</b>   |
| ISSUED:                 | April 2003 - 7115010000CR001<br>HEMPEL A/S   |

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# Product Data

## HEMPEL'S ALU SAFE 7120D

**Description:** HEMPEL'S ALU SAFE 7120D is a copper-free polishing antifouling with a combination of organic bioactive materials. Due to its self-renewing effect this product maintains an effective bioactive surface during its entire service life.

**Recommended use:** As an antifouling for boats of aluminium and other light-alloy metal. Primarily for use in water with relatively low fouling potential.

**Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

|                             |   |   |
|-----------------------------|---|---|
| Colours/Shade nos:          | White/10000*  | Black/19990*  |
| Finish:                     | Semi-flat   | Semi-flat   |
| Volume solids, %:           | 55 ± 1  | 51 ± 1  |
| Theoretical spreading rate: | 13.8 m <sup>2</sup> /litre - 40 micron<br>551 sq.ft./US gallon - 1.6 mils | 12.8 m <sup>2</sup> /litre - 40 micron<br>511 sq.ft./US gallon - 1.6 mils |
| Flash point:                | 32°C/90°F   | 32°C/90°F   |
| Specific gravity:           | 1.5 kg/litre - 12.5 lbs/US gallon   | 1.4 kg/litre - 11.7 lbs/US gallon   |
| Dry to touch:               | 4 (app) hours at 20°C/68°F<br>8 (app) hours at 10°C/50°F                  | 4 (app) hours at 20°C/68°F<br>8 (app) hours at 10°C/50°F                  |
| V.O.C.:                     | 400 g/litre - 3.3 lbs/US gallon   | 430 g/litre - 3.6 lbs/US gallon   |

\*Other shades according to assortment list.

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |   |             |                        |
|--------------------------------|---|-------------|------------------------|
| Application method:            | Airless spray   | Air spray   | Brush/Roller/Paint pad |
| Thinner (max.vol.):            | 08080 (5%)  | 08080 (15%) | 08080 (5%)             |
| Nozzle orifice:                | .018"-.023"   |             |                        |
| Nozzle pressure:               | 150 bar/2175 psi<br>(Airless spray data are indicative and subject to adjustment) |             |                        |
| Cleaning of tools:             | HEMPEL'S THINNER 08080  |             |                        |
| Indicated film thickness, dry: | 40 micron/1.6 mils (see REMARKS overleaf)   |             |                        |
| Indicated film thickness, wet: | 75 micron/3 mils  |             |                        |
| Recoat interval, min:          | 5 hours (20°C/68°F)<br>9 hours (10°C/50°F)  |             |                        |
| Recoat interval, max:          | None (See REMARKS overleaf)   |             |                        |

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

**HEMPEL'S ALU SAFE 7120D**

|                         |   |
|-------------------------|---|
| APPLICATION CONDITIONS: | The surface must be completely clean and dry. Application should only take place in dry weather and the temperature of the surface should be above the dew point to avoid condensation. The temperature of the paint itself should be above 15°C/59°F. Avoid direct sunlight. In confined spaces provide adequate ventilation during application and drying.  |
| PRECEDING COAT:         | Depending on the substrate. Please see data sheet for HEMPEL'S LIGHT PRIMER 45551. The maximum recoating interval of HEMPEL'S LIGHT PRIMER 45551 is 8 hours at 20°C/68°F - 16 hours at 10°C/50°F.   |
| REMARKS:                | Before recoating old HEMPEL'S ALU SAFE clean the surface thoroughly with fresh water by high pressure hosing or by brushing with clean, bristle brushes. The bottom is most easily cleaned using suitable detergent followed by fresh water hosing immediately after the boat is taken out of the water.<br>The antifouling contains heavy pigments and must therefore be stirred well before and during use.<br><b>Recommended number of coats:</b><br>Airless application: 2 coats, 80-100 micron total dry film thickness.<br>Air spray, brush, roller, paint pad: 3-5 coats<br>Launching not before 24 hours after application of last coat. HEMPEL'S ALU SAFE 7120D can be left out of water up to 1 month after painting. If a new coat of HEMPEL'S ALU SAFE 7120D is applied after prolonged exposure to polluted atmosphere, remove accumulated contamination by fresh water hosing and allow to dry before painting. |
| Note:                   | <b>The information given in the Product Data Sheet is intended for commercial use.</b>  |
| ISSUED:                 | April 2003 - 7120D10000CR002<br>HEMPEL A/S  |

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# Product Data

## HEMPEL'S MILLE® RACING 71350

**Description:** HEMPEL'S MILLE RACING 71350 is an erodable bottom paint.

**Recommended use:** HEMPEL'S MILLE RACING 71350 is recommended for areas with high environmental demands.  
Can be used on boats of glass fibre reinforced polyester, wood, plywood, steel and ferrous cement.

**Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

|                             |   |   |
|-----------------------------|---|---|
| Colour/Shade nos:           | White/10000*  | Black/19990*  |
| Finish:                     | Semiflat  | Semiflat  |
| Volume solids,%:            | 52 ± 1  | 49 ± 1  |
| Theoretical spreading rate: | 13.0 m <sup>2</sup> /litre - 40 micron<br>521 sq.ft./US gallon - 1.6 mils | 12.3 m <sup>2</sup> /litre - 40 micron<br>491 sq.ft./US gallon - 1.6 mils |
| Flash point:                | 32°C/90°F   | 32°C/90°F   |
| Specific gravity:           | 1.6 kg/litre - 13.4 lbs/US gallon   | 1.5 kg/litre - 12.5 lbs/US gallon   |
| Dry to touch:               | 4 (app) hours at 20°C/68°F<br>8 (app) hours at 10°C/50°F                  | 4 (app) hours at 20°C/68°F<br>8 (app) hours at 10°C/50°F                  |
| V.O.C.:                     | 425 g/litre - 3.5 lbs/US gallon   | 450 g/litre - 3.7 lbs/US gallon   |

\*Other shades according to assortment list.

