



# Product Data

## HEMPADUR 45141/ HEMPADUR 45143

45141: BASE 45148 with CURING AGENT 97820  
45143: BASE 45148 with CURING AGENT 97430

### Description:

HEMPADUR 45141/45143 is a two-component, polyamide adduct cured epoxy paint with good wetting properties and low water permeability. It is selfpriming and forms a hard and tough coating which has good resistance against abrasion and impact as well as to seawater, mineral oils, aliphatic hydrocarbons and splashes from petrol and related products. Harmless to grain cargoes.

### Recommended use:

1. As a high build primer, intermediate and/or finishing coat in (heavy duty) paint systems according to specification. (As a finishing coat where a cosmetic appearance is of less importance).
2. For repair and maintenance work at application temperatures above -10°C/15°F on hatch covers, decks, in cargo holds, etc.
3. As a ballast tank coating.

HEMPADUR 45143 is intended for use in cold/temperate climates, HEMPADUR 45141 for warmer climates - see APPLICATION CONDITIONS overleaf.

### Service temperatures:

Dry exposure only: Maximum 150°C/302°F (See REMARKS overleaf)  
Ballast water service: Resists normal ambient temperatures at sea\*  
Other water service: 40°C/104°F (no temperature gradient)  
Other liquids: Contact HEMPEL  
\*Avoid long-term exposure to negative temperature gradients.

### Certificates/Approvals:

Complies with EU Directive 2004/42/EC, subcategory j.  
See REMARKS overleaf.  
HEMPADUR 45143 has a French EC-type Examination Certificate.

### Availability:

Part of Group Assortment. Local availability subject to confirmation.

### PHYSICAL CONSTANTS:

Version; mixed product:  
Colours/Shade nos:  
Finish:  
Volume solids, %:  
Theoretical spreading rate:

**45141**  
Red/50630\*  
Semi-gloss  
60 ± 1  
4.0 m<sup>2</sup>/litre - 150 micron  
160 sq.ft./US gallon - 6 mils

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Red/50630\*  
Semi-gloss  
60 ± 1  
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Flash point:  
Specific gravity:  
Surface dry:  
Dry to touch:  
Fully cured:  
V.O.C.:

26°C/79°F  
1.3 kg/litre - 10.8 lbs/US gallon  
4 (approx.) hrs at 20°C/68°F (ISO 1517)  
7 (approx.) hours at 20°C/68°F  
7 (approx.) days at 20°C/68°F  
380 g/litre - 3.2 lbs/US gallon  
26°C/79°F  
1.3 kg/litre - 10.8 lbs/US gallon  
5 (approx.) hrs at 5°C/41°F (ISO 1517)  
11 (approx.) hours at 5°C/41°F  
20 (approx.) days at 5°C/41°F  
375 g/litre - 3.1 lbs/US gallon  
\*Other shades including a MIO version, colour no. 12430, according to assortment list.

The physical constants stated are nominal data according to the HEMPEL Group's approved formulas. They are subject to normal manufacturing tolerances and where stated, being standard deviation according to ISO 3534-1.

### APPLICATION DETAILS:

Mixing ratio:  
Application method:  
Thinner (max.vol.):

**45141**  
Base 45148 : Curing agent 97820  
3 : 1 by volume  
Airless spray Brush  
08450 (5%) 08450 (5%)  
(See REMARKS overleaf)  
2 hrs (20°C/68°F) 4 hrs (20°C/68°F)  
(See REMARKS overleaf)

**45143**  
Base 45148 : Curing agent 97430  
3 : 1 by volume  
Airless spray Brush  
08450 (5%) 08450 (5%)  
(See REMARKS overleaf)  
2 hrs (15°C/59°F) 4 hrs (15°C/59°F)  
(See REMARKS overleaf)

Pot life:  
Nozzle orifice:  
Nozzle pressure:

Cleaning of tools:  
Indicated film thickness, dry:  
Indicated film thickness, wet:  
Recoat interval, min:  
Recoat interval, max:

.019"-.023"  
250 bar/3600 psi  
(Airless spray data are indicative and subject to adjustment)  
HEMPEL'S TOOL CLEANER 99610 or THINNER 08450  
150 micron/ 6 mils (See REMARKS overleaf)  
250 micron/10 mils  
As per separate APPLICATION INSTRUCTIONS  
As per separate APPLICATION INSTRUCTIONS

### Safety:

Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.



## HEMPADUR 45141/45143

**SURFACE PREPARATION:** **New steel:** When used selfprimed surface preparation as to specification. When being an integral part in heavy duty systems abrasive blasting to Sa 2½. Reference is made to separate APPLICATION INSTRUCTIONS.

**New steel, ballast tanks and similar areas:** Abrasive blasting to Sa 2½. For temporary protection, if required, use a suitable shopprimer. All damage of shopprimer and contamination from storage and fabrication should be thoroughly cleaned prior to final painting - preferably by abrasive blasting. For repair and touch-up, use HEMPADUR 45141/45143.

**Stainless steel:** (Ballast tanks in chemical carriers) to be abrasive blasted to a uniform, sharp, dense profile, ISO Comparator Medium (G), corresponding to Rz minimum 50 micron. Any salts, grease, oil, etc. to be removed before abrasive blasting is commenced.

