



HEMPADUR QUATTRO ALU 45604

45604: BASE 45606: CURING AGENT 97334

Description:	HEMPADUR QUATTRO ALU 45604 is a two-component aluminium pigmented universal epoxy paint, which cures to a hard and tough coating with superior anticorrosive properties and good resistance to abrasion, seawater and various oils.
Recommended use:	As a universal epoxy and self-primed high performance coating system for atmospheric or in-water service. As primer for HEMPADUR QUATTRO 17634 for water ballast tanks to be coated according to IMO-PSPC requirements (Resolution MSC.215(82)). HEMPADUR QUATTRO ALU 45604 is intended for all year application down to -10°C/ 15°F and for in-shop applications where fast recoating and handling is required.
Features:	Superior anticorrosive and very good mechanical properties. Short drying time. Curing down to -10°C/14°F.
Service temperature:	Maximum, dry exposure only: 120°C/248°F Ballast water service. Resists normal ambient temperatures at sea (Avoid long-term exposure to negative temperature gradients). Other water service: 40°C/104°F (no temperature gradient) Other liquids. Contact HEMPEL
Certificates/Approvals:	PSPC type approved. (Consult HEMPEL for specific Type Approval Certificates) Complies with EU Directive 2004/42/EC: subcategory j.
Availability:	Part of Group Assortment. Local availability subject to confirmation. HEMPADUR QUATTRO ALU 45604 replaces HEMPADUR PRO 45601/3.

PHYSICAL CONSTANTS:

Shade nos/Colours:	19530*/ reddish alu
Finish:	Semi-flat
Volume solids, %:	70 ± 1
Theoretical spreading rate:	5.6 m ² /l [224.6 sq.ft./US gallon] - 125 micron/5 mils
Flash point:	32 °C [89.6 °F]
Specific gravity:	1.3 kg/litre [11.1 lbs/US gallon]
Dry to touch:	4 hour(s) 20°C/68°F 9 hour(s) at 5°C/41°F
Fully cured:	7 day(s) 20°C/68°F 20 day(s) at 5°C/41°F
VOC content:	302 g/l [2.5 lbs/US gallon] <i>*other shades according to assortment list. see REMARKS overleaf</i> <i>The physical constants stated are nominal data according to the HEMPEL Group's approved formulas.</i>

APPLICATION DETAILS:

Version, mixed product:	45604
Mixing ratio:	BASE 45606: CURING AGENT 97334 4:1 Parts by volume
Application method:	Airless spray / Brush
Pot life:	2 hour(s) 20°C/68°F or 3 hour(s) at 15°C/59°F or 1.5 hour(s) at 25°C/77°F or 1 hour(s) at 30°C/86°F.
Induction time:	see REMARKS overleaf
Nozzle orifice:	0.021 - 0.025 "
Nozzle pressure:	250 bar [3625 psi] (Airless spray data are indicative and subject to adjustment)
Cleaning of tools:	HEMPEL'S TOOL CLEANER 99610
Indicated film thickness, dry:	125 micron [5 mils] see REMARKS overleaf
Indicated film thickness, wet:	175 micron [7 mils] approx
Recoat interval, min:	According to separate APPLICATION INSTRUCTIONS
Recoat interval, max:	According to separate APPLICATION INSTRUCTIONS
Safety:	Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Safety Data Sheets and follow all local or national safety regulations.



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SURFACE PREPARATION:

New steel: Remove oil and grease etc. thoroughly with suitable detergent. Remove salts and other contaminants by high pressure fresh water cleaning. Abrasive blasting to minimum Sa 2½ (ISO 8501-1:1988) with a surface profile corresponding to Rugotest No. 3, N9a to N10, preferably BN9a to BN10, Keane-Tator Comparator, 2.0 G/S or ISO Comparator, Medium (G). All damage to the shopprimer and contamination from storage and fabrication - including white rust formation - should be thoroughly cleaned together with welds by manual spot blasting prior to further painting. For repair and touch-up use: HEMPADUR QUATTRO ALU 45604.

Ballast tanks: For PSPC type approved coating, consult separate APPLICATION INSTRUCTIONS.

Repair and maintenance: Remove oil and grease etc. thoroughly with suitable detergent. Remove salts and other contaminants by high pressure fresh water cleaning. Clean damaged areas thoroughly by power tool cleaning to St 3 (ISO 8501-1:1988) (minor areas) or by abrasive blasting to min. Sa 2, preferably to Sa 2½ (ISO 8501-1:1988). Improved surface preparation will improve the performance of the product.

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).

Acceptable flash-rust degree before application: maximum M (atmospheric exposure) / M, preferably L (immersion) (ISO 8501-4:2006). Feather edges to sound and intact areas. Dust off residues. Touch up to full film thickness.

On pit-corroded surfaces, excessive amounts of salt residues may call for high pressure water jetting, wet abrasive blasting, alternatively dry abrasive blasting, high pressure fresh water hosting, drying, and finally dry abrasive blasting again.

Other substrates: contact Hempel.

APPLICATION CONDITIONS:

Use only where application and curing can proceed at temperatures above: -10°C/14°F. The temperature of the paint itself should be above: 15°C/59°F. Apply only on a dry and clean surface with a temperature above the dew point to avoid condensation. In confined spaces provide adequate ventilation during application and drying.

SUBSEQUENT COAT:

According to specification.

REMARKS:

VOC - EU Directive 2004/42/EC:

Product	As supplied	5 vol. % thinning	Limit phase II, 2010
4560419530	302 g/l	330 g/l	500 g/l

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

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. Has a tendency to yellow after application. This has no influence on the performance nor does the yellowing affect any topcoat applied.

Induction time:

To facilitate proper application properties it is recommended to allow the thoroughly mixed BASE and CURING AGENT to prereact before application. In case two-component spray-equipment is used consult separate APPLICATION INSTRUCTIONS.

Film thicknesses/thinning:

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: 100-200 micron/4-8 mils. For ballast tanks at newbuilding stage minimum specified dft is: 2 x 160 micron per coat. (Consult the separate APPLICATION INSTRUCTIONS)

Shades:

The product also comes in shade Grey alu/19880. Shade Reddish alu/19530 contains approximately 9% aluminium by weight in the dry film.

Note:

HEMPADUR QUATTRO ALU 45604 For professional use only.

ISSUED BY:

HEMPEL A/S

4560419530

This Product Data Sheet supersedes those previously issued.

For explanations, definitions and scope, see "Explanatory Notes" available on www.hempel.com. 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.

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