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |   |             |                        |
|--------------------------------|---|-------------|------------------------|
| Application method:            | Airless spray   | Air spray   | Brush/Roller/Paint pad |
| Thinner (max.vol.):            | 08080 (5%)  | 08080 (15%) | 08080 (5%)             |
| Nozzle orifice:                | .018"-.023"   |             |                        |
| Nozzle pressure:               | 150 bar/2175 psi<br>(Airless spray data are indicative and subject to adjustment) |             |                        |
| Cleaning of tools:             | HEMPEL'S THINNER 08080  |             |                        |
| Indicated film thickness, dry: | 40 micron/1.6 mils (See REMARKS overleaf)   |             |                        |
| Indicated film thickness, wet: | 75 micron/3 mils  |             |                        |
| Recoat interval, min:          | 5 hours (20°C/68°F)<br>9 hours (10°C/50°F)  |             |                        |
| Recoat interval, max:          | None (See REMARKS overleaf)   |             |                        |

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued: April 2003

**HEMPEL'S MILLE RACING 71350**

**APPLICATION CONDITIONS:** The surface must be completely clean and dry. Application should only take place in dry weather and the temperature of the surface should be above the dew point to avoid condensation. The temperature of the paint itself should be above 15°C/59°F. Avoid direct sunlight. In confined spaces provide adequate ventilation during application and drying.

**PRECEDING COAT:** Depending on the substrate. Please see product data sheet for HEMPEL'S LIGHT PRIMER 45551 or HEMPEL'S YACHT PRIMER 26030.

**REMARKS:** Before recoating old HEMPEL'S MILLE RACING 71350 clean the surface thoroughly with fresh water by high pressure hosing or by brushing with clean, bristle brushes. The bottom is most easily cleaned by using diluted HEMPEL'S YACHT CLEANER 67601 followed by fresh water hosing immediately after the boat is taken out of the water. HEMPEL'S MILLE RACING 71350 contains heavy pigments and should therefore be stirred well before and during use.

**Recommended number of coats:**

Airless application: 2 coats, 80-100 micron/3.2-4 mils total dry film thickness.

Air spray, brush, roller, paint pad: 3-5 coats

Launching not before 24 hours after application of the last coat. HEMPEL'S MILLE RACING 71350 can be left out of water up to 1 month after painting. If a new coat of HEMPEL'S MILLE RACING 71350 is applied after prolonged exposure to polluted atmosphere remove accumulated contamination by fresh water hosing and allow to dry before painting.

**Note:** **The information given in the Technical Data Sheet is intended for commercial use.**

**ISSUED:** April 2003 - 7135010000CR001  
HEMPEL A/S

***This Product Data Sheet supersedes those previously issued. For definition and scope, see explanatory notes to applicable Product Data Sheets.***

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***Product data are subject to change without notice and become void five years from the date of issue.***



# Product Data

## HEMPEL'S MILLE® LIGHT 71400

**Description:** HEMPEL'S MILLE LIGHT 71400 is an erodable bottom paint.

**Recommended use:** HEMPEL'S MILLE LIGHT 71400 is recommended for areas with high environmental demands.  
Can be used on boats of glass fibre reinforced polyester, wood, plywood, steel and ferrous cement with a speed below 15 knots.

**Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

|                             |   |   |
|-----------------------------|---|---|
| Colour/Shade nos:           | White/10000*  | Black/19990*  |
| Finish:                     | Semiflat  | Semiflat  |
| Volume solids,%:            | 51 ± 1  | 50 ± 1  |
| Theoretical spreading rate: | 12.8 m <sup>2</sup> /litre - 40 micron<br>511 sq.ft./US gallon - 1.6 mils | 12.5 m <sup>2</sup> /litre - 40 micron<br>501 sq.ft./US gallon - 1.6 mils |
| Flash point:                | 21°C/70°F   | 21°C/70°F   |
| Specific gravity:           | 1.6 kg/litre - 13.4 lbs/US gallon   | 1.5 kg/litre - 12.5 lbs/US gallon   |
| Dry to touch:               | 4 (app) hours at 20°C/68°F<br>8 (app) hours at 10°C/50°F                  | 4 (app) hours at 20°C/68°F<br>8 (app) hours at 10°C/50°F                  |
| V.O.C.:                     | 430 g/litre - 3.6 lbs/US gallon   | 440 g/litre - 3.7 lbs/US gallon   |

\*Other shades according to assortment list.

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |   |             |                        |
|--------------------------------|---|-------------|------------------------|
| Application method:            | Airless spray   | Air spray   | Brush/Roller/Paint pad |
| Thinner (max.vol.):            | 08080 (5%)  | 08080 (15%) | 08080 (5%)             |
| Nozzle orifice:                | .018"-.023"   |             |                        |
| Nozzle pressure:               | 150 bar/2175 psi<br>(Airless spray data are indicative and subject to adjustment) |             |                        |
| Cleaning of tools:             | HEMPEL'S THINNER 08080  |             |                        |
| Indicated film thickness, dry: | 40 micron/1.6 mils (See REMARKS overleaf)   |             |                        |
| Indicated film thickness, wet: | 75 micron/3 mils  |             |                        |
| Recoat interval, min:          | 5 hours (20°C/68°F)<br>9 hours (10°C/50°F)  |             |                        |
| Recoat interval, max:          | None (See REMARKS overleaf)   |             |                        |

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued: April 2003

**HEMPEL'S MILLE LIGHT 71400**

APPLICATION CONDITIONS: The surface must be completely clean and dry. Application should only take place in dry weather and the temperature of the surface should be above the dew point to avoid condensation. The temperature of the paint itself should be above 15°C/59°F. Avoid direct sunlight. In confined spaces provide adequate ventilation during application and drying.

