

Hempadur Multi-Strength GF 35870

Product characteristics

Description

Hempadur Multi-Strength GF 35870 is an amine adduct cured epoxy coating. The product is reinforced with glass flakes and cures to a hard, impact and abrasion resistant coating with good resistance to sea water and splashes from petrol and related products. Suitable for early water exposure and will continue to cure under water.

Recommended use

Hempadur Multi-Strength GF 35870 is a self-primed, high-build coating recommended for areas subject to abrasion and/or to a high corrosive environment e.g. splash zones, jetty pilings and working decks. It has very high resistance to abrasion and damages, making it ideal for use on ice trading vessels. It creates a smooth surface that reduces the resistance through ice and consequently keeps the fuel consumption low and reduces the costs during major ship maintenance.

Service temperature:

- Maximum, dry exposure only: 140°C [284°F].
- Maximum, in water (no temperature gradient): 60°C [140°F].
- Maximum, in water (peak): 80°C [176°F].

Certificates / Approvals

- Recognized Abrasion Resistant Ice Coating. Consult Hempel for specific Type Approval Certificates.
- Complies with US FDA and EU food regulations for contact with dry foodstuff. Consult Hempel for details.

Features

- Supreme mechanical resistance.
- Smooth surface.
- Low maintenance.

Product safety

Flash point 35°C [95°F]

VOC content mixed product

Legislation	Value
EU	226 g/L [1.89 lb/US gal]
US (coatings)	226 g/L [1.89 lb/US gal]
US (regulatory)	226 g/L [1.89 lb/US gal]
China	226 g/L [1.89 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.

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

35870

Product components

Base 35879
Curing Agent 98870

Standard shade* / code

Black 19990 **

Gloss

Glossy

Volume solids

87 ± 2%

Specific gravity

1.3 kg/L [11 lb/US gal]

Reference dry film thickness

350 micron [14 mils]

* 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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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).
- Minor areas may be hand or power tool cleaned instead of abrasive blasting.
- Remove dust, blast media and loose materials.

Roughness

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

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

Application

Mixing ratio

Base 35879 : Curing Agent 98870
(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]	30°C [86°F]
Pot life	90 min	60 min	30 min

Application method

Tool	Thinning max vol.	Application parameters
Airless spray	5%	Nozzle pressure: 250 bar [3600 psi] Nozzle orifice: 0.023-0.027"

Filter: surge tank filter and tip filter should be removed. 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	300 micron [12 mils]	500 micron [20 mils]	350 micron [14 mils]
Wet film thickness	350 micron [14 mils]	550 micron [22 mils]	400 micron [16 mils]
Theoretical spreading rate	2.9 m ² /L [120 sq ft/US gal]	1.7 m ² /L [69 sq ft/US gal]	2.5 m ² /L [100 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 5°C [41°F] during application and curing.
- Optimal paint temperature for proper mixing, pumping and spraying is: 20-30°C [68-86°F].

Application remarks

- Product requires heavy duty spray equipment; spray hoses shall be as short as possible.
- The product can be immersed 4 hours after application at 20°C [68°F]. This may result in discolouration but will not affect anticorrosive performance.

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Drying and overcoating

Product compatibility

- Previous coat: None or according to Hempel's specification. Recommended product is: Hempadur 15590
- Subsequent coat: None or according to Hempel's specification.

Drying time

Surface temperature		5°C [41°F]	10°C [50°F]	20°C [68°F]	40°C [104°F]
Touch dry	hours	24	10	4	1½
Hard dry	hours	48	16	6	2½
Fully cured	days	28	14	7	3

Determined for dry film thickness 350 micron [14 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 [50°F]	20°C [68°F]	40°C [104°F]
Atmospheric severe				
Hempadur Multi-Strength GF 35870	Min	20 h	8 h	2½ h
	Max	75 d	30 d	9 d
Hempathane HS 55610	Min	15 h	6 h	110 min
	Max	7½ d	72 h	22 h
Immersion				
Hempadur Multi-Strength GF 35870	Min	40 h	16 h	5 h
	Max	75 d	30 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 [77°F]	35°C [95°F]
Base	24 months	18 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.