

Technical information

Hesse FANTASTIC-CLEAR DE 4877x(gloss level)

Mixing ratio (by volume): 10 : 1 PU Hardener DR 4071

Product description

FANTASTIC-CLEAR is a light fast, transparent and scratch-resistant acrylate-based multicoat lacquer. Its wide variety of application options and uncomplicated processing mean that FANTASTIC-CLEAR is superb as a multicoat lacquer on all common types of wood and in parallel as an excellent finishing lacquer on FANTASTIC-COLOR. Its excellent adhesion properties mean that FANTASTIC-CLEAR can also be used on bleached woods. Its good adhesion on vertical surfaces significantly reduces the risk of runs.

Areas of application

FANTASTIC-CLEAR can be used in all areas of interior design and shopfitting, including in kitchens and bathrooms. Hardening can be adapted to be object- or process-oriented. Detailed information can be found under "Application hints" in this Technical Information. FANTASTIC-CLEAR is ideally matched as a top coat to complement FANTASTIC-FILL and FANTASTIC-COLOR in a complete colour coating.

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
- Engineered veneer/fineline
- Conifers



Surface Preparation

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

Substrate sanding grits  150 - 400

Lacquer sanding grit  280 - 400

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	
other spraying methods			
Wiping with a cloth			

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Times

Pot life	 3 d / 20 °C
Usage time	 8 h / 20 °C
Drying	 3 h / 20 °C
Stackable after	 16 h / 20 °C
Complete drying	 7 d / 20 °C

Finishing

Finishing After sufficient drying and immediately after interim sanding with lacquer from the same product range.

Processing instructions

FANTASTIC-CLEAR can optionally be applied in a mixing ratio (by volume) of 5 : 1 with PU Hardener DR 4070. FANTASTIC-CLEAR dries to be slightly more glossy in this hardening. A more matt gloss level should be selected as necessary.

Hardening using PU Hardener DR 4076-0001 in a mixing ratio (by volume) of 5 : 1, after adding 5 % Glass lacquer additive EL 460-0025 to the lacquer components, enables direct coating on glass. The glass surface to be coated must first be properly cleaned using Cleaning thinner ZD 101.

This product must only be combined with other approved and technically suitable products when 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 using this product as a flame retardant coating material for seagoing vessels is 240 g/m². This product is only suitable as a flame retardant coating for seagoing vessels when the default hardening is used, not the optional hardenings!

Particular instructions

FANTASTIC-CLEAR DE 4877x(gloss level) should not be mixed with the FANTASTIC-CLEAR ULTRAMATT DE 48770-0 range! Mixing these two lacquer systems may result in incompatibility reactions or alterations in the respective product properties. Colour lacquers UNA-COLOR DB 4524x(gloss level)-(colour tone) and FANTASTIC-COLOR DB 4888x(gloss level)-(colour tone) can be used as glazing lacquers to tint FANTASTIC-CLEAR DE 4877x(gloss level) (maximum addition 1.5 %). Depending on the substrate material and desired surface, the following Basecoats can be used in combination with FANTASTIC-CLEAR: DG 434 / DG 4734, DG 417 / DG 4717-0005, DG 468-1 / DG 4768-0011 and DG 4750.

FANTASTIC-CLEAR has been tested according to the standard test procedure of the American Society for Testing and Materials to determine its scratch resistance. The tested sample of DE 48770 did not show any scratches at a load of 700 g.

"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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Flow time (+/- 15%)		30 s / DIN4
Yield per coat		6 - 9 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-		0.324 %
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 ²
Amount per layer (max)		150 g/m ²
Total application volume		450 g/m ²
Mixing ratio (by volume)		10 : 1 PU Hardener DR 4071
Mixing information (gravimetric)		100 : 11 PU Hardener DR 4071








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Particular properties / testing standards

Sign	Product standard / basis
	DIN 68861-Part 1B (Furniture surfaces; Behaviour under chemical demands)
	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
	Classification of fire behaviour under DIN EN 13501-1 on validated substrate materials
	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.
	Quality Assurance System Certificate (Module D); Directive 2014/90/EU (Marine Equipment Directive)
	Scratch resistant according to ASTM D7027-20.

Sample process

Natural beech heartwood sideboard for a conference room, matt

Wood sanding: 150 - 180 grit (dust removal)

Basecoat: 1 x 100 - 150 g/m² FANTASTIC-CLEAR DE 48772 at 20 °C room temperature, mixing ratio (by volume) 10 : 1 with PU Hardener DR 4071 and addition of 10 - 20 % Thinner DV 4900 to the lacquer/hardener mixture

Intermediate drying: 2.5 h / 20 °C

Lacquer sanding: 280 - 320 grit (dust removal)

Top coat: 1 x 100 - 150 g/m² FANTASTIC-CLEAR DE 48772 at 20 °C room temperature, mixing ratio (by volume) 10 : 1 with PU Hardener DR 4071 and addition of 10 - 20 % Thinner DV 4900 to the lacquer/hardener mixture

Packable: after at least 16 h / 20 °C

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Ordering information

Order number	Colour tone	Gloss level 60° (Gloss +/-5)	Gloss level
DE 48770			dull matt
DE 48772		10	matt
DE 48774		20	silk matt
DE 48777		40	satin gloss

Accessories

	Order number	Product description
hardeners	DR 4071	PU Hardener
Thinners	DV 4900	PU Thinner
	DV 4935	PU Special thinner
Retarder	DV 4909	PU Retarder
Equipment cleaner	RV 1	Cleaning thinner

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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