PRECEDING COAT: Depending on the substrate. Please see product data sheet for HEMPEL'S LIGHT PRIMER 45551 or HEMPEL'S YACHT PRIMER 26030.

REMARKS: Before recoating old HEMPEL'S MILLE LIGHT 71400 clean the surface thoroughly with fresh water by high pressure hosing or by brushing with clean, bristle brushes. The bottom is most easily cleaned by using diluted HEMPEL'S YACHT CLEANER 67601 followed by fresh water hosing immediately after the boat is taken out of the water. HEMPEL'S MILLE LIGHT 71400 contains heavy pigments and should therefore be stirred well before and during use.

**Recommended number of coats:**

Airless application: 2 coats, 80-100 micron/3.2-4 mils total dry film thickness.

Air spray, brush, roller, paint pad: 3-5 coats

Launching not before 24 hours after application of the last coat. HEMPEL'S MILLE LIGHT 71400 can be left out of water up to 1 month after painting. If a new coat of HEMPEL'S MILLE LIGHT 71400 is applied after prolonged exposure to polluted atmosphere remove accumulated contamination by fresh water hosing and allow to dry before painting.

Note: **The information given in the Technical Data Sheet is intended for commercial use.**

ISSUED: April 2003 - 7140010000CR005  
HEMPEL A/S

***This Product Data Sheet supersedes those previously issued. For definition and scope, see explanatory notes to applicable Product Data Sheets.***

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***Product data are subject to change without notice and become void five years from the date of issue.***



# Product Data

## HEMPEL'S HARD RACING® OCEAN 7142E

COMPONENT B: OCEAN ACTIVE 71210

### Description:

HEMPEL'S HARD RACING OCEAN 7142E is a two-component antifouling with a high content of biocide and cuprous oxide. It changes to final colour after approximately 1 week of exposure to water.

### Recommended use:

As an antifouling for boats of glass fibre, wood, plywood, steel and ferro-cement. Do not use on aluminium or other light-alloy metals. Risk of corrosion in case of direct contact. For cold and warm waters. Recommended for water with heavy fouling with algae.

### Availability:

Subject to confirmation.

### PHYSICAL CONSTANTS:

|                             |   |   |
|-----------------------------|---|---|
| Colours/Shade nos:          | Grey/10160*   | Red/51170*  |
| Finish:                     | Flat  | Flat  |
| Volume solids, %:           | 54 ± 1  | 55 ± 1  |
| Theoretical spreading rate: | 13.5 m <sup>2</sup> /litre - 40 micron<br>541 sq.ft./US gallon - 1.6 mils | 13.8 m <sup>2</sup> /litre - 40 micron<br>551 sq.ft./US gallon - 1.6 mils |
| Flash point:                | 24°C/75°F   | 24°C/75°F   |
| Specific gravity:           | 1.7 kg/litre - 14.2 lbs/US gallon   | 1.6 kg/litre - 13.4 lbs/US gallon   |
| Dry to touch:               | 4 (app) hours at 20°C/68°F<br>8 (app) hours at 10°C/50°F                  | 4 (app) hours at 20°C/68°F<br>8 (app) hours at 10°C/50°F                  |
| V.O.C.:                     | 405 g/litre - 3.4 lbs/US gallon   | 400 g/litre - 3.3 lbs/US gallon   |

\*Other shades according to assortment list.

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |   |             |                                     |
|--------------------------------|---|-------------|-------------------------------------|
| Mixing ratio for 7142E:        | HARD RACING 7142S: OCEAN ACTIVE 71210<br>3 : 1 volume                             |             |                                     |
| Application methods:           | Airless spray   | Airspray    | Brush/Roller (See REMARKS overleaf) |
| Thinner (max. vol.):           | 08080 (5%)  | 08080 (15%) | 08080 (5%)                          |
| Pot life:                      | 24 hours (20°C/68°F)<br>48 hours (10°C/50°F)                                      |             |                                     |
| Nozzle orifice:                | .018" - .023"   |             |                                     |
| Nozzle pressure:               | 150 bar/2175 psi<br>(Airless spray data are indicative and subject to adjustment) |             |                                     |
| Cleaning of tools:             | HEMPEL'S THINNER 08080  |             |                                     |
| Indicated film thickness, dry: | 40 micron/1.6 mils  |             |                                     |
| Indicated film thickness, wet: | 75 micron/3 mils  |             |                                     |
| Recoat interval, min:          | 5 hours (20°C/68°F) -<br>9 hours (10°C/50°F)                                      |             |                                     |
| Recoat interval, max:          | None (See REMARKS overleaf)   |             |                                     |

### Safety:

Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued:

April 2003

**HEMPEL'S HARD RACING OCEAN 7142E**

APPLICATION CONDITIONS: The surface must be completely clean and dry. Application should only take place in dry weather and the temperature of the surface should be above the dew point to avoid condensation. The temperature of the paint itself should be above 15°C/59°F. Avoid direct sunlight. In confined spaces provide adequate ventilation during application and drying.

PRECEDING COAT: HEMPEL'S LIGHT PRIMER 45551 or according to specification.

SUBSEQUENT COAT: None.

REMARKS: Stir well before use as the product contains heavy particles.  
Keep thinning to a minimum to ensure that correct film thickness is obtained.  
Recommended number of coats:  
Airless application: 2-3 coats, minimum 120 micron total dry film thickness.  
Air spray, brush, roller, paint pad: 3-5 coats  
Launching not before 24 hours after application of the last coat. HEMPEL'S HARD RACING OCEAN 7142E can be left out of water up to 1 month after painting. If a new coat of HEMPEL'S HARD RACING OCEAN 7142E is applied after prolonged exposure to polluted atmosphere, remove accumulated contamination by fresh water hosing and allow to dry before painting.  
When recoating after service the old antifouling should be sealed off with eg HEMPEL'S YACHT PRIMER 26030, even if it looks sound and intact.  
More versions of HARD RACING exist. It is important not to "mix", but only to use versions with the same 5 digits/letters in the quality number.

