

#### >Product description

DE 4259x(gloss level) is a **light fast** and transparent multicoat lacquer. Its **versatile application options** and **straightforward processing** mean that DE 4259x(gloss level) is exceptionally suitable as a **multicoat lacquer** on **all common woods** and equally as an **excellent finishing lacquer on Hesse PU colour lacquers**. Its **superb adhesion properties** also mean that DE 4259x(gloss level) can be applied on **bleached woods** in gloss levels from **dull matt to glossy**. DE 4259x(gloss level) has been tested by the French CSTB and classified as non-flammable according to the French M1 standard. This lacquer is also flame retardant according to DIN 4102-B1.

#### >Areas of application

DE 4259x(gloss level) can be used for shopfitting and all interior fixtures and fittings, including in kitchens and bathrooms and the fitting out of ship interiors. In parallel DE 4259x(gloss level) can also be used in different hardening versions. Detailed information on this can be found under "application instructions" in this technical information.

#### >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	280 - 320

#### >Finishing

Finishing	Coat with products from the same series after drying and lacquer sanding.
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#### >Times

Usage time	8 h / 20 °C
Pot life	3 d / 20 °C
Drying	2 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			
Spraying robot			

#### >Processing instructions

Hardening the lacquer/hardener mixture (by volume) at 5 : 1 with PU Hardener DR 4070 or 10 : 1 with PU Hardener DR 4071 is advisable for coating critical substrates or to optimise chemical and mechanical resistance. Hardening the lacquer / hardener mixture (by volume) at 5 : 1 with PU Hardener DR 4076-0001 after prior mixing of 5 % Glass lacquer additive EL 460-0025 to the lacquer components also enables direct coating on glass. The glass surface to be lacquered should be cleaned properly beforehand using Cleaning thinner ZD 101.

## Technical information

### Hesse UNA-PUR DE 4259x(gloss level)

Mixing ratio (by volume): 10 : 1 PU Hardener DR 4070

#### >Technical data

Proportion of renewable raw materials %	0.2 - 0.5
Flow time (+/- 15 %)	30 s / DIN 53211 - 4 mm
Appearance	colourless
Density series kg/l	0.919 - 0.932
Yield per coat	6 - 9 m <sup>2</sup> /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 %	23 - 25
VOC EU %	75 %
VOC FR	A+
Storage temperature	16 - 25 °C
Shelf life in weeks	52
Working temperature	20 °C
Number of coats (max)	3
Amount per layer (minimum)	100 g/m <sup>2</sup>
Amount per layer (max)	150 g/m <sup>2</sup>
Total application volume	450 g/m <sup>2</sup>
Mixing ratio (by volume)	10 : 1 PU Hardener DR 4070
Mixing ratio (gravimetric)	100 : 10 PU Hardener DR 4070

#### >Ordering information

Order number	Gloss level 60° (Gloss)	Gloss level	Container Size
DE 42590	0 - 3	dull matt	1 l, 5 l, 25 l
DE 42592	8 - 12	matt	1 l, 5 l, 25 l
DE 42594	18 - 23	silk matt	1 l, 5 l, 25 l
DE 42596	30 - 39	satin gloss	5 l, 25 l
DE 42597	40 - 59	satin gloss	1 l, 5 l, 25 l
DE 42599	≥ 90	high gloss	5 l, 25 l

#### >Hardeners

Order number	Product description	Container Size
DR 4070	PU Hardener	0.1 l, 0.5 l, 1 l, 2.5 l, 5 l, 15 l

#### >Thinners

Order number	Product description	Container Size
DV 4900	PU Thinner	1 l, 5 l, 15 l, 25 l
DV 4994	PU Thinner	1 l, 5 l, 15 l, 25 l

#### >Retarder

Order number	Product description	Container Size
DV 4909	PU Retarder	1 l, 5 l, 25 l

#### >Equipment cleaner

Order number	Product description	Container Size
RV 1	Cleaning thinner	5 l, 15 l, 25 l
DV 4916	PUR THINNER	1 l, 5 l, 15 l, 25 l

