

Technical information

Hesse PERFECT-TOP HDE 5400x(gloss level)

Mixing ratio (by volume): 10 : 1 HYDRO Hardener HDR 5091

Product description

Two-component HYDRO-PU Acrylate multicoat lacquer system with outstanding mechanical and chemical resistance. Excellent accentuation and brilliance, combined with good cream and hand perspiration resistance, establish this system as a top quality surface protection for all interior fittings. The special formulation of this lacquer also makes it suitable for coating wooden staircases to be creak-free. This lacquer is certified to IMO (flame retardant coating for seagoing vessels) and is therefore suitable for the interior fittings on ships. It is free from methylpyrrolidone and phthalate plasticizers and thus also suitable for coating children's toys. Also certified for flame retardancy under DIN EN 13501-1.

Areas of application

In the entire interior, including kitchen and bathroom, as well as for painting the interior of ships. Also suitable for coating content-rich woods (e.g. ash, oak, pine, etc.), as well as stairs and handrails. Can also be used for finishing suitable colour lacquer surfaces and on (sufficiently dried) bleached surfaces.

Area of application

- Internal fit-out
- Kitchen and bathroom
- Furniture
- The fitting out of ship interiors
- Special applications
- Doors
- Stairs




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
- MDF
- suitably pre-primed



Surface Preparation

Surface preparation

Clean, dry wood, free of oil, grease, wax and silicones. Sanded as prescribed and free from sanding dust.

Substrate sanding grits		120 - 220
Lacquer sanding grit		280 - 320
Comments on sanding		The quality and uniformity of the wood / substrate and of the lacquer sanding are crucial to the final surface finish. After sanding, remove dust as prescribed.

Application

Application		Spray nozzle size	Spray pressure	Atomizing pressure
Airless		0,23 - 0,38 mm	100 - 120 bar	
Airmix		0,23 - 0,38 mm	60 - 100 bar	1,5 - 2,5 bar
Compressed air spraying		1,5 - 2 mm	2,5 - 4 bar	





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Times

Usage time	 2 h / 20 °C
Drying	 4 h / 20 °C
Stackable after	 16 h / 20 °C
Complete drying	 24 d / 20 °C

Processing instructions

Once the hardener is well worked in, adjust the spray viscosity with up to 5 % water. The hardener must always be added before thinning with water! Never store product mixed with hardening agent in closed containers. Recoatability: with itself following proper sanding. Clean tools with water. For removal of dried lacquer residues use Hesse HYDRO Cleaning agent HV 6917. In case of combined coatings (HYDRO- and solvent based lacquers) rinse application tools with Hesse HYDRO Reversing agent HV 6904.

Particular instructions

Our PERFECT-TOP can be used with up to 10 % PERFECT-COLOR HDB 5434x(gloss level) for finishing suitable colour lacquer surfaces.

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 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 using this product as a flame retardant coating material for seagoing vessels is 240 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."

Non-slip factor R10 as per DIN 51130 is achieved by adding 10 % Hesse Additive HZ 75 to the final coat of lacquer.















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Flow time (+/- 15%)		40 s / DIN4
Yield per coat		8 - 13 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 %
Non-volatile proportion		32.8 - 36.6 %
VOC FR		C
conditions of transport		10 - 30 °C
Shelf life in weeks		26
Storage temperature		10 - 30 °C
Working Temperature Range		18 - 22 °C
Number of coats (max)		2
Amount per layer (minimum)		80 g/m ²
Amount per layer (max)		130 g/m ²
Total application volume		260 g/m ²
Mixing ratio (by volume)		10 : 1 HYDRO Hardener HDR 5091
Mixing information (gravimetric)		100 : 10 HYDRO Hardener HDR 5091












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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)
	Product meets the requirements of solvent based paints and coatings regulation - ChemVOCFarbV (German ordinance on solvent-based paints and varnishes) - according to the national implementation of 2004/42/EG ("Deco-paint Directive").
	DIN 68861-Part 1B (Furniture surfaces; Behaviour under chemical demands)
	PVC-resistant
	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
	Non-slip class R10 per DIN 51130
	Green Building - Applicable Standard Specification: 2010 Dubai Green Building Regulations and Specifications (GBRS) Applicable Specific Rules: RD-DP21-2180-(IC) Specific Rules for Certification of Paints and Coating through Factory Assessment as per the 2010 Dubai Green Building Regulations and Specifications.
	Construction book registered
	The DGNB criteria of quality level 3 for coatings on non-mineral substrates are met.

Sample process

Wood sanding: graduated from 120 - 180 grit with subsequent dust removal.

Coating: 2 x 100 - 120 g/m² Hesse PERFECT-TOP HDE 54004, mixing ratio (by volume) 10 : 1 with 2C HYDRO Hardener HDR 5091. Intermediate drying: at least 4 h / 20° C room temperature with adequate air circulation.

Lacquer sanding: smoothed using 320 grit with subsequent dust removal.

Packable: after drying for at least 16 h / 20 °C room temperature with adequate air circulation.

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Ordering information

Order number	Colour tone	Gloss level 60° (Gloss +/-5)	Gloss level
HDE 54000		3	dull matt
HDE 54002		5	matt
HDE 54004		15	silk matt

Accessories

	Order number	Product description
hardeners	HDR 5091	HYDRO Hardener
Equipment cleaner	HV 6904	HYDRO Reversing agent
	HV 6917	HYDRO Cleaning agent
	Water	

General instructions on workmanship

When working with HYDRO materials, parts that come into contact with the material must be made from stainless steel. The moisture content should be between 8 - 12 %. Do not apply or dry HYDRO lacquers at material or room temperatures below 18 °C. The ideal humidity for application lies between 55 and 65 %. During the lacquering process, a humidity level that is too low leads to surface defects (such as shrink cracks, etc.). Excessive humidity during the drying phase may drastically lengthen the drying time! In order to avoid adhesion problems, please sand the lacquered surfaces freshly before coating and apply lacquer to the sanded surfaces as soon as possible. When applied to foils, etc., please use a sample coating on the respective substrate to check the adhesion! The ideal complete hardening of lacquered surfaces that have been flashed off is reached at temperatures over 20 °C up to no more than 40 °C. Adequate, draft-free air exchange must be assured. The complete hardening of the lacquer will be reached after one week of proper storage (at least 20 °C room temperature). Woods containing large amounts of natural oils, such as teak, can negatively influence adhesion under certain circumstances. Water-soluble wood ingredients such as those in ash and tannins in woods such as oak may cause colour changes and discolourations in the coating. We recommend that you always conduct a sample lacquering to evaluate the colour effect, adhesion and drying process 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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