Note: **The information given in the Product Data Sheet is intended for commercial use.**

ISSUED: April 2003 - 7142E10160CR004  
HEMPEL A/S

***This Product Data Sheet supersedes those previously issued. For definition and scope, see explanatory notes to applicable Product Data Sheets.***

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***Product data are subject to change without notice and become void five years from the date of issue.***



# Product Data

## HEMPEL'S HARD RACING® SOLO 7142H

|                             |   |
|-----------------------------|---|
| <b>Description:</b>         | HEMPEL'S HARD RACING SOLO 7142H is a conventional antifouling with a high content cuprous oxide. It changes to final colour after approximately 1 week of exposure to water.<br>For cold and warm waters. |
| <b>Recommended use:</b>     | As an antifouling for boats of glass fibre, wood, plywood, steel and ferro-cement. Do not use on aluminium or other light-alloy metals. Risk of corrosion in case of direct contact.                      |
| <b>Availability:</b>        | Subject to confirmation.  |
| <b>PHYSICAL CONSTANTS:</b>  |   |
| Colours/Shade nos:          | Black/19990 - Red/51170*  |
| Finish:                     | Semi-flat   |
| Volume solids, %:           | 53 ± 1  |
| Theoretical spreading rate: | 13.3 m <sup>2</sup> /litre - 40 micron<br>531 sq.ft./US gallon - 1.6 mils   |
| Flash point:                | 24°C/75°F   |
| Specific gravity:           | 1.8 kg/litre - 15.0 lbs/US gallon   |
| Dry to touch:               | 4 (app) hours at 20°C/68°F<br>8 (app) hours at 10°C/50°F  |
| V.O.C.:                     | 420 g/litre - 3.5 lbs/US gallon   |

\*Other shades according to assortment list.

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |   |             |              |                        |
|--------------------------------|---|-------------|--------------|------------------------|
| Application methods:           | Airless spray   | Airspray    | Brush/Roller | (See REMARKS overleaf) |
| Thinner (max. vol.):           | 08080 (5%)  | 08080 (15%) | 08080 (5%)   |                        |
| Nozzle orifice:                | .018" - .023"   |             |              |                        |
| Nozzle pressure:               | 150 bar/2175 psi<br>(Airless spray data are indicative and subject to adjustment) |             |              |                        |
| Cleaning of tools:             | HEMPEL'S THINNER 08080  |             |              |                        |
| Indicated film thickness, dry: | 40 micron/1.6 mils  |             |              |                        |
| Indicated film thickness, wet: | 75 micron/3 mils  |             |              |                        |
| Recoat interval, min:          | 5 hours (20°C/68°F) -<br>9 hours (10°C/50°F)                                      |             |              |                        |
| Recoat interval, max:          | None (See REMARKS overleaf)   |             |              |                        |

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

**HEMPEL'S HARD RACING SOLO 7142H**

APPLICATION CONDITIONS: The surface must be completely clean and dry. Application should only take place in dry weather and the temperature of the surface should be above the dew point to avoid condensation. The temperature of the paint itself should be above 15°C/59°F. Avoid direct sunlight. In confined spaces provide adequate ventilation during application and drying.

PRECEDING COAT: HEMPEL'S LIGHT PRIMER 45551 or according to specification.

SUBSEQUENT COAT: None.

REMARKS: Stir well before use as the product contains heavy particles.  
Keep thinning to a minimum to ensure that correct film thickness is obtained.  
Recommended number of coats:  
Airless application: 2-3 coats, minimum 120 micron total dry film thickness.  
Air spray, brush, roller, paint pad: 3-5 coats  
Launching not before 24 hours after application of the last coat. HEMPEL'S HARD RACING SOLO 7142H can be left out of water up to 1 month after painting. If a new coat of HEMPEL'S HARD RACING SOLO 7142H is applied after prolonged exposure to polluted atmosphere, remove accumulated contamination by fresh water hosing and allow to dry before painting.  
When recoating after service the old antifouling should be sealed off with eg HEMPEL'S YACHT PRIMER 26030, even if it looks sound and intact.  
More versions of HARD RACING exist. It is important not to "mix", but only to use versions with the same 5 digits/letters in the quality number.

Note: **The information given in the Product Data Sheet is intended for commercial use.**

ISSUED: April 2003 - 7142H19990CR006  
HEMPEL A/S

***This Product Data Sheet supersedes those previously issued. For definition and scope, see explanatory notes to applicable Product Data Sheets.***

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***Product data are subject to change without notice and become void five years from the date of issue.***



# Product Data

## HEMPEL'S MILLE® DYNAMIC 71600

**Description:**

HEMPEL'S MILLE DYNAMIC 71600 is a polishing antifouling based on a combination of cuprous compounds and organic bioactive materials. Due to its self-renewing effect this product maintains an effective bioactive surface during its entire service life. Service has a certain influence on colour. The antifouling may obtain a copper-green tinge. HEMPEL'S MILLE DYNAMIC 71600 is for temperate waters.

**Recommended use:**

As an antifouling for boats of glass fibre, wood, plywood, steel and ferro-cement. Do not use on aluminium or other light-alloy metal. Risk of corrosion in case of direct contact.

**Availability:**

Subject to confirmation.

