

Hempel's Vinyl Ester GF

Product characteristics

Description

Hempel's Vinyl Ester GF is a two component cold cured vinyl ester/acrylic copolymer, reinforced with glass flakes. Applicable in thick coats by standard heavy duty airless spray equipment.

Recommended use

As a lining in immersed environments where superior resistance to chemical attack is required, Hempel's Vinyl Ester GF is suitable for most chemical environments within the pH range of 0 to 9. The product also has excellent resistance to demineralised water and a range of solvents.

The product is also suited for aggressive atmospheric and spillage conditions.

Service temperature:

- Maximum, dry exposure only: 160°C [320°F].
- Immersion: < 95°C [203°F].
- Other liquids: Please contact Hempel.

Product safety

Flash point 26°C [79°F]

VOC content mixed product

Legislation	Value
EU	299 g/L [2.50 lb/US gal]
US (coatings)	299 g/L [2.50 lb/US gal]
US (regulatory)	299 g/L [2.50 lb/US gal]
China	299 g/L [2.50 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

35910

Product components

Base 35919
Curing agent 99410

Standard shade / code

Off white 11630

Gloss

Flat

Volume solids

100 ± 2%

Specific gravity

1.2 kg/L [10 lb/US gal]

Reference dry film thickness

650 micron [26 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 shopprimer 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).
- Remove dust, blast media and loose materials.

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Roughness

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

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

Application

Mixing ratio

Base 35919 : Curing agent 99410
(98 : 2 by volume)

Stir well before use. It is recommended to use fixed volumes/can size for multi-component products.

Cleaner

Hempel's Thinner 08960

Pot life

Product temperature	20°C [68°F]
Pot life	45 min

Application method

Tool	Application parameters
Airless spray	Nozzle pressure: 275 bar [4000 psi] Nozzle orifice: 0.025-0.048"
Brush	Not Applicable.
Roller	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	500 micron [20 mils]	3000 micron [120 mils]	650 micron [26 mils]
Wet film thickness	500 micron [20 mils]	3000 micron [120 mils]	650 micron [26 mils]
Theoretical spreading rate	2 m ² /L [81 sq ft/US gal]	0.3 m ² /L [12 sq ft/US gal]	1.5 m ² /L [61 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.
- Material temperatures should be between 15°C/59°F and 25°C/77°F. Retarder 99190 should be added if temperatures exceed 25°C/77°F.
- Optimal paint temperature for proper mixing, pumping and spraying is: 15-25°C [59-77°F].

Relative Humidity:

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

Application remarks

- Depending on the application and curing conditions, some of the volatile reactants may evaporate. Furthermore, the curing process is accompanied by contraction. As a result, volume solids and spreading rate are in practice lower than stated above. Consult Hempel for advice.

Drying and overcoating

Product compatibility

- Previous coat: None.
- Subsequent coat: None. Recommended product is: Hempel's Vinyl Ester 35910

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Drying time

Surface temperature		20°C [68°F]
Hard dry	hours	6
Fully cured	days	4

Determined for dry film thickness 650 micron [26 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]	30°C [86°F]
		Immersion		
Hempel's Vinyl	Min	13 h	5 h	2½ h
Ester GF	Max	5 d	48 h	24 h

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

- Hempel's Specification supersedes any recommendations given in the Product Data Sheets.

Storage

Shelf life

Ambient temperature	25°C [77°F]
Base	6 months
Curing agent	6 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 40°C [104°F] without direct sunlight and protected from rain and snow.

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.