

HEMPADUR* 45141/ HEMPADUR* 45143

High temperatures: 45141 with CURING AGENT 97820
Low to medium temperatures: 45143 with CURING AGENT 97430

Description:

HEMPADUR 4514 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, jet fuel, lubrication oil 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.
 2. For repair and maintenance work at application temperatures above -10°C/15°F on hatch covers, decks, in cargo holds, etc. when the performance of an epoxy coating is required, but the usual, high demands to surface preparation cannot be obtained.
 3. As a ballast tank coating.
 4. As a finishing coat where a cosmetic appearance is of less importance.
- HEMPADUR 45143 is intended for use in cold/temperate climates, HEMPADUR 45141 for warmer climates - see overleaf.

Service temperatures: maximum:

Dry: 150°C/302°F In water (max temperature gradient 10°C/18°F): 40°C/104°F
See REMARKS overleaf.

Approvals, certificates:

Accepted by Lloyd's Register of Shipping as a provisionally recognized corrosion control coating. Tested for non-contamination of grain cargo at the Newcastle Occupational Health Agency, Great Britain.
Classified as a class 1 material according to BS 476, Part 7: 1987 (fire testing).

Availability:

Subject to confirmation.

PHYSICAL CONSTANTS:

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

Flash point:
Specific gravity:
Surface dry:
Dry to touch:
Fully cured:
V.O.C.:

45141	45143
Red/50630*	Red/50630*
Semi-gloss	Semi-gloss
60%	60%
4.0 m ² /litre - 150 micron	4.0 m ² /litre - 150 micron
160 sq.ft./US gallon - 6 mils	160 sq.ft./US gallon - 6 mils
25°C/77°F	25°C/77°F
1.3 kg/litre - 10.8 lbs/US gallon	1.3 kg/litre - 10.8 lbs/US gallon
4 (approx.) hrs at 20°C/68°F (ISO 1517)	5 (approx.) hrs at 5°C/41°F (ISO 1517)
7 (approx.) hours at 20°C/68°F	11 (approx.) hours at 5°C/41°F
7 (approx.) days at 20°C/68°F	20 (approx.) days at 5°C/41°F
384 g/litre - 3.2 lbs/US gallon	382 g/litre - 3.2 lbs/US gallon

*Other shades according to assortment list.

Available in a MIO version, colour no. 12430, on request.

The physical constants are subject to normal manufacturing tolerances.
Further reference is made to "Explanatory Notes" in the Hempel Book.

APPLICATION DETAILS:

	45141	45143
Mixing ratio:	Base 45148 : Curing agent 97820 3 : 1 by volume	Base 45148 : Curing agent 97430 3 : 1 by volume
Application method:	Airless spray Brush	Airless spray Brush
Thinner (max.vol.):	0845 (5%) 0845 (5%) (See REMARKS overleaf)	0845 (5%) 0845 (5%) (See REMARKS overleaf)
Pot life:	2 hrs (20°C/68°F) 4 hrs (20°C/68°F) (See REMARKS overleaf)	3 hrs (10°C/50°F) 5 hrs (10°C/50°F) (See REMARKS overleaf)
Nozzle orifice:	.019"-.023"	
Nozzle pressure:	250 bar/3600 psi (Airless spray data are indicative and subject to adjustment)	
Cleaning of tools:	HEMPEL'S TOOL CLEANER 9961 or THINNER 0845	
Indicated film thickness, dry:	150 micron/ 6 mils (See REMARKS overleaf)	
Indicated film thickness, wet:	250 micron/10 mils	
Recoat interval, min:	As per separate APPLICATION INSTRUCTIONS	
Recoat interval, max:	As per separate APPLICATION INSTRUCTIONS	

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SURFACE PREPARATION:	<p>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.</p> <p>New steel, ballast tanks and similar areas: Abrasive blasting to Sa 2½, SSPC-SP-10. 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 4514.</p> <p>Stainless steel: (Ballast tanks of chemical carriers) to be abrasive blast cleaned to a uniform, sharp, dense profile (Rugotest No. 3, BN10, ISO Comparator Medium (G), Keane-Tator Comparator 3.0 G/S). Any salts, grease, oil, etc. to be removed before abrasive blasting is commended.</p> <p>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 4514. As an alternative to dry cleaning, water jetting to min. WJ-3, preferably WJ-2 (NACE No. 5/SSPC-SP 12), may be used. A flash-rust degree of FR-1 maximum FR-2 (Hempel standard) is acceptable before application. Feather edges to sound and intact paint. Dust off residues.</p> <p>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.</p>
APPLICATION CONDITIONS:	<p>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. 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.</p> <p>In confined spaces provide adequate ventilation during application and drying.</p>
PRECEDING COAT:	None or according to specification.
SUBSEQUENT COAT:	None or according to specification.
REMARKS:	Refer to separate APPLICATION INSTRUCTIONS.
Weathering/ service temperatures:	<p>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.</p>
Film thicknesses:	<p>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.</p>
Thinning:	<p>Thinning above 5% may cause lower film build and slower drying/curing. Mix the components thoroughly.</p>
Induction time:	<p>If the paint temperature, as an exception, is below approx. 10°C/50°F, allow the mixture to pre-react 30 minutes before use.</p>
Recoating:	<p>Recoat intervals related to later conditions of exposure: Consult separate APPLICATION INSTRUCTIONS.</p> <p>Before recoating after exposure in contaminated environment, clean the surface thoroughly by (high pressure) fresh water hosing and allow to dry.</p> <p>If the maximum recoat interval is exceeded, roughening of the surface is necessary to ensure intercoat adhesion.</p>
Note:	HEMPADUR 4514 is for professional use only.
Safety:	<p>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. Harmful or fatal if swallowed; immediately seek medical assistance if swallowed. Avoid inhalation of possible solvent vapours or paint mist, as well as paint contact with skin and eyes.</p> <p>Apply only in well ventilated areas and ensure that adequate forced ventilation exists when applying paint in confined spaces or when the air is stagnant. Always take precautions against the risks of fire and explosions.</p>

This Product Data Sheet supersedes those previously issued. For definition and scope, see explanatory notes to applicable Product Data Sheets. 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.

Issued by HEMPEL'S MARINE PAINTS A/S.

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