**Repair and maintenance:** Remove oil and grease, etc. with suitable detergent. Remove salt and other contaminants by (high pressure) fresh water cleaning. Clean damaged areas thoroughly by power tool cleaning to St 3 (spot-repairs) or by abrasive blasting to min. Sa 2, preferably to Sa 2½. Improved surface preparation will improve the performance of HEMPADUR 45141/45143. As an alternative to dry cleaning, water jetting to sound, well adhering coat and/or to steel. Intact coat must appear with roughened surface after the water jetting. By water jetting to steel, cleanliness shall be Wa 2 - Wa 2½ (atmospheric exposure) / minimum Wa 2½ (immersion) (ISO 8501-4:2006). A flash-rust degree of maximum M (atmospheric exposure) / M, preferably L (immersion) (ISO 8501-4:2006) is acceptable before application. Feather edges to sound and intact paint. Dust off residues. On pit-corroded surfaces, excessive amounts of salt residues may call for water jetting, wet abrasive blasting, alternatively dry abrasive blasting, high pressure fresh water hosing, drying, and finally, dry abrasive blasting again.

**APPLICATION CONDITIONS:** Apply only on a dry and clean surface with a temperature above the dew point to avoid condensation. HEMPADUR 45143 is intended for curing conditions down to -10°C/14°F, HEMPADUR 45141 is to be selected in warmer climates. A shift from 45143 to 45141 is most convenient to take place when the temperature is between 15°C/59°F and 25°C/77°F, however, HEMPADUR 45141 may be used for curing conditions down to 0°C/32°F in cases where surfaces are not to be immersed. Optimal spraying properties are obtained at paint temperatures of 18-22°C/64-72°F. In warm climates, the paint should be stored in a cool place. At paint temperatures below 15°C/59°F or in the case of very long spray hoses, thinning may be necessary. This will cause lower film build and longer drying time. In confined spaces provide adequate ventilation during application and drying.

**PRECEDING COAT:** None or according to specification.

**SUBSEQUENT COAT:** None or according to specification.

**REMARKS:** See separate APPLICATION INSTRUCTIONS.

VOC - EU directive 2004/42/EC:  
VOC:

	As supplied	5 vol. % thinning	Limit phase I, 2007	Limit phase II, 2010
VOC in g/l	375	400	550	500

For VOC of other shades, please refer to Safety Data Sheet.

Certificates/  
Approvals:

**Certificates** have been issued under the former quality number 4514. Approved by Lloyd's Register of Shipping as a recognised corrosion control coating. Tested for non-contamination of grain cargo at the Newcastle Occupational Health, Great Britain. Approved as a ballast tank coating by Germanischer Lloyd, Germany. Classified as a class 1 material according to BS 476, Part 7: 1987 (fire testing). Accepted as a corrosion control coating by Maritime Register of Shipping, Russia. Complies with Section 175.300 of the Code of Federal Regulations in respect of carriage of dry foodstuffs (FDA) in spaces with an internal surface area larger than 1000 m<sup>2</sup>/10,750 sq.ft.

Weathering/  
service  
temperatures:

The natural tendency of epoxy coatings to chalk in outdoor exposure and to become more sensitive to mechanical damage and chemical exposure at elevated temperatures is also reflected in this product.

Colour:

Light shades will have a tendency to yellow when exposed to sunshine.

Film thicknesses:

May be specified in another film thickness than indicated depending on purpose and area of use. This will alter spreading rate and may influence drying time and recoating interval. Normal range dry is 125-175 micron/5-7 mils.

Curing agent:

Curing agent 97820 and 97430 are hazy. This is intended and has no negative influence on the performance.

Thinning:

Thinning above 5% may cause lower film build and slower drying/curing. Mix the components thoroughly.

Induction time:

If the paint temperature, as an exception, is below approx. 10°C/50°F, allow the mixture to pre-react 30 minutes before use.



### **HEMPADUR 45141/45143**

Recoating: Recoat intervals related to later conditions of exposure: Consult separate APPLICATION INSTRUCTIONS. Before recoating after exposure in contaminated environment, clean the surface thoroughly by (high pressure) fresh water hosing and allow drying. If the maximum recoat interval is exceeded, roughening of the surface is necessary to ensure intercoat adhesion.

Note: **HEMPADUR 45141/45143 is for professional use only.**

ISSUED BY: HEMPEL A/S - 4514350630C0005/4514150630C0007

***This Product Data Sheet supersedes those previously issued. For explanations, definitions and scope, see "Explanatory Notes" in the HEMPEL Book. Data, specifications, directions and recommendations given in this data sheet represent only test results or experience obtained under controlled or specially defined circumstances. Their accuracy, completeness or appropriateness under the actual conditions of any intended use of the Products herein must be determined exclusively by the Buyer and/or User. The Products are supplied and all technical assistance is given subject to HEMPEL's GENERAL CONDITIONS OF SALES, DELIVERY AND SERVICE, unless otherwise expressly agreed in writing. The Manufacturer and Seller disclaim, and Buyer and/or User waive all claims involving, any liability, including but not limited to negligence, except as expressed in said GENERAL CONDITIONS for all results, injury or direct or consequential losses or damages arising from the use of the Products as recommended above, on the overleaf or otherwise. Product data are subject to change without notice and become void five years from the date of issue.***