Hempaprime Multi 500 Winter

Product characteristics

Description
Hempaprime Multi 500 is a fast drying, high solids epoxy paint. It provides hard wearing and long lasting barrier protection in coating systems for severe corrosive environments. The product meets the requirements of ISO 12944 Part 5, 2019 when used as part of a predefined paint system.

Recommended use
Hempaprime Multi 500 is recommended as a high-build, intermediate coat in high performance coating systems where fast handling and short overcoating times are required. Due to its fast drying - up to twice as fast as comparable products - the product is excellent for projects where fast throughput is key. The product can also be used as self-priming coat and a finishing coat in heavy-duty coating systems. The product is suited for all-year application and can be used at low temperatures down to -10°C [14°F].
The product is available in MIO shade 12430.

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

Certificates / Approvals
- Third-party verified, product-specific Environmental Product Declaration (Type III EPD, ISO 14025, EN 15804)
- Meets requirements to ISO 12944 when used as part of a predefined paint system. Part 6, C5 / Im2; Part 9, CX / Im4.
- Meets requirements to NORSOK M-501 when used as part of a predefined paint system. Edition 6, System 1, 7B. Edition 7, System 1A, 1B, 7B.

Features
- Fast overcoating.
- Crack resistant in high film thickness.
- Low VOC.
- Ready to use - optimised application properties.
- Surface tolerant.
- Suitable for immersion as well as atmospheric service.
- Can contribute to points for LEED projects (Low-emitting materials, Environmental Product Declarations).

Product safety

Flash point 27°C [80°F]

VOC content mixed product

Legislation	Value
EU	142 g/L [1.19 lb/US gal]
US (coatings)	142 g/L [1.19 lb/US gal]
US (regulatory)	142 g/L [1.19 lb/US gal]
China	142 g/L [1.19 lb/US gal]

VOC values may vary with shade, please consult the Safety Data Sheet, section 9. 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
45953

Product components
Base 45959
Curing Agent 95093

Standard shade* / code
Brownish red 50630 **

Gloss
Semi-gloss

* 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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Volume solids
85 ± 2%

Specific gravity
1.4 kg/L [12 lb/US gal]

Reference dry film thickness
150 micron [6.0 mils]

Aluminium shade / code
Aluminium grey 19871

Gloss
Please consult Hempel's Guideline on aluminium pigmented coatings.

Volume solids
81 ± 2%

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

Reference dry film thickness
150 micron [6.0 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).
- Stainless steel, aluminium and other non ferric metals and alloys: use non-metallic blast media (corundum, garnet, etc.). Sweep blasting to a uniform dense sharp profile, without blank spots.
- Remove dust, blast media and loose materials.

Maintenance and Repair
- Spot abrasive blasting to min. PSa 2 (ISO 8501-2) / SP 6 (SSPC).
- Minor areas may be hand or power tool cleaned instead of abrasive blasting.
- Water jetting to min. Wa 2 (ISO 8501-4).
- Flash rust degree of maximum FR M (ISO 8501-4).
- Feather edges to sound surrounding coating.
- Remove dust, blast media and loose materials.

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

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

Application

Mixing ratio
Base 45959 : Curing Agent 95093
(4 : 1 by volume)

Stir well before use.

Thinner
Hempel's Thinner 08450

Cleaner
Hempel's Tool Cleaner 99610
Hempel's Thinner 08450

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Pot life

Product temperature	20°C [68°F]	10°C [50°F]	30°C [86°F]
Pot life	1 hour	2½ hours	½ hours

Application method

Tool	Thinning max vol.	Application parameters
Airless spray	5%	Nozzle pressure: 225 bar [3300 psi] Nozzle orifice: 0.019-0.023"
Brush/Roller	5%	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	100 micron [4.0 mils]	250 micron [10 mils]	150 micron [6.0 mils]
Wet film thickness	117 micron [4.7 mils]	293 micron [12 mils]	176 micron [7.0 mils]
Theoretical spreading rate	8.5 m²/L [346 sq ft/US gal]	3.4 m²/L [139 sq ft/US gal]	5.7 m²/L [232 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

- Optimal paint temperature for proper mixing, pumping and spraying is: 20 °C [68°F].
- 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 [14°F] during application and curing.

Relative Humidity:

- Relative humidity must be below 85% during curing.

Application remarks

- Product requires heavy duty spray equipment; spray hoses shall be as short as possible.
- Metallised surfaces should be overcoated before exposure to open air conditions.
- Flash-coat technique is recommended when overcoating porous substrates.

Drying and overcoating

Product compatibility

- Previous coat: None or according to Hempel's specification.
- Subsequent coat: None or according to Hempel's specification. Recommended products are: Hempadur, Hempaprime, Hempathane

Drying time

Surface temperature		-10°C [14°F]	0°C [32°F]	10°C [50°F]	20°C [68°F]
Touch dry	hours	13	5½	2½	1
Surface dry	hours	24	12	6	3
Hard dry	hours	33	16	8	3½
Fully cured	days	-	-	-	7

Determined for dry film thickness 150 micron [6.0 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 [14°F]	0°C [32°F]	10°C [50°F]	20°C [68°F]
Atmospheric medium					
Hempaprime Multi 500 Winter	Min	27 h	13 h	6 h	3 h
	Max	Ext*	Ext*	Ext*	Ext*
Hempathane HS 55610	Min	27 h	13 h	6 h	3 h
	Max	40 d	40 d	40 d	20 d
Atmospheric severe					
Hempaprime Multi 500 Winter	Min	27 h	13 h	6 h	3 h
	Max	60 d	60 d	60 d	30 d
Hempathane HS 55610	Min	27 h	13 h	6 h	3 h
	Max	10 d	10 d	10 d	5 d
Immersion					
Hempaprime Multi 500 Winter	Min	27 h	13 h	6 h	3 h
	Max	60 d	60 d	60 d	30 d

Ext*: Depending on the actual exposure conditions, the coated surface is overcoatable for an extended period of time. Contact your local Hempel representative for advice.
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	24 months
Curing Agent	24 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.

Carbon Footprint

Dry film thickness	1 µm	1 mil
GWP (Global Warming Potential)	5.6 g CO_2e/m^2	0.029 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.

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

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.