**PHYSICAL CONSTANTS:**

|                             |   |   |
|-----------------------------|---|---|
| Colour/Shade nos:           | White/10000*  | Red/51170*  |
| Volume solids,%:            | 63 ± 1  | 56 ± 1  |
| Theoretical spreading rate: | 15.8 m <sup>2</sup> /litre - 40 micron<br>632 sq.ft./US gallon - 1.6 mils | 14.0 m <sup>2</sup> /litre - 40 micron<br>561 sq.ft./US gallon - 1.6 mils |
| Flash point:                | 32°C/90°F   | 32°C/90°F   |
| Specific gravity:           | 1.5 kg/litre - 12.5 lbs/US gallon   | 1.3 kg/litre - 10.8 lbs/US gallon   |
| Dry to touch:               | 4 (app) hours at 20°C/68°F<br>8 (app) hours at 10°C/50°F                  | 4 (app) hours at 20°C/68°F<br>8 (app) hours at 10°C/50°F                  |
| V.O.C.:                     | 330 g/litre - 2.7 lbs/US gallon   | 390 g/litre - 3.2 lbs/US gallon   |

\*Other shades according to assortment list.

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

**APPLICATION DETAILS:**

|                                |   |             |                        |
|--------------------------------|---|-------------|------------------------|
| Application method:            | Airless spray   | Air spray   | Brush/Roller/Paint pad |
| Thinner (max.vol.):            | 08080 (5%)  | 08080 (15%) | 08080 (5%)             |
| Nozzle orifice:                | .018"-.023"   |             |                        |
| Nozzle pressure:               | 150 bar/2175 psi<br>(Airless spray data are indicative and subject to adjustment) |             |                        |
| Cleaning of tools:             | HEMPEL'S THINNER 08080  |             |                        |
| Indicated film thickness, dry: | 40 micron/1.6 mils (See REMARKS overleaf)   |             |                        |
| Indicated film thickness, wet: | 75 micron/3 mils  |             |                        |
| Recoat interval, min:          | 6 hours (20°C/68°F)<br>12 hours (10°C/50°F)                                       |             |                        |
| Recoat interval, max:          | None (See REMARKS overleaf)   |             |                        |

**Safety:**

Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

**HEMPEL'S MILLE DYNAMIC 71600**

**APPLICATION CONDITIONS:** The surface must be completely clean and dry. Application should only take place in dry weather and the temperature of the surface should be above the dew point to avoid condensation. The temperature of the paint itself should be above 15°C/59°F. Avoid direct sunlight. In confined spaces provide adequate ventilation during application and drying.

**PRECEDING COAT:** Depending on the substrate. Please see data sheet for HEMPEL'S LIGHT PRIMER 45551 or HEMPEL'S YACHT PRIMER 26030.

**REMARKS:** Before recoating old HEMPEL'S MILLE DYNAMIC 71600 clean the surface thoroughly with fresh water by high pressure hosing or by brushing with clean, bristle brushes. The bottom is most easily cleaned using diluted HEMPEL'S YACHT CLEANER 67601 followed by fresh water hosing immediately after the boat is taken out of the water. The antifouling contains heavy pigments and must therefore be stirred well before and during use. Recommended number of coats:  
Airless application: 2 coats, 80-100 micron total dry film thickness.  
Air spray, brush, roller, paint pad: 3-5 coats  
Launching not before 24 hours after application of last coat. HEMPEL'S MILLE DYNAMIC 71600 can be left out of water up to 1 month after painting. If a new coat of HEMPEL'S MILLE DYNAMIC 71600 is applied after prolonged exposure to polluted atmosphere remove accumulated contamination by fresh water hosing and allow to dry before painting.

**Note:** **The information given in the Technical Data Sheet is intended for commercial use.**

**ISSUED:** April 2003 - 7160010000CR006  
HEMPEL A/S

***This Product Data Sheet supersedes those previously issued. For definition and scope, see explanatory notes to applicable Product Data Sheets.***

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***Product data are subject to change without notice and become void five years from the date of issue.***



# Product Data

## HEMPEL'S MILLE® DYNAMIC 71700

**Description:**

HEMPEL'S MILLE DYNAMIC 71700 is a polishing antifouling containing a combination of cuprous compounds and organic, bioactive materials. Due to its self-renewing effect this product maintains an effective bioactive surface during its entire service life. Service has a certain influence on colour. The antifouling will change to its intended final shade after approximately one week in water and may obtain a copper-green tinge.

**Recommended use:**

As an antifouling for boats of glass fibre, wood, plywood, steel and ferro-cement. Do not use on aluminium or other light-alloy metal. Risk of corrosion in case of direct contact.

**Availability:**

Subject to confirmation.

**PHYSICAL CONSTANTS:**

|                             |   |   |
|-----------------------------|---|---|
| Colours/Shade nos:          | Light-grey/10160*   | Red/51170*  |
| Finish:                     | Semi-flat   | Semi-flat   |
| Volume solids, %:           | 56 ± 1  | 60 ± 1  |
| Theoretical spreading rate: | 14.0 m <sup>2</sup> /litre - 40 micron<br>561 sq.ft./US gallon - 1.6 mils | 15.0 m <sup>2</sup> /litre - 40 micron<br>602 sq.ft./US gallon - 1.6 mils |
| Flash point:                | 25°C/77°F   | 25°C/77°F   |
| Specific gravity:           | 1.8 kg/litre - 15.0 lbs/US gallon   | 1.9 kg/litre - 15.8 lbs/US gallon   |
| Dry to touch:               | 4 (app) hours at 20°C/68°F<br>8 (app) hours at 10°C/50°F                  | 4 (app) hours at 20°C/68°F<br>8 (app) hours at 10°C/50°F                  |
| V.O.C.:                     | 390 g/litre - 3.2 US/gallon   | 355 g/litre - 2.9 lbs/US gallon   |

\*Other shades according to assortment list.

The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.

