Technical information

Hesse PERFECT-NATURA bright HDE 54510

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

Hesse Lignal
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Product description

The light fast PERFECT-NATURA bright can be used to achieve an open-pored, dull matt, scratch resistant and mechanically resilient surface with the natural look of wood. This topcoat is particularly interesting for sustainable objects, as it contains 11% renewable raw materials. Due to its pronounced brightening properties, PERFECT-NATURA bright is particularly suitable for use on light-colored wood types.

Areas of application

In the complete field of interior fittings for living areas as a natural wood effect; mainly on light-colored woods. Can also be used for stairs, Handrails and bleached Surfaces.

Area of application

- Internal fit-out
- Furniture
- Special applications
- Doors
- Stairs

Substrate material

- light deciduous woods with fine pores
- light deciduous woods with coarse pores
- Conifers

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
2C line			
Airless	0.23 - 0.38 mm		
Airless low pressure			
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

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

Finishing

Finishing

After suitable drying can be recoated with the same product.

PERFECT-NATURA bright can if required be top coated after sufficient drying and without intermediate sanding using PERFECT-TOP HDE 5400x(gloss level).
This enables you to influence the gloss level and improve surface resistance.
Finishing with PERFECT-TOP enables DIN 68861 1B to be met. This may though alter the natural wood effect.
So please check the result beforehand by conducting a trial coating under practical conditions.

Processing instructions

PERFECT-NATURA bright can be applied as a top coat, i.e. as a primer and as a top coat. **Depending on the type of wood, the use of PERFECT-NATURA-BASE HDG 5410 is recommended to minimize wood discoloration.** Add the hardener in a slow stream while stirring. If necessary, adjust the spray viscosity by adding water. Maximum addition rate 5 %. Hardener must always be added before thinning! Do not store material mixed with hardener in closed packaging. Overcoatability: possible with itself or suitable clear materials. Clean work tools with water. Use Hesse HYDRO Cleaner HV 6917 to remove dried lacquer residues. For combined work (water-based and solvent-based lacquers), rinse application equipment with Hesse HYDRO Rewetting agent HV 6904.

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Particular instructions

Stir the lacquer material well! The product can be used on surfaces that have been bleached with hydrogