

>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.

>Surface Preparation

Surface preparation	Clean, dry wood, dependent upon wood type and method of application.
Substrate sanding grits from-to	150 - 180
Lacquer sanding (grit) from - to	320 - 600

>Finishing

Finishing	After sufficient drying and lacquer sanding as per instructions, it can be re-coated with Hesse PU Acrylic brilliant Lacquer DU 45229, Hesse PU brilliant Lacquer DU 44099 or DU 449, ADAMANT DU 48999 as applicable, or with Hesse PU Multicoat lacquer series DE 55x(gloss level), DE 4259x(gloss level), DE 56x(gloss level) or DE 4503x(gloss level).
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>Times

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

>Application

Application	Nozzle size in mm	Spray pressure in bar	Atomising pressure in bar
Spraying			
2C line			
Airless	0,23 - 0,28	100 -150	
Airless low pressure			
Air mix	0,23 - 0,28	60 - 100	2,0 - 2,5
Compressed air spraying	1,8 - 2,0	1,8 - 2,0	
High-performance automatic spraying unit			
Automatic spray gun			

>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!

>Technical data

Flow time (+/- 15 %)	50 s / DIN 53211 - 4 mm
Appearance	colourless
Density series kg/l	0.924
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.
Form of delivery	fluid
Non-volatile content series %	26
VOC EU %	74 %
VOC FR	C
Storage temperature	16 - 25 °C
Shelf life in weeks	52
Working temperature	20 °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 PUR Hardener DR 4034
Mixing ratio (gravimetric)	100 : 551 PUR Hardener DR 4034

>Ordering information

Order number	Gloss level 60° (Gloss)	Container Size
DG 4750	-	1 l, 5 l

>Hardeners

Order number	Product description	Container Size
DR 4034	PUR Hardener	5 l

>Thinners

Order number	Product description	Container Size
DV 494	PU Thinner	1 l, 5 l, 15 l, 25 l
DV 4994	PU Thinner	1 l, 5 l, 15 l, 25 l
DV 4981	PU Thinner	1 l, 5 l, 25 l

>Equipment cleaner

Order number	Product description	Container Size
RV 1	Cleaning thinner	5 l, 15 l, 25 l

>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 74/88 Reg. II-2/3, II-2/5 and II-2/6, IMO Resolution MSC.36(63)-(1994 HSC-Code) 7 and IMO Resolution MSC.97(73)-(2000 HSC-Code) 7. 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."

>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

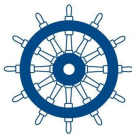
Top coat: 1 x 100 - 120 g/m² Hesse PU Brillant lacquer DU 44099, mixing ratio (by volume) 2 : 1 with PU Hardener DR 4080 and addition of 10 - 20 % PU Thinner DV 4994 to the lacquer/hardener mixture

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

>General information

PU lacquers should not be applied or dried at material and room temperatures of less than 18 °C and 40 % RH, ideal values: 20 - 25 °C, 50 - 65 % RH. Deviations will result in drying or curing faults. To avoid adhesion problems, please sand PU lacquered surfaces before applying fresh lacquer and apply lacquer to these sanded surfaces as soon as possible. Old lacquer/hardener mixtures will affect the surface quality (adhesion/resistance). If stored correctly (at least 20 °C room temperature), complete hardening of the coating is achieved after a week. Please apply a test coat under real conditions!

>Particular properties and/or testing standards

Test standard / basis	Testing laboratory	Mark	Report	No.
EC type examination certificate (module B); coating agent for seagoing vessels according to IMO Resolution MSC.307(88)-(FTP-Code 2010).	Trade association transport and traffic; Ship Safety Division, Hamburg		Approval No. U.S. Coast Guard Ap- proval No.	164.112/ EC0736/ 116.503-01

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.