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#### >Cleaning agent and care product

Order number	Product description	Container Size
GR 1900	Cleaning agent	1 l, 2.5 l, 3 l, 25 l

#### >Particular instructions

This product can only be combined with other approved and technically suitable products when used as a flame-retardant coating for seagoing vessels in accordance with SOLAS 74/88 Regulations II-2/3, II-2/5 and II-2/6, in the latest version, 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 is 150 g/m<sup>2</sup>. **The dull matt configuration of DE 42590 and the extra matt formulation of DE 42590-0007 (please observe the separate technical information) may not be used as a multicoat lacquer, but only as a 1-coat finish!** Hesse UNA-PUR DE 4259x(gloss level) is ideally suited as a finishing coat on Hesse UNA-COLOR DB 4524x(gloss level)-(colour tone) and provides outstanding metal-marking resistance. Hesse UNA-COLOR DB 4524x(gloss level)-(colour tone) can be used to tint Hesse UNA-PUR DE 4259x(gloss level). Pre-priming is possible depending on surface requirements and substrate, for instance using Hesse Basecoats DG 4741, DG 4734, DG 4717-0004, DG 4768-0004 and DG 4763. **"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

Pharmacy fit-out in natural rosewood, satin gloss, open-pored

Wood sanding: 150 - 180 grit (dust removal)

Basecoat: 1 x 100 - 150 g/m<sup>2</sup> / 20 °C room temperature UNA-PUR DE 42597, mixing ratio (by volume) 10 : 1 with PU Hardener DR 4070 and the addition of 10 % Thinner DV 4900 to the lacquer/hardener mixture

Intermediate drying: 2 h / 20 °C.

Lacquer sanding: 280 - 320 grit (dust removal)

Top coat: 1 x 100 - 150 g/m<sup>2</sup> / 20 °C room temperature UNA-PUR DE 42597, mixing ratio (by volume) 10 : 1 with PU Hardener DR 4070 and the addition of 10 % Thinner DV 4900 to the lacquer/hardener mixture


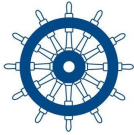
Packable: after at least 16 h / 20 °C

#### >General information

PU lacquers should not be used and dried at product and room temperatures below 18 °C and below 40 % RH, ideal values: 20 -25 °C, 50 - 65 % RH. Deviations lead to problems with drying or, as may apply, hardening. 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. Mixed residues from the previous day must only be used as a 10 - 20 % aggregate in a fresh lacquer/hardener mixture. Old lacquer/hardener mixtures impair the surface quality (adhesion/stability). Freshly bleached woods must be dried for at least 48 h / 20 °C before being coated with PU lacquers. 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





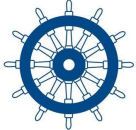

Test standard / basis	Testing laboratory	Mark	Report	No.
flame-retardant according to French standard; M1	CSTB		Test no.	RA21-0026
EC type examination certificate (module B); coating agent for seagoing vessels according to IMO Resolution MSC.307(88)-(FTP-Code 2010).	Trade association transport and traffic; Ship Safety Division, Hamburg		Approval No. U.S. Coast Guard Approval No.	116.324-02 116.112/ EC0736/ 116.324-02

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Test standard / basis	Testing laboratory	Mark	Report	No.
Saliva and sweat resistance according to DIN 53160 Parts 1 and 2: no discolouration (Level 5)	HESSE			
DIN 68861-Part 1B (Furniture surfaces; Behaviour under chemical demands)	HESSE			
Flame retardant to B1 according to DIN 4102; on suitable substrates.	MPA-Stuttgart		Test certificate no. certificate of compliance	P-BWU03-I-16.5.75 ÜZ-BWU03-I 16.2.828
French VOC classification according to directive 2011-321				
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 Approval No.	116.487 164.112/ EC0736/116.487 (DE 42590)
Toy safety DIN EN 71-3 (2014-12)	Hesse			

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](http://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. Safety data sheet is provided in accordance with EC regulation no. 1907/2006.