**APPLICATION DETAILS:**

|                                |   |             |                        |
|--------------------------------|---|-------------|------------------------|
| Application method:            | Airless spray   | Air spray   | Brush/Roller/Paint pad |
| Thinner (max.vol.):            | 08080 (5%)  | 08080 (15%) | 08080 (5%)             |
| Nozzle orifice:                | .018"-.023"   |             |                        |
| Nozzle pressure:               | 150 bar/2175 psi<br>(Airless spray data are indicative and subject to adjustment) |             |                        |
| Cleaning of tools:             | HEMPEL'S THINNER 08080  |             |                        |
| Indicated film thickness, dry: | 40 micron/1.6 mils (See REMARKS overleaf)   |             |                        |
| Indicated film thickness, wet: | 75 micron/3 mils  |             |                        |
| Recoat interval, min:          | 5 hours (20°C/68°F)<br>9 hours (10°C/50°F)  |             |                        |
| Recoat interval, max:          | None (See REMARKS overleaf)   |             |                        |

**Safety:**

Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

**HEMPEL'S MILLE DYNAMIC 71700**

|                         |  |
|-------------------------|--|
| SURFACE PREPARATION:    | <b>Existing antifouling:</b> Remove possible oil and grease, etc. with HEMPEL'S YACHT CLEANER 67601 followed by (high pressure) fresh water cleaning, also to remove possible weak structure of leached antifouling. Allow the surface to dry before recoating. Sealer depends on type and condition of existing antifouling.  |
| APPLICATION CONDITIONS: | The surface must be completely clean and dry. Application should only take place in dry weather and the temperature of the surface should be above the dew point to avoid condensation. The temperature of the paint itself should be above 15°C/59°F. Avoid direct sunlight. In confined spaces provide adequate ventilation during application and drying.   |
| PRECEDING COAT:         | Depending on the substrate. Please see data sheet for HEMPEL'S LIGHT PRIMER 45551 or HEMPEL'S YACHT PRIMER 26030.  |
| REMARKS:                | Before recoating old HEMPEL'S MILLE DYNAMIC 71700 clean the surface thoroughly with fresh water by high pressure hosing or by brushing with clean, bristle brushes. The bottom is most easily cleaned using suitable detergent followed by fresh water hosing immediately after the boat is taken out of the water.<br>The antifouling contains heavy pigments and must therefore be stirred well before and during use.<br>Recommended number of coats:<br>Airless application: 2 coats, 80-100 micron total dry film thickness.<br>Air spray, brush, roller, paint pad: 3-5 coats<br>Launching not before 24 hours after application of last coat. HEMPEL'S MILLE DYNAMIC 71700 can be left out of water up to 1 month after painting. If a new coat of HEMPEL'S MILLE DYNAMIC 71700 is applied after prolonged exposure to polluted atmosphere remove accumulated contamination by fresh water hosing and allow to dry before painting. |
| Note:                   | <b>The information given in the Product Data Sheet is intended for commercial use.</b>   |
| ISSUED:                 | April 2003 - 7170010160CR007<br>HEMPEL A/S   |

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***Product data are subject to change without notice and become void five years from the date of issue.***



# Product Data

## HEMPEL'S YACHT CLASSIC® 76111

**Description:** HEMPEL'S YACHT CLASSIC 76111 is a tin-free conventional antifouling of the "soft" type. It changes to final colour after approximately 1 week of exposure to water.

**Recommended use:** As an antifouling for boats of glass fibre, wood, plywood, steel and ferro-cement not exceeding a speed of 15 knots. Do not use on aluminium and other light-alloy metal. Risk of corrosion in case of direct contact.

**Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

|                             |   |   |
|-----------------------------|---|---|
| Colours/Shade nos:          | Black/19990   | Red/50000   |
| Finish:                     | Semi-flat   | Semi-flat   |
| Volume solids, %:           | 51 ± 1  | 55 ± 1  |
| Theoretical spreading rate: | 12.8 m <sup>2</sup> /litre - 40 micron<br>511 sq.ft./US gallon - 1.6 mils | 13.8 m <sup>2</sup> /litre - 40 micron<br>551 sq.ft./US gallon - 1.6 mils |
| Flash point:                | 37°C/99°F   | 37°C/99°F   |
| Specific gravity:           | 1.5 kg/litre - 11.7 lbs/US gallon   | 1.5 kg/litre - 12.5 lbs/US gallon   |
| Dry to touch:               | 4 (app) hours at 20°C/68°F<br>8 (app) hours at 10°C/50°F                  | 4 (app) hours at 20°C/68°F<br>8 (app) hours at 10°C/50°F                  |
| V.O.C.:                     | 395 g/litre - 3.3 lbs/US gallon   | 365 g/litre - 3.0 lbs/US gallon   |

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |  |             |              |                        |
|--------------------------------|--|-------------|--------------|------------------------|
| Application methods:           | Airless spray  | Airspray    | Brush/Roller | (See REMARKS overleaf) |
| Thinner (max. vol.):           | 08080 (5%)   | 08080 (15%) | 08080 (5%)   |                        |
| Nozzle orifice:                | .018" - .023"  |             |              |                        |
| Nozzle pressure:               | 150 bar/2175 psi   |             |              |                        |
| Cleaning of tools:             | <i>(Airless spray data are indicative and subject to adjustment)</i><br>HEMPEL'S THINNER 08080 |             |              |                        |
| Indicated film thickness, dry: | 40 micron/1.6 mils   |             |              |                        |
| Indicated film thickness, wet: | 50 micron/2 mils   |             |              |                        |
| Recoat interval, min:          | 5 hours (20°C/68°F)<br>9 hours (10°C/50°F)   |             |              |                        |
| Recoat interval, max:          | None (See REMARKS overleaf)  |             |              |                        |

