

Hempel's Polyenamel 55102

Product characteristics

Description

Hempel's Polyenamel 55102 is a two-component, high-gloss acrylic polyurethane enamel cured with aliphatic isocyanate, with excellent gloss and colour retention.

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

Recommended use

Hempel's Polyenamel 55102 is recommended as a finishing coat in coating systems for severely corrosive atmospheric environments on properly prepared metals such as steel, aluminium, stainless steel, and galvanised steel. The product can also be used for decorative marking in direct-to-substrate applications on wood and glass-fibre reinforced polyester, on which the product shows excellent adhesion.

Service temperature:

- Maximum, dry exposure only: 120°C [248°F].

Certificates / Approvals

- Reaction to fire tested (as part of a coating system with approved primer and topcoat) according to EN13501-1 B-s1, d0.

Product safety

Flash point 35°C [95°F]

VOC content mixed product

Legislation	Value
EU	442 g/L [3.69 lb/US gal]
US (coatings)	442 g/L [3.69 lb/US gal]
US (regulatory)	442 g/L [3.69 lb/US gal]
China	442 g/L [3.69 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. *EU 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

55102

Product components

Base 55107
Curing Agent 95304

Standard shade / code

White 10000 *

Wide range of colours is available via Hempel's tinting system.

Gloss

High-gloss

Volume solids

52 ± 2%

Specific gravity

1.2 kg/L [10 lb/US gal]

Reference dry film thickness

35 micron [1.4 mils]

Aluminium shade / code

Aluminium grey 19002 **

Gloss

Please consult Hempel's Guideline on aluminium pigmented coatings.

* Colour stability may be affected by exposure to chemicals, high temperatures or inadequate ventilation.

** Appearance of the aluminium pigmented coats will depend on application method, drying conditions, handling, etc.

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Volume solids

45 ± 2%

Specific gravity

1 kg/L [8 lb/US gal]

Reference dry film thickness

35 micron [1.4 mils]

Surface preparation

Cleanliness

- According to Hempel's Specification.

New build:

- According to Hempel's Specification.

Maintenance and Repair

- According to Hempel's Specification.

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

Application

Mixing ratio

Base 55107 : Curing Agent 95304
(4 : 1 by volume)

Stir well before use.

Thinner

Hempel's Thinner 08080
Hempel's Thinner 08880

Cleaner

Hempel's Thinner 08080
Hempel's Thinner 08510

Pot life

Product temperature	20°C [68°F]
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Pot life	2 hours
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Application method

Tool	Thinning max vol.	Application parameters
Airless spray	5%	Nozzle pressure: 75-100 bar [1100 psi] Nozzle orifice: 0.017-0.019"
Air spray	5%	Not Applicable.
Brush	5%	Not Applicable.

If brush or roller application is used, more coats will be necessary to achieve the specified dry film thickness. Hempel's Brush & Roller Agent 99140 can be used to improve levelling. Consult Hempel for advice. 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	30 micron [1.2 mils]	40 micron [1.6 mils]	35 micron [1.4 mils]
Wet film thickness	57 micron [2.3 mils]	76 micron [3.1 mils]	67 micron [2.7 mils]
Theoretical spreading rate	17 m ² /L [693 sq ft/US gal]	13 m ² /L [530 sq ft/US gal]	15 m ² /L [611 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

- Surface temperature must be above -10°C [14°F] during application and curing.
- 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.

Relative Humidity:

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

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Application remarks

- Two coats of the topcoat may be necessary to obtain full hiding power.

Drying and overcoating

Product compatibility

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

Drying time

Surface temperature		20°C [68°F]
Surface dry	min	120
Hard dry	hours	4

Determined for dry film thickness 35 micron [1.4 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]	
	Min	Max	Min	Max	Min	Max
Atmospheric severe						
Hempel's Polyenamel 55102	Min	12 h	8 h	4 h	Min	4 h
	Max	No max	No max	No max	Max	No max

Drying conditions

- To obtain the drying time stated, it is important to maintain sufficient ventilation during application, drying and curing.
- Condensation on the freshly applied coating should be avoided.

Overcoating details

- The surface must be clean before overcoating.

Other remarks

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

Storage

Shelf life

Ambient temperature	25°C [77°F]
Base	36 months
Curing Agent	12 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 curing agent is sensitive to moisture. Store in a dry place and keep the can tightly closed until use.
- 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)	10.5 g CO ₂ e/m ²	0.054 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.