

Hempadur Multi-Strength 45751

Product characteristics

Description

Hempadur Multi-Strength 45751 is a self-priming, high-build, epoxy-polyamide/amine coating which cures to an abrasion and corrosion resistant coating. Applicable by standard, heavy-duty airless spray equipment.

Complies with EU Directive 2004/42/EC, The Paints Directive on the limitation of volatile organic compounds: subcategory j.

Recommended use

Hempadur Multi-Strength 45751 is recommended as a heavy duty coating for areas exposed to abrasion and aggressive corrosive climate such as ramps, ship hulls and holds of bulk carriers. The product is also suitable for ballast tank coatings for special purposes such as chemical carriers carrying hot cargoes and other purposes where a pure epoxy coating is requested. Is applicable as a finishing coat where a cosmetic appearance is of less importance. Hempadur Multi-Strength 45751 is intended for use in warm climates.

Service temperature:

- Maximum, dry exposure only: 140°C [284°F].
- Maximum, in water (no temperature gradient): 50°C [122°F].
- Other liquids: Please contact Hempel.

Certificates / Approvals

- EC-type examined as a low flame spread material when used as part of a predefined paint system. Please refer to "Declaration of Conformity" on hempel.com for further details.
- Recognized Abrasion Resistant Ice Coating. Consult Hempel for specific Type Approval Certificates.

Features

- Self-priming.
- Abrasion and corrosion resistant.

Product safety

Flash point 27°C [81°F]

VOC content mixed product

| Legislation | Value | 5% thinning, by volume | Limit value, phase II (2010) ^a |
|-----------------|-----------------------------|-----------------------------|---|
| EU | 250 g/L [2.09 lb/US gal] | 280 g/L [2.34 lb/US gal] | 500 g/L [4.17 lb/US gal] |
| US (coatings) | 250 g/L [2.09 lb/US gal] | - | - |
| US (regulatory) | 250 g/L [2.09 lb/US gal] | | |
| China | 250 g/L [2.09 lb/US gal] | | |

According to specific legislation, see details in the Explanatory Notes available at Hempel website, hempel.com or at your local Hempel website. VOC values may vary with shade, please consult the Safety Data Sheet, section 9. ^aEU Directive 2004/42/CE.

Handling

Handle with care. Before and during use, observe safety labels on packaging and paint containers and follow all local and national safety regulations. Always consult Hempel's Safety Data Sheet for this product along with the Product Data Sheet.

For professional use only.

Product data

Product code

45751

Product components

Base 45755
Curing agent 97652

Standard shade* / code

Grey 12340 **

Gloss

Semi-gloss

Volume solids

79 ± 2%

* Other shades are available, please contact your local Hempel representative.

** Slight discolouration may occur. This does not affect the performance of the coating.

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Specific gravity

1.6 kg/L [13 lb/US gal]

Reference dry film thickness

200 micron [7.9 mils]

Surface preparation

Cleanliness

- Remove oil, grease and other contaminants by suitable detergent cleaning.
- Remove salts, detergents and other contaminants by high pressure fresh water cleaning.

New build:

- Abrasive blasting to min. Sa 2½ (ISO 8501-1) / SP 10 (SSPC).
- Concrete: According to Hempel's Specification.
- Remove dust, blast media and loose materials.

Maintenance and Repair

- Spot abrasive blasting to min. PSa 2 (ISO 8501-2) / SP 6 (SSPC).
- Minor areas may be hand or power tool cleaned instead of abrasive blasting.
- Flash rust degree of maximum FR M (ISO 8501-4).
- Remove dust, blast media and loose materials.
- Water jetting to min. Wa 2 (ISO 8501-4).

Roughness

- Surface profile Medium (G) (ISO 8503-2).

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

Application

Mixing ratio

Base 45755 : Curing agent 97652
(3 : 1 by volume)

Stir well before use.

Thinner

Hempel's Thinner 08450

Cleaner

Hempel's Tool Cleaner 99610

Pot life

| Product temperature | 15°C [59°F] | 20°C [68°F] | 25°C [77°F] |
|---------------------|----------------|----------------|----------------|
| Pot life | 2 hours | 1 hour | ½ hours |

Application method

| Tool | Thinning max vol. | Application parameters |
|---------------|-------------------|---|
| Airless spray | 5% | Nozzle pressure: 250 bar [3600 psi] Nozzle orifice: 0.021-0.023" |
| Brush | 5% | Not Applicable. |
| Roller | 5% | Not Applicable. |

If brush or roller application is used, more coats will be necessary to achieve the specified dry film thickness. Spray data are indicative and subject to adjustment. Pressure is for a material temperature of 20°C [68°F].

Film thickness

| Specification range | Low | High | Recommended |
|----------------------------|---|---|---|
| Dry film thickness | 125 micron [4.9 mils] | 300 micron [12 mils] | 200 micron [7.9 mils] |
| Wet film thickness | 150 micron [6 mils] | 370 micron [15 mils] | 250 micron [10 mils] |
| Theoretical spreading rate | 6.3 m ² /L [260 sq ft/US gal] | 2.6 m ² /L [110 sq ft/US gal] | 3.9 m ² /L [160 sq ft/US gal] |

Product may be specified in another film thickness than indicated depending on purpose and area of use. This will alter spreading rate, drying and curing time and overcoating interval. For best performance, avoid excessive film thickness.

