

Technical information

Hesse PUR OPTI-BASE DG 4750

Mixing ratio (by volume): 1 : 5 PU Hardener DR 4034

Product description

OPTI-BASE is an especially transparent base coat and excellent for closed-pore and very stable surface processes. Ideally suitable as an isolation sealer and base coat with very good body under high gloss. Given its thixotropic lacquer formulation, there are no problems with applying high coat thicknesses to vertical surfaces or edges.

Areas of application

OPTI-BASE can also be used for shopfitting and all interior fixtures and fittings, including in kitchens and bathrooms and the fitting out of ship interiors.

Area of application

- Internal fit-out
- Kitchen and bathroom
- Furniture
- The fitting out of ship interiors
- Special applications

Substrate material

- Dark, fine pored hardwood
- dark deciduous woods with coarse pores
- light deciduous woods with fine pores
- light deciduous woods with coarse pores
- Conifers



Surface Preparation

Surface preparation Clean, dry wood, dependent upon wood type and method of application.

Substrate sanding grits  150 - 180

Lacquer sanding grit  320 - 600

Application

Application	Spray nozzle size	Spray pressure	Atomizing pressure
2C line			
Airless	 0,23 - 0,28 mm	100 - 150 bar	
Airless low pressure			
Airmix	 0,23 - 0,28 mm	60 - 100 bar	2 - 2,5 bar
Compressed air spraying	1,8 - 2 mm	1,8 - 2 bar	
High-performance automatic spraying unit			
Automatic spray gun			

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Times

Pot life		7 h / 20 °C
Usage time		5 h / 20 °C
Drying		16 h / 20 °C
Stackable after		16 h / 20 °C
Complete drying		7 d / 20 °C

Finishing

Finishing After sufficient drying and lacquer sanding, it can be combined with almost all PU lacquers.

Processing instructions

Its high thixotropy means the flow behaviour when mixing PU OPTI-BASE DG 4750 with PU Hardener DR 4034 is not comparable with that of customary furniture lacquers. The base lacquer is somewhat more viscous. The lacquer/hardener mixture therefore has to be a little more carefully amalgamated.

Opened containers of PU Hardener DR 4034 have to be properly closed and made airtight after use. Slight yellowing may be evident depending on the storage period. Please conduct a trial coating and check the colour tone as necessary.

Woods containing high levels of active substances, wax or oil may under certain circumstances negatively influence the adhesion and drying properties of PU OPTI-BASE. It is therefore advisable to conduct a trial coating under practical conditions to evaluate shading, adhesion and the drying process!

Particular instructions

This coating material is not suitable for application on bleached surfaces!

Please note the application example concerning wet-on-wet application of DG 4750!

This product must only be combined with other approved and technically suitable products when it used as a flame retardant coating material for seagoing vessels according to the latest version of SOLAS 74 Reg. II-2/3, II-2/5, II-2/6 and X/3, as amended, IMO Resolution MSC.36(63)-(1994 HSC-Code) 7, IMO Resolution MSC.97(73)-(2000 HSC-Code) 7, IMO MSC/Circ. 1120. The maximum application amount in wet film when used as a flame retardant coating material for seagoing vessels using DG 4750 is 120 g/m².

"A risk assessment was undertaken according to Directive 2014/90/EU, Annex II, Section 3. This coating does not pose a physical risk to health nor a risk to the environment when cured and dried."














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Technical data

Flow time (+/- 15%)		50 s / DIN4
Yield per coat		5 - 8 m ² /l The spreading rate is heavily dependent on the type of application. The specifications relate to a liter of ready-for-use product, if necessary including hardener and thinner.
Proportion of renewable raw materi-		0 %
Non-volatile proportion		26.2 %
VOC FR		C
conditions of transport		frost-free - up to max. 35 °C
Shelf life in weeks		52
Storage temperature		16 - 40 °C
Number of coats (max)		8
Amount per layer (minimum)		120 g/m ²
Amount per layer (max)		200 g/m ²
Total application volume		1600 g/m ²
Mixing ratio (by volume)		1 : 5 PU Hardener DR 4034
Mixing information (gravimetric)		100 : 552 PU Hardener DR 4034

Particular properties / testing standards

Sign Product standard / basis



Quality Assurance System Certificate (Module D); Directive 2014/90/EU (Marine Equipment Directive)

