

Hempadur 87540

Product characteristics

Description

Hempadur 87540 is an amine-cured, solvent-free phenolic epoxy paint which cures to a very strong and hard coating.

Recommended use

As a self-primed, high-build coating for the protection of the exterior of buried steel pipes, valves, fittings etc. operating at elevated temperatures in severely corrosive environments.
As a repair system for pipelines.

The product complies with Aramco Engineering Standard APCS 113.

Service temperature:

- Maximum, dry exposure only: 150°C [302°F].

Product safety

Flash point 136°C [277°F]

VOC content mixed product

| Legislation | Value |
|-----------------|------------------------|
| EU | 5 g/L [0.04 lb/US gal] |
| US (coatings) | 5 g/L [0.04 lb/US gal] |
| US (regulatory) | 5 g/L [0.04 lb/US gal] |
| China | 5 g/L [0.04 lb/US gal] |

According to specific legislation, see details in the Explanatory Notes available at Hempel website, hempel.com or at your local Hempel website.

Handling

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

For professional use only.

Product data

Product code

87540

Product components

Base 87549
Curing Agent 97740

Standard shade / code

Brownish red 50700 *

Gloss

Glossy

Volume solids

100 ± 2%

Specific gravity

1.8 kg/L [15 lb/US gal]

Reference dry film thickness

625 micron [25 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).
- Remove dust, blast media and loose materials.

Maintenance and Repair

- Spot abrasive blasting to min. P Sa 2½ (ISO 8501-2) / SP 10 (SSPC).
- Remove dust, blast media and loose materials.

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Roughness

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

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

Application

Mixing ratio

Base 87549 : Curing Agent 97740
(2 : 1 by volume)

Stir well before use.

Cleaner

Hempel's Tool Cleaner 99610

Pot life

| | |
|----------------------------|------------------------|
| Product temperature | 60°C [140°F] |
| Pot life | 3 min |

Application method

| Tool | Application parameters |
|-----------------|---|
| Dual feed spray | Nozzle pressure: 172 bar [2500 psi] Nozzle orifice: 0.024-0.031" |

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 | 500 micron [20 mils] | 1500 micron [60 mils] | 625 micron [25 mils] |
| Wet film thickness | 502 micron [20 mils] | 1507 micron [60 mils] | 628 micron [25 mils] |
| Theoretical spreading rate | 2 m ² /L [81 sq ft/US gal] | 0.7 m ² /L [29 sq ft/US gal] | 1.6 m ² /L [65 sq ft/US gal] |

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

Application conditions

- To avoid condensation, apply on a clean and dry surface with a temperature that is at least 3°C [5°F] above the dew point.
- Surface temperature must be above 10°C [50°F] during application and curing.
- Can be applied onto hot substrate up to maximum 100°C [212°F].
- Do not preheat above 80°C [176°F].

Relative Humidity:

- Relative humidity must be below 85% during curing.
- Relative humidity must be below 85% during application.

Drying and overcoating

Product compatibility

- Previous coat: None.
- Subsequent coat: According to Hempel's Specification.
Recommended product is: Hempadur 87540

Drying time

| Surface temperature | | 25°C [77°F] | 50°C [122°F] |
|---------------------|-----|----------------|-----------------|
| Touch dry | min | 60 | - |
| Hard dry | min | 120 | 15 |

Determined for dry film thickness 625 micron [25 mils] at standard conditions, see Hempel's Explanatory Notes for details.

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Overcoating

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

| Quality name | 10°C [50°F] | | 20°C [68°F] | | 30°C [86°F] | |
|----------------|--------------------|------|----------------|--------|----------------|--|
| | Atmospheric medium | | | | | |
| Hempadur 87540 | Min | 2½ h | 60 min | 30 min | | |
| | Max | 5 d | 48 h | 24 h | | |

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 [77°F] |
|---------------------|----------------|
| Base | 12 months |
| Curing Agent | 36 months |

Shelf life from date of production, when stored in original, unopened containers. Thereafter, the product quality must be re-inspected. Storage at elevated temperatures may reduce shelf life. For advice, please consult Hempel.

Storage conditions

- The product must be stored in accordance with Safety Data Sheet, label and local regulations. Keep the containers in a dry, shaded, cool, well-ventilated space and away from sources of heat and ignition. Containers must be kept tightly closed. Handle with care.

Carbon Footprint

| Dry film thickness | 1 µm | 1 mil |
|--------------------------------|--|--|
| GWP (Global Warming Potential) | 5.9 g CO ₂ e/m ² | 0.031 lb CO ₂ e/ft ² |

The carbon footprint is for 1 square meter / square foot of surface area with a dry film thickness of 1 micron / mil.

The scope includes raw materials, in-bound transport to the Hempel factory, Hempel manufacturing processes, and any Volatile Organic Compounds emitted during and after the application of the product.

It is calculated based on the standard shade defined in this PDS. Values may vary with shade.

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Additional documents

Additional information is available at the Hempel website <https://www.hempel.com/service-and-support/technical-guidelines> or at your local Hempel website:

- Explanatory Notes for Product Data Sheet.
- Application methods.
- 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.