Application conditions

- Temperature of product must be above 15°C [59°F] during application.
- To avoid condensation, apply on a clean and dry surface with a temperature that is at least 3°C [5°F] above the dew point.
- Surface temperature must be above 10°C [50°F] during application and curing.

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Relative Humidity:

- Relative humidity must be below 90% during curing.
- Relative humidity must be below 90% during application.

Application remarks

- Product requires heavy duty spray equipment; spray hoses shall be as short as possible.

Drying and overcoating

Product compatibility

- Previous coat: None or according to Hempel's specification.
- Subsequent coat: None or according to Hempel's specification.
Recommended products are: Hempadur, Hemptthane

Drying time

| Surface temperature | | 10°C | 20°C | 30°C | 40°C |
|---------------------|-------|--------|--------|--------|---------|
| | | [50°F] | [68°F] | [86°F] | [104°F] |
| Surface dry | hours | 13 | 3 | 2½ | 1½ |
| Hard dry | hours | 15 | 6 | 3 | 2 |

Determined for dry film thickness 200 micron [7.9 mils] at standard conditions, see Hempel's Explanatory Notes for details.

Overcoating

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

| Quality name | | 10°C | 20°C | 30°C | 40°C |
|-------------------------------|-----|--------|--------|--------|---------|
| | | [50°F] | [68°F] | [86°F] | [104°F] |
| Atmospheric severe | | | | | |
| Hempadur Multi-Strength 45751 | Min | 13 h | 5 h | 2½ h | 90 min |
| | Max | 75 d | 30 d | 15 d | 9 d |
| Hemptthane HS 55610 | Min | 13 h | 5 h | 2½ h | 90 min |
| | Max | 7½ d | 72 h | 36 h | 22 h |
| Immersion | | | | | |
| Hempadur Multi-Strength 45751 | Min | 15 h | 6 h | 3 h | 110 min |
| | Max | 75 d | 30 d | 15 d | 9 d |

Overcoating times are indicative for products of the same generic chemistry. Consult Hempel's specification for more information.

Drying conditions

- To obtain the drying time stated, it is important to maintain sufficient ventilation during application, drying and curing.

Overcoating details

- If the maximum overcoating interval is exceeded, roughening of the surface is necessary to ensure intercoat adhesion.
- The surface must be dry and clean prior to application.

Other remarks

- Epoxy coats have an inherent tendency of chalking in outdoor exposure. This does not affect the performance of the coating.
- Hempel's Specification supersedes any recommendations given in the Product Data Sheets.

Storage

Shelf life

| Ambient temperature | 25°C | 35°C |
|---------------------|-----------|-----------|
| | [77°F] | [95°F] |
| Base | 36 months | 24 months |
| Curing agent | 36 months | 24 months |

Shelf life from date of production, when stored in original, unopened containers. Thereafter, the product quality must be re-inspected. Always check the best before date or expiry date on the label.

Storage conditions

- Product must be stored according to local legislation, at maximum 40°C [104°F], without direct sunlight and protected from rain and snow.

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Additional documents

Additional information is available at the Hempel website hempel.com or at your local Hempel website:

- Explanatory Notes explaining the fields in this Product Data Sheet.
- Surface Preparation Guidelines.
- Application Guidelines for different application methods.
- General Application Guidelines

This Product Data Sheet ("PDS") relates to the supplied product ("Product") and is subject to updating from time-to-time. Accordingly, the buyer/applicator should have regard to the PDS supplied together with the relevant batch of the Product (and not an earlier version). In addition to the PDS, the buyer/applicator may receive some or all of the following specifications, statements and/or guidelines as listed below or as are available from the Hempel website under 'Products' at www.hempel.com (the "Additional documents"):

| No. | Document description | Location/comments |
|-----|--|---|
| 1. | Technical Statement | One-off specific advice provided on request for specific projects |
| 2. | Specification | Only issued for specific projects |
| 3. | PDS | This document |
| 4. | Explanatory Notes to the PDS | Available at www.hempel.com and contain relevant information about the Product testing parameters |
| 5. | Application Instruction | Where available, at www.hempel.com |
| 6. | Generic technical guidelines (e.g. on application and surface preparation) | Where available, at www.hempel.com |

In the event of a conflict of information between the PDS and the Additional documents, the order of priority of information shall be in the order as set out above. In such event you should also contact your representative at Hempel for clarification. Furthermore, the buyer/applicator must have full regard to the relevant Safety Data Sheet provided with each Product and which can also be downloaded from www.hempel.com.

Hempel shall not be liable for defects where the application of the Product has not been made fully in accordance with the recommendations and requirements set out in the relevant PDS and the Additional Documents. The information and terms of this disclaimer apply to this PDS, the Additional documents and any other documents supplied by Hempel in respect of the Product. In addition, the Product is supplied and all technical assistance is given subject to Hempel's General Conditions of Sale, Delivery and Service, unless otherwise expressly agreed in writing.