

Hempadur Quattro XO 17870

Product characteristics

Description

Hempadur Quattro XO 17870 is a pure epoxy, high volume solids primer with a very high application flexibility. It holds good resistance to abrasion and has excellent anticorrosive and mechanical properties. It is an all year round primer, ideal for application in newbuilding, in ballast tanks, cargo oil tanks and cargo holds when high temperature resistance is required. The product is available with different levels of aluminium and fibre pigmentation to deliver tailor made optimised performance properties for different service conditions, enhanced cracking resistance and to reduce maintenance during ship service life.

Recommended use

Hempadur Quattro XO 17870 is recommended as an universal, self-primed high performance coating for atmospheric or immersion service, including cargo holds, water ballast tanks and cargo oil tanks to be coated according to IMO-PSPC requirements. It is intended for all year application and for applications where very long recoating interval required.

The products resists normal ambient temperatures at sea when used in ballast water service (avoid long-term exposure to negative temperature gradients). For resistance to other liquids, please contact Hempel.

Service temperature:

- Maximum, dry exposure only: 120°C [248°F].
- Other liquids: Please contact Hempel.

Certificates / Approvals

- This product is type approved according to PSPC requirements based on crossover testing over a wide range of shopprimers. Consult Hempel for specific Type Approval Certificates as defined in IMO Resolution: MSC.215(82), MSC.288(87).
- 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.
- Complies with US FDA and EU food regulations for contact with dry foodstuff. Consult Hempel for details.
- Meets requirements to NORSOK M-501 when used as part of a predefined paint system. Edition 6, System 1. Edition 7, System 1A.

Features

- Very long overcoating intervals giving a very high application flexibility.
- Cures down to -10°C [14°F].
- Very good resistance to high cargo oil temperature.
- 9% aluminium pigmented shades are available e.g. 19871 and 19880.

Product safety

Flash point 35°C [95°F]

VOC content mixed product

Legislation	Value
EU	178 g/L [1.49 lb/US gal]
US (coatings)	178 g/L [1.49 lb/US gal]
US (regulatory)	178 g/L [1.49 lb/US gal]
China	178 g/L [1.49 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

17870

Product components

Base 17879

Curing Agent 95870

Hempadur Quattro XO 17870

Standard shade* / code

Venetian Red 50630 **

Gloss

Semi-flat

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 red 19880

Gloss

Please consult Hempel's Guideline on aluminium pigmented coatings.

Volume solids

72 ± 2%

Specific gravity

1.4 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).
- Remove dust, blast media and loose materials.
- All damage of shopprimer and contamination from storage and fabrication should be thoroughly mechanically/chemically cleaned prior to final painting.

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 Wa 2½ (ISO 8501-4).
- Flash rust degree of maximum FR M (ISO 8501-4).
- 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 17879 : Curing Agent 95870
(4 : 1 by volume)

Stir well before use.

Thinner

Hempel's Thinner 08450

Cleaner

Hempel's Tool Cleaner 99610

* 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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Pot life

Product temperature	20°C [68°F]	15°C [59°F]	30°C [86°F]
Pot life (spray)	1 hour	2 hours	½ hours
Pot life (brush)	1½ hours	2½ hours	¾ hours

Application method

Tool	Thinning max vol.	Application parameters
Airless spray	5%	Nozzle pressure: 250 bar [3600 psi] Nozzle orifice: 0.021-0.025"
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]	125 micron [5.0 mils]
Wet film thickness	126 micron [5.0 mils]	314 micron [13 mils]	157 micron [6.3 mils]
Theoretical spreading rate	8 m²/L [326 sq ft/US gal]	3.2 m²/L [130 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

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

Drying and overcoating

Product compatibility

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

Drying time

Surface temperature		-10°C [14°F]	0°C [32°F]	20°C [68°F]	40°C [104°F]
Touch dry	hours	12	4	½	⅓
Hard dry	hours	32	12	3	2½
Fully cured	days	40	20	5	1½

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		-10°C [14°F]	0°C [32°F]	20°C [68°F]	40°C [104°F]
Atmospheric severe					
Hempadur Quattro XO 17870	Min	27 h	14 h	3 h	90 min
	Max	90 d	90 d	30 d	15 d
Hempathane HS 55610	Min	27 h	14 h	3 h	90 min
	Max	7 d	7 d	4 d	72 h
Immersion					
Hempadur Quattro XO 17870	Min	27 h	14 h	3 h	90 min
	Max	90 d	90 d	30 d	15 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.

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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	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

- Product must be stored according to local legislation, at maximum 40°C [104°F], without direct sunlight and protected from rain and snow.

Carbon Footprint

Dry film thickness	1 µm	1 mil
GWP (Global Warming Potential)	5.8 g CO ₂ e/m ²	0.03 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.

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.
- IMO PSPC ballast tanks.

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.