

## Technical information

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

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



#### Product description

DE 4259x(gloss level) is a 100 % light fast and transparent acrylate-based 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 "Processing instructions" in this technical information.

#### Area of application

- Glass
- Internal fit-out
- Kitchen and bathroom
- Furniture
- Special applications

#### Substrate material

- Dark, fine pored hardwood
- dark deciduous woods with coarse pores
- bleached
- light deciduous woods with fine pores
- light deciduous woods with coarse pores
- Engineered veneer/fineline
- Conifers

#### Surface Preparation

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

|                                |                                                                                               |
|--------------------------------|-----------------------------------------------------------------------------------------------|
| <b>Substrate sanding grits</b> |  150 - 180 |
|--------------------------------|-----------------------------------------------------------------------------------------------|

|                             |                                                                                               |
|-----------------------------|-----------------------------------------------------------------------------------------------|
| <b>Lacquer sanding grit</b> |  280 - 320 |
|-----------------------------|-----------------------------------------------------------------------------------------------|

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## Application

| Application                              |                                                                                   | Spray nozzle size | Spray pressure | Atomizing pressure |
|------------------------------------------|-----------------------------------------------------------------------------------|-------------------|----------------|--------------------|
| 2C line                                  |                                                                                   |                   |                |                    |
| Airless                                  |  | 0,23 - 0,28 mm    |                |                    |
| 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                      |  |                   |                |                    |
| Spraying robot                           |  |                   |                |                    |

## Times

|                 |                                                                                     |              |
|-----------------|-------------------------------------------------------------------------------------|--------------|
| Pot life        |  | 3 d / 20 °C  |
| Drying          |  | 2 h / 20 °C  |
| Stackable after |  | 16 h / 20 °C |
| Complete drying |  | 7 d / 20 °C  |

## Finishing

|           |                                                                           |
|-----------|---------------------------------------------------------------------------|
| Finishing | Coat with products from the same series after drying and lacquer sanding. |
|-----------|---------------------------------------------------------------------------|

## 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.

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#### 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 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 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."

#### Technical data

|                                     |                                                                                                                   |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Flow time (+/- 15%)                 |  30 s / DIN4                     |
| Proportion of renewable raw materi- |  0.324 %                         |
| Non-volatile proportion             |  23 - 25.2 %                     |
| VOC FR                              | A+                                                                                                                |
| conditions of transport             |  frost-free - up to max. 35 °C |
| Shelf life in weeks                 |  52                            |
| Storage temperature                 |  16 - 40 °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            |  MAX 450 g/m <sup>2</sup>      |
| Mixing ratio (by volume)            |  10 : 1 PU Hardener DR 4070    |
| Mixing information (gravimetric)    |  100 : 10 PU Hardener DR 4070  |

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## Particular properties / testing standards

| Sign                                                                              | Product standard / basis                                                                      | Sign                                                                              | Product standard / basis                                                                           |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
|  | Flame retardancy class M1 according to French regulation                                      |  | Flame retardant to B1 according to DIN 4102; on suitable substrates.                               |
|  | Saliva and sweat resistance according to DIN 53160 Parts 1 and 2: no discolouration (Level 5) |  | Toy safety as per DIN EN 71-3                                                                      |
|  | DIN 68861-Part 1B (Furniture surfaces; Behaviour under chemical demands)                      |  | Quality Assurance System Certificate (Module D); Directive 2014/90/EU (Marine Equipment Directive) |

## 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

## Ordering information

| Order number | Gloss level 60° (Gloss +/-5) | Gloss level |
|--------------|------------------------------|-------------|
| DE 42590     |                              | dull matt   |
| DE 42592     | 10                           | matt        |
| DE 42594     | 20                           | silk matt   |
| DE 42596     | 30                           | satin gloss |
| DE 42597     | 40                           | satin gloss |
| DE 42599     |                              | high gloss  |

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## Accessories

|                          | Order number | Product description |
|--------------------------|--------------|---------------------|
| <b>hardeners</b>         | DR 4070      | PU Hardener         |
| <b>Thinners</b>          | DV 4900      | PU Thinner          |
|                          | DV 4994      | PU Thinner          |
| <b>Retarder</b>          | DV 4909      | PU Retarder         |
| <b>Equipment cleaner</b> | RV 1         | Cleaning thinner    |

## General instructions on workmanship

PU lacquers should not be applied or dried at material and room temperatures below 18 °C and 40 % RH, ideal values: 20 - 25 °C and 50 - 65 % RH. Deviations lead to problems with drying and/or curing. To avoid adhesion problems, please gently sand back 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 wood must be allowed at least 48 h intermediate drying / 20 °C before recoating with PU lacquers. The final hardness of the coating is achieved after one week in correct storage conditions (at least 20 °C room temperature). Please conduct a sample coating 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](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. Material safety data sheet is provided in accordance with EC regulation no. 1907/2006.

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