

## Technical information

# Hesse MEGA-PUR DE 4503x(gloss level)

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

## Product description

DE 4503x(gloss level) is a 100 % light fast and transparent acrylate-based multi-coat lacquer. Its uncomplicated application on three-dimensional components makes DE 4503x(gloss level) eminently suitable as a multi-coat lacquer on all customary woods and in parallel as an excellent finishing lacquer on Hesse PU colour lacquers. Its good body and elegant looks mean that DE 4503x(gloss level) can be used on bleached woods as required.

## Areas of application

DE 4503x(gloss level) can be used for shopfitting and on all interior fixtures and fittings, including in kitchens and bathrooms and the fitting out of ship interiors. In parallel DE 4503x(gloss level) can also be used in different hardening versions. Detailed information on this can be found under "application instructions" in this technical information.

## 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
- 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.

**Substrate sanding grits**  150 - 180

**Lacquer sanding grit**  280 - 320



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## 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				
Spraying robot				

## Times

Pot life		16 h / 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

DE 4503x(gloss level) can as necessary be mixed at a mixing ratio (by volume) of 5 : 1 with DR 4070 and at a mixing ratio (by volume) of 160;10 : 1 with DR 4071 to optimise chemical and mechanical resistance.

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### Particular instructions

MEGA-PUR has been tested according to the standard test procedure of the American Society for Testing and Materials ASTM D7027-20 to determine its scratch resistance. The tested sample of DE 45030 did not show any scratches at a load of 400 g. The tested sample of DE 45034 did not show any scratches at a load of 700 g. In addition, DE 4503x(gloss level) was tested according to the standard test method ASTM D2794-93 to determine the effects of rapid deformation by impact. Detailed results can be found in the test report.

This product can only be combined with other approved and technically suitable products when being used as coating material with low flame-spread characteristics complying 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 wet application amount when used as a low-flammable coating for seagoing vessels is 240 g/m<sup>2</sup>. When used as a flame retardant coating on interior fittings according to ASTM E84-16, this product may only be combined and processed as described in the test certificate from Thomas Bell-Wright. Do not use the extra matt configuration of DE 45030 as a multicoat lacquer, but only as a 1-coat finish on top of the next highest gloss levels in the series or on a matching basecoat! Pre-priming is possible depending on the desired surface and substrate, e.g. using Hesse Basecoats DG 4720-0001, DG 4741-0001, DG 4734, DG 4717-0004, DG 4768-0004, DG 4768-0009 and OPTI-BASE DG 4750.

Multicoat lacquer DE 4503x(gloss level) is suitable for finishing on Hesse UNA-COLOR and FANTASTIC-COLOR and its transparent finish provides excellent ring-resistance. This operation can also be used in parallel to individually determine the gloss level of the colour lacquer applied. The stipulated test certificates relate exclusively to a mixing ratio (by volume) of 10 : 1 with PU Hardener DR 4070. **"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%)		29 s / DIN4
Proportion of renewable raw materi-		0 %
Non-volatile proportion		21.9 - 25 %
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		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
	Quality Assurance System Certificate (Module D); Directive 2014/90/EU (Marine Equipment Directive)
	PVC-resistant
	Flame retardant to B1 according to DIN 4102; on suitable substrates.
	Formulation is free of: wood preservatives, toxic heavy metals, phthalate plasticizers, formaldehyde, CMR substances in Categories 1A + 1B and volatile aromatic and halogenated organic compounds.
	Saliva and sweat resistance according to DIN 53160 Parts 1 and 2: no discolouration (Level 5)
	DIN 68861-Part 1B (Furniture surfaces; Behaviour under chemical demands)
	Classification of fire behaviour under DIN EN 13501-1 on validated substrate materials
	Flame retardant to Class A under ASTM E84-16
	Toy safety as per DIN EN 71-3
	Toy safety as per DIN EN 71-3
	Scratch resistant according to ASTM D7027-20.
	Determination of impact resistance according to ASTM D2794-93.

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## Sample process

### Interior restaurant fit-out in natural beech, silk matt, execution as per DIN 4102 B1

Wood sanding: 120 - 180 grit (dust removal)

Basecoat: 1 x 100 - 150 g/m<sup>2</sup> MEGA-PUR DE 45034 / 20 °C room temperature, mixing ratio (by volume) 10 : 1 with PU Hardener DR 4070 and the addition of 10 % Thinner DV 4994 in relation to the lacquer/hardener mixture

Intermediate drying: at least 2 h / 20 °C

Lacquer sanding: 280 - 320 grit (dust removal)

Top coat: 1 x 100 - 150 g/m<sup>2</sup> MEGA-PUR DE 45034 / 20 °C room temperature, mixing ratio (by volume) 10 : 1 with PU Hardener DR 4070 and the addition of 10 % Thinner DV 4994 in relation to the lacquer/hardener mixture

Packable: after at least 16 h / 20 °C

## Ordering information

Order number	Colour tone	Gloss level 60° (Gloss +/-5)	Gloss level
DE 45030			dull matt
DE 45032		10	matt
DE 45034		20	silk matt
DE 45036		30	satin gloss
DE 45037		40	satin gloss

## Accessories

	Order number	Product description
hardeners	DR 4070	PU Hardener
Thinners	DV 4900	PU Thinner
	DV 4994	PU Thinner
Retarder	DV 4909	PU Retarder
Equipment cleaner	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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