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. offshore splash zones, jetty pilings and working decks. The product is ideal for use on offshore foundations and ice trading vessels.

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
- High resistance to abrasion and damages.
- High build.
- Smooth surface to keep fuel consumption low.
- 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
Jet black 19990 **
Black 19990

Gloss
Glossy

Volume solids
87 ± 2%

Specific gravity
1.3 kg/L [11 lb/US gal]

* 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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Reference dry film thickness
350 micron [14 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. PSa 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	20°C [68°F]	15°C [59°F]	30°C [86°F]
Pot life	60 min	90 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	344 micron [14 mils]	574 micron [23 mils]	402 micron [16 mils]
Theoretical spreading rate	2.9 m²/L [118 sq ft/US gal]	1.7 m²/L [69 sq ft/US gal]	2.5 m²/L [102 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].

Relative Humidity:
- Relative humidity must be below 80% during application.

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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 20ºC [68ºF]. This may result in discolouration but will not affect anticorrosive performance.

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 Max	20 h 75 d	8 h 30 d	2½ h 9 d
Hempathane HS 55610	Min Max	15 h 7½ d	6 h 72 h	110 min 22 h
Immersion				
Hempadur Multi-Strength GF 35870	Min Max	40 h 75 d	16 h 30 d	5 h 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.
- Hempel's Epoxy Accelerator 99075 can be used under special conditions. Contact your Hempel representative for more information.

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Storage

Shelf life

Ambient temperature	25°C [77°F]
Base	24 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)	6.8 g CO_2e/m^2	0.035 lb CO_2e/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.

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.
- Substrates.
- Surface Preparation.
- Application Instruction for this product.
- Repair & maintenance.
- Inspection & quality control.