

Hempadur 15600

Product characteristics

Description

Hempadur 15600 is an amine adduct curing pure epoxy coating with excellent adhesion to steel, resistance to crude oil and most refined oil products.

Recommended use

Hempadur 15600 is recommended for linings for cargo oil tanks of crude oil tankers to be coated according to IMO-PSPC requirements (Resolution MSC.288(87)). Also suitable as lining for a wide range of cargo tanks of product tankers as well as tank lining for grey/black water, brine, drilling mud, fish (RSW) tanks etc. Can also be used in ballast tanks to be coated according to IMO-PSPC requirements (Resolution MSC. 215(82)).

Service temperature:

- Maximum, dry exposure only: 140°C [284°F].
- Please contact Hempel for more information.
- Please consult the Chemical protection guide at hempel.com.

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).

Features

- Very high chemical and temperature resistance.
- Application and curing at low temperature.
- Build to minimise turnaround time when switching cargos.

Product safety

Flash point 31°C [88°F]

VOC content mixed product

Legislation	Value
EU	229 g/L [1.91 lb/US gal]
US (coatings)	221 g/L [1.84 lb/US gal]
US (regulatory)	229 g/L [1.91 lb/US gal]
China	229 g/L [1.91 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

15600

Product components

Base 15609
Curing agent 95600

Standard shade* / code

Light grey 11150

Gloss

Semi-flat

Volume solids

77 ± 2%

Specific gravity

1.6 kg/L [13 lb/US gal]

Reference dry film thickness

160 micron [6.3 mils]

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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.

Maintenance and Repair

- Spot abrasive blasting to min. PSa 2½ (ISO 8501-2) / SP 10 (SSPC).
- Water jetting to Wa 2½ (ISO 8501-4).
- Minor areas may be hand or power tool cleaned instead of abrasive blasting.
- Remove dust, blast media and loose materials.
- Flash rust degree of maximum FR L (ISO 8501-4).

Roughness

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

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

Application

Mixing ratio

Base 15609 : Curing agent 95600
(7.6 : 2.4 by volume)

Stir well before use.

Thinner

Hempel's Thinner 08450

Cleaner

Hempel's Tool Cleaner 99610

Pot life

Product temperature	10°C [50°F]	20°C [68°F]	30°C [86°F]
Induction time	20 min	-	-
Pot life (spray)	90 min	60 min	30 min
Pot life (brush)	1¼ hours	1¼ hours	¾ hours

Application method

Tool	Thinning max vol.	Application parameters
Airless spray	5%	Nozzle pressure: 200 bar [2900 psi] Nozzle orifice: 0.019-0.023"
Brush	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 [3.9 mils]	200 micron [7.9 mils]	160 micron [6.3 mils]
Wet film thickness	130 micron [5 mils]	250 micron [10 mils]	210 micron [8 mils]
Theoretical spreading rate	7.7 m ² /L [310 sq ft/US gal]	3.9 m ² /L [160 sq ft/US gal]	4.8 m ² /L [200 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 -5°C [23°F] during application and curing.

Relative Humidity:

- Relative humidity must be below 80% during curing.
- Relative humidity must be below 80% during application.

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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		0°C [32°F]	10°C [50°F]	20°C [68°F]	30°C [86°F]
Touch dry	hours	9	4	1½	1
Hard dry	hours	18	7	3½	1½
Fully cured	days	12	6	3	1½

Determined for dry film thickness 160 micron [6.3 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]	10°C [50°F]	20°C [68°F]	30°C [86°F]
Immersion					
Hempadur 15600	Min	20 h	11 h	6 h	3 h
	Max	14 d	14 d	7 d	5 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.

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]	35°C [95°F]
Base	12 months	9 months
Curing agent	36 months	24 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 maximum 40°C [104°F], without direct sunlight and protected from rain and snow.

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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
- Consult Hempel's separate IMO PSPC ballast tank guideline for more details.

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.