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Sample process

Ship interior in stained mahogany, high-gloss

Bare wood sanding: 150 - 180 grit (dust removal)

Wiping stain: BE 15-20400

Drying: 2 - 3 h / 20 °C

Isolation: 1 x 120 - 160 g/m² Hesse PUR OPTI-BASE DG 4750, mixing ratio (by volume) 1 : 5 with PU Hardener DR 4034 and addition of 50 % PU Thinner DV 4994 to the lacquer/hardener mixture

Intermediate drying: 20 - 30 min / 20 °C

Isolation: 1 x 120 - 160 g/m² Hesse PUR OPTI-BASE DG 4750, mixing ratio (by volume) 1 : 5 with PU Hardener DR 4034 and addition of 50 % PU Thinner DV 4994 to the lacquer/hardener mixture

Drying: > 16 h / 20 °C

Lacquer sanding: 320 - 400 grit (dust removal)

Basecoat: 1 x 150 - 200 g/m² Hesse PUR OPTI-BASE DG 4750, mixing ratio (by volume) 1 : 5 with PU Hardener DR 4034 and addition of 20 - 25 % PU Thinner DV 4994 to the lacquer/hardener mixture

Intermediate drying: 20 - 30 min / 20 °C

Basecoat: 1 x 150 - 200 g/m² Hesse PUR OPTI-BASE DG 4750, mixing ratio (by volume) 1 : 5 with PU Hardener DR 4034 and addition of 20 - 25 % PU Thinner DV 4994 to the lacquer/hardener mixture

Drying: > 16 h / 20 °C

The more porous the wood, the more basecoats to be applied. Although a maximum application amount in wet film of 400 g/m² may be applied on one working day, since a drying time of > 16 h / 20 °C is then required! Apply sufficient basecoats until the surface to be coated has closed pores prior to lacquer sanding! The drying time for the final basecoat using OPTI-BASE DG 4750 should be > 48 h / 20 °C! PU Thinner DV 4981 can optionally be used at higher temperatures or if very large surfaces are being coated.

Lacquer sanding of the final basecoat: graduating from 400 - 600 grit (dust removal)

Top coat: 1 x 100 - 120 g/m² Hesse PU Brillant lacquer DU 44099, mixing ratio (by volume) 2 : 1 with PU Hardener DR 4080 and addition of 10 - 20 % PU Thinner DV 4994

Intermediate drying: 20 - 30 min / 20 °C

Top coat: 1 x 100 - 120 g/m² Hesse PU Brillant lacquer DU 44099, mixing ratio (by volume) 2 : 1 with PU Hardener DR 4080 and addition of 10 - 20 % PU Thinner DV 4994 to the lacquer/hardener mixture

Packable / ready for polishing: > 3 d / 20 °C

Ordering information

Order number	Colour tone	Gloss level 60° (Gloss +/-5)	Gloss level
DG 4750			

Accessories

	Order number	Product description
hardeners	DR 4034	PU Hardener
Thinners	DV 4994	PU Thinner
	DV 4981	PU Thinner
	DV 4935	PU Special thinner
Equipment cleaner	RV 1	Cleaning thinner

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General instructions on workmanship

PU lacquers should not be applied and dried at material and room-temperatures below 18 °C and 40 % RH. Ideal values are: 20 - 25 °C, 50 - 65 % RH. Deviations will result in drying or hardening errors. In order to avoid adhesion problems, please sand the PU lacquered surfaces before applying fresh lacquer and apply lacquer to the sanded surfaces as soon as possible. Old lacquer and hardener mixtures affect the surface quality (adhesion/resistance). Freshly bleached substrates must undergo intermediate drying for at least 48 h at 20 °C before coating with suitable PU lacquers. If stored correctly (at least 20 °C room temperature), the final hardness of the coating is achieved after a week. Please apply a test coat under real conditions!

Our technical information is continually adapted to keep up to date with the latest technology and statutory regulations. The indicated values are no specification, but typical product data. The latest version is always available online at www.hesse-lignal.de or talk to your local account manager. This information is for advice and is based on the best knowledge available and careful research in line with the current state of the art. This information cannot be held as legally binding. We also refer you to our terms and conditions of business. Material safety data sheet is provided in accordance with EC regulation no. 1907/2006.

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