Hempadur Mastic 45880

Product characteristics

Description
Hempadur Mastic 45880 is a polyamide curing, high solids modified epoxy paint. It forms a hard and tough coating, has good wetting properties and cures at low temperature.
Complies with EU Directive 2004/42/EC, The Paints Directive on the limitation of volatile organic compounds: subcategory j.

Recommended use
Hempadur Mastic 45880 is recommended as a self-primed, surface tolerant paint for steel and concrete or as an intermediate or a topcoat in systems where low VOC and high film build are required. The product can be used when extended recoating properties for polyurethane topcoats are required. It may also be used directly on zinc silicate or spray metallised surfaces. The product can be used for minor repairs in immersed areas.

Service temperature:
- Maximum, dry exposure only: 120°C [248°F].
- Minimum, recommended by Hempel for dry exposure: -50°C [-58°F].

Certificates / Approvals
- EC-type examined as a low flame spread material when used as part of a predefined paint system. Please refer to “Declaration of Conformity” on hempel.com for further details.
- Meets requirements to ISO 12944 when used as part of a predefined paint system. Part 6 C4 High.
- Reaction to fire tested (as part of a coating system with approved primer and topcoat) according to EN13501-1 B-s1, d0.
- Complies with US FDA and EU food regulations for contact with dry foodstuff. Consult Hempel for details.
- Complies with the requirements in EN1504-2 Products and systems for the protection and repair of concrete structures, meeting CE Mark performance qualification.

Features
- Versatile, can be used for both steel and concrete.
- High surface tolerance.
- Low temperature curing.

Product safety

Flash point 25°C [77°F]

VOC content mixed product

Legislation	Value
EU	217 g/L [1.81 lb/US gal]
US (coatings)	217 g/L [1.81 lb/US gal]
US (regulatory)	217 g/L [1.81 lb/US gal]
China	217 g/L [1.81 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. [a]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: 45880

Product components: Base 45889 | Curing Agent 95880

Standard shade* / code: Stone grey / Light grey 12170 **

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

Gloss: Semi-gloss

Volume solids: 80 ± 2%

Specific gravity: 1.5 kg/L [12 lb/US gal]

Reference dry film thickness: 125 micron [5.0 mils]

Aluminium shade / code: Aluminium grey 19002

Gloss: Please consult Hempel’s Guideline on aluminium pigmented coatings.

Volume solids: 72 ± 2%

* Other shades are available, including shades containing MIO. Please contact your local Hempel representative.
** Slight discolouration may occur. This does not affect the performance of the coating.

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

Reference dry film thickness: 125 micron [5.0 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) / NACE No.2.
- Concrete: According to Hempel's Specification.
- Remove dust, blast media and loose materials.

Maintenance and Repair
- Spot abrasive blasting to min. PSa 2 (ISO 8501-2) / SP 6 (SSPC).
- Water jetting to min. Wa 2 (ISO 8501-4).
- Flash rust degree of maximum FR M (ISO 8501-4).
- Remove dust, blast media and loose materials.
- Minor areas can be cleaned by power tool to St 2 provided the surface is roughened and not polished.

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

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

Application

Mixing ratio
Base 45889 : Curing Agent 95880
(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]
Induction time	10 min	15 min	0 min
Pot life (spray)	60 min	90 min	30 min
Pot life (brush)	1½ hours	3 hours	1 hour

Application method

Tool	Thinning max vol.	Application parameters
Airless spray	5%	Nozzle pressure: 250 bar [3600 psi] Nozzle orifice: 0.017-0.023"
Air spray	5%	-
Brush/Roller	5%	-
Dual feed spray	5%	Nozzle pressure: 221 bar [3200 psi] Nozzle orifice: 0.017-0.023"

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]	200 micron [8.0 mils]	125 micron [5.0 mils]
Wet film thickness	125 micron [5.0 mils]	250 micron [10.0 mils]	156 micron [6.2 mils]
Theoretical spreading rate	8 m²/L [326 sq ft/US gal]	4 m²/L [163 sq ft/US gal]	6.4 m²/L [261 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 [23°F] during application and curing.
- Material temperature should be maximum 43°C [109°F].

Relative Humidity:
- Relative humidity must be below 85% during curing.

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Drying and overcoating

Product compatibility

- Previous coat: None or according to Hempel's specification.
- Subsequent coat: None or according to Hempel's specification.

Drying time

Surface temperature		-5°C [23°F]	0°C [32°F]	20°C [68°F]	40°C [104°F]
Surface dry	hours	36	20	2½	1
Hard dry	hours	48	25	3½	1½
Fully cured	days	75	30	7	3

Determined for dry film thickness 125 micron [5.0 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		0°C [32°F]	20°C [68°F]	30°C [86°F]	40°C [104°F]
Atmospheric medium					
Hempadur Mastic 45880	Min	54 h	6 h	4½ h	3½ h
	Max	Ext*	Ext*	Ext*	Ext*
Hempathane HS 55610	Min	54 h	6 h	4½ h	3½ h
	Max	Ext*	Ext*	Ext*	Ext*
Atmospheric severe					
Hempadur Mastic 45880	Min	4 d	10 h	7½ h	5½ h
	Max	Ext*	Ext*	Ext*	Ext*
Hempathane HS 55610	Min	4 d	10 h	7½ h	5½ h
	Max	27 d	72 h	54 h	40 h

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 when applied at the recommended DFT.
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	36 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. The shelf life printed on product labels is based on regional climate conditions. 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)	6.3 g CO_2e/m^2	0.033 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 Knowledge Center: https://www.hempel.com/knowledge-center . The documents below can be found in the Technical Guidelines section: https://www.hempel.com/knowledge-center/technical-guidelines or at the Hempel website.

- Explanatory Notes for Product Data Sheet.
- Application methods.
- Substrates.
- Surface Preparation.
- Application Instruction for this product.
- Repair & maintenance.

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.