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued: April 2003

**HEMPEL'S YACHT CLASSIC 76111**

|                         |   |
|-------------------------|---|
| SURFACE PREPARATION:    | <b>Existing antifouling:</b> Remove any oil and grease, etc. with HEMPEL'S YACHT CLEANER 67601 followed by high pressure) fresh water cleaning, also to remove possible weak structure of leached antifouling. Allow the surface to dry before recoating.   |
| APPLICATION CONDITIONS: | The surface must be completely clean and dry. The temperature of the surface must be above the dew point to avoid condensation. The moisture content in the wood should not exceed 16%. Preferably to be applied at temperatures above 5°C/41°F.  |
| PRECEDING COAT:         | HEMPEL'S PLATIN PRIMER 10001, HEMPEL'S YACHT PRIMER 26030 or according to specification.  |
| SUBSEQUENT COAT:        | None.   |
| REMARKS:                | Stir well before use as the product contains heavy particles.<br>Keep thinning to a minimum to ensure that correct film thickness is obtained.<br>The ship may be floated when the paint is dry. Undocking may be postponed for a few days at low temperature, or - when not exposed to direct sun - up to two weeks, without affecting the antifouling performance.<br>When recoating after service, the old coat of HEMPEL'S YACHT CLASSIC 76111 should be sealed off with eg HEMPEL'S YACHT PRIMER 26030 even if it may appear sound and intact. |
| Note:                   | <b>The information given in the Product Data Sheet is intended for professional use.</b>  |
| ISSUED:                 | April 2003 - 7611050000C0007<br>HEMPEL A/S  |

***This Product Data Sheet supersedes those previously issued. For definition and scope, see explanatory notes to applicable Product Data Sheets.***

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# Product Data

## HEMPEL'S HARD RACING WHITE 76300

**Description:** HEMPEL'S HARD RACING WHITE 76300 is an antifouling containing cuprous compounds and organic bioactive materials.

**Recommended use:** As an antifouling for boats of glassfibre, wood, steel and ferro-cement. Do not use on aluminium or other light alloy metals. Risk of corrosion in case of direct contact. Service has a certain influence on colour. The antifouling may obtain a copper-green tinge.  
HEMPEL'S HARD RACING WHITE 76300 is for temperate waters.

**Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

Colours/Shade nos: White/10000  
 Finish: Flat  
 Volume solids, %: 56 ± 1  
 Theoretical spreading rate: 14.0 m<sup>2</sup>/liter - 40 micron  
 561 sq.ft./US gallon - 1.6 mils  
 Flash point: 39°C/102°F  
 Specific gravity: 1.4 kg/litre - 11.7 lbs/US gallon  
 Dry to touch: 4 (app) hours at 20°C/68°F  
 8 (app) hours at 10°C/50°F  
 V.O.C.: 390 g/litre - 3.2 lbs/US gallon

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |  |            |                        |
|--------------------------------|--|------------|------------------------|
| Application method:            | Airless Spray  | Air Spray  | Brush/Roller/Paint pad |
| Thinner (max.vol.):            | 08080 (5%)   | 08080 (5%) | 08080 (5%)             |
| Nozzle orifice:                | .018" - .023"  |            |                        |
| Nozzle pressure:               | 150 bar/2175 psi   |            |                        |
|                                | <i>(Airless spray data are indicative and subject to adjustment)</i> |            |                        |
| Cleaning of tools:             | HEMPEL'S THINNER 08080   |            |                        |
| Indicated film thickness, dry: | 40 micron/1.6 mils   |            |                        |
| Indicated film thickness, wet: | 75 micron/3 mils   |            |                        |
| Recoat interval, min.:         | 5 hours (20°C/68°F)  |            |                        |
|                                | 9 hours (10°C/50°F)  |            |                        |
| Recoat interval, max.          | None (See REMARKS overleaf)  |            |                        |

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued: April 2003

**HEMPEL'S HARD RACING WHITE 76300**

|                         |   |
|-------------------------|---|
| SURFACE PREPARATION:    | <b>Existing antifouling:</b> Remove possible oil and grease, etc. with HEMPEL'S YACHT CLEANER 67601 followed by (high pressure) fresh water cleaning, also to remove possible weak structure of leached antifouling. Allow the surface to dry before recoating. Sealer depends on type and condition of existing antifouling.   |
| APPLICATION CONDITIONS: | The surface must be completely clean and dry. Application should only take place in dry weather with temperatures above the dew point to avoid condensation. Avoid direct sunlight. In confined spaces provide adequate ventilation during application and drying.  |
| PRECEDING COAT:         | HEMPEL'S LIGHT PRIMER 45551 or according to specification.  |
| REMARKS:                | Stir well before use as the product contains heavy particles.<br>Keep thinning to a minimum to ensure that correct film thickness is obtained.<br>Recommended number of coats:<br>Airless application: 2-3 coats, minimum 120 micron total dry film thickness.<br>Air spray, brush, roller, paint pad: 3-5 coats<br>Launching not before 24 hours after application of the last coat. HEMPEL'S HARD RACING WHITE 76300 can be left out of water up to 1 month after painting. If a new coat of HARD RACING WHITE 76300 is applied after prolonged exposure to polluted atmosphere, remove accumulated contamination by fresh water hosing and allow to dry before painting.<br><b>Only HARD RACINGS with the same product no. - 763 00 - must be mixed.</b> |
| Note:                   | <b>The information given in the Product Data Sheet is intended for professional use.</b>  |
| ISSUED:                 | April 2003 - 7630010000CR002<br>HEMPEL A/S  |

***This Product Data Sheet supersedes those previously issued. For definition and scope, see explanatory notes to applicable Product Data Sheets.***

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# Product Data

## HEMPEL'S HARD RACING 76480

**Description:** HEMPEL'S HARD RACING 76480 is an acrylic-based antifouling, with a high content of cuprous compounds and organic bioactive materials.

**Recommended use:** As an antifouling for boats of glassfibre, wood, steel and ferro-cement. Do not use on aluminium or other light alloy metals. Risk of corrosion in case of direct contact.

**Availability:** Subject to confirmation.

### PHYSICAL CONSTANTS:

|                             |   |   |
|-----------------------------|---|---|
| Colours/Shade nos:          | Black/19990   | Red/51170   |
| Finish:                     | Flat  | Flat  |
| Volume solids, %:           | 51 ± 1  | 53 ± 1  |
| Theoretical spreading rate: | 12.8 m <sup>2</sup> /litre - 40 micron<br>511 sq.ft./US gallon - 1.6 mils | 13.3 m <sup>2</sup> /litre - 40 micron<br>531 sq.ft./US gallon - 1.6 mils |
| Flash point:                | 33°C/91°F   | 33°C/91°F   |
| Specific gravity:           | 1.6 kg/litre - 13.4 lbs/US gallon   | 1.7 kg/litre - 14.1 lbs/US gallon   |
| Dry to touch:               | 4 (app) hours at 20°C/68°F<br>8 (app) hours at 10°C/50°F                  | 4 (app) hours at 20°C/68°F<br>8 (app) hours at 10°C/50°F                  |
| V.O.C.:                     | 430 g/litre - 3.6 lbs/US gallon   | 420 g/litre - 3.5 lbs/US gallon   |

*The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.*

### APPLICATION DETAILS:

|                                |  |            |                        |
|--------------------------------|--|------------|------------------------|
| Application method:            | Airless Spray  | Air Spray  | Brush/Roller/Paint pad |
| Thinner (max.vol.):            | 08080 (5%)   | 08080 (5%) | 08080 (5%)             |
| Nozzle orifice:                | .018" - .023"  |            |                        |
| Nozzle pressure:               | 150 bar/2175 psi<br><i>(Airless spray data are indicative and subject to adjustment)</i> |            |                        |
| Cleaning of tools:             | HEMPEL'S THINNER 08080   |            |                        |
| Indicated film thickness, dry: | 40 micron/1.6 mils   |            |                        |
| Indicated film thickness, wet: | 75 micron/3 mils   |            |                        |
| Recoat interval, min.          | 5 hours (20°C/68°F)<br>9 hours (10°C/50°F)   |            |                        |
| Recoat interval, max.          | None (See REMARKS overleaf)  |            |                        |

**Safety:** Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

**HEMPEL'S HARD RACING 76480**

|                         |   |
|-------------------------|---|
| SURFACE PREPARATION:    | <b>Existing antifouling:</b> Remove possible oil and grease, etc. with HEMPEL'S YACHT CLEANER 67601 followed by (high pressure) fresh water cleaning, also to remove possible weak structure of leached antifouling. Allow the surface to dry before recoating. Sealer depends on type and condition of existing antifouling.   |
| APPLICATION CONDITIONS: | The surface must be completely clean and dry. Application should only take place in dry weather with temperatures above the dew point to avoid condensation. Avoid direct sunlight. In confined spaces provide adequate ventilation during application and drying.  |
| PRECEDING COAT:         | HEMPEL'S LIGHT PRIMER 45551 or according to specification.  |
| REMARKS:                | Stir well before use as the product contains heavy particles.<br>Keep thinning to a minimum to ensure that correct film thickness is obtained.<br>Recommended number of coats:<br>Airless application: 2-3 coats, minimum 120 micron total dry film thickness.<br>Air spray, brush, roller, paint pad: 3-5 coats<br>Launching not before 24 hours after application of the last coat. HEMPEL'S HARD RACING 76480 can be left out of water up to 1 month after painting. If a new coat of HEMPEL'S HARD RACING 76480 is applied after prolonged exposure to polluted atmosphere, remove accumulated contamination by fresh water hosing and allow to dry before painting.<br><b>Only HARD RACINGS with the same product no. - 76480 - should be mixed.</b> |
| Note:                   | <b>The information given in the Technical Data Sheet is intended for commercial use.</b>  |
| ISSUED:                 | April 2003 - 7648019990CR10<br>HEMPEL A/S   |

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# Product Data

## HEMPEL'S DEGREASER 99611

|                            |  |
|----------------------------|--|
| <b>Description:</b>        | HEMPEL'S DEGREASER 99611 is a cleaning agent based on a mixture of solvents.   |
| <b>Recommended use:</b>    | For removal of wax coats, silicone residues from mould, and of polish used for polishing of glass fibre reinforced polyester. For use before grinding of glass fibre reinforced polyester. Suited as tool cleaner after use of two-component epoxy products.   |
| <b>Availability:</b>       | Subject to confirmation.   |
| <b>PHYSICAL CONSTANTS:</b> |  |
| Colours/Shade nos:         | Transparent/00000  |
| Flash point:               | 28°C/82°F  |
| Specific gravity:          | 0.9 kg/litre - 7.5 lbs/US gallon   |
|                            | <small>The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1. Further reference is made to "Explanatory Notes" in the HEMPEL Book.</small>  |
| <b>Application method:</b> | Brush and/or rags  |
| <b>Remarks:</b>            | <b>Do not use on painted surfaces, linoleum, plastic, asphalt floors, aluminium and similar.</b>   |
| <b>Note:</b>               | <b>The information given in the Technical Data Sheet is intended for commercial use.</b>   |
| <b>Safety:</b>             | Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas. |
| <b>Issued:</b>             | April 2003 - 9961100000C0003<br>HEMPEL A/S   |

***This Product Data Sheet supersedes those previously issued. For definition and scope, see explanatory notes to applicable Product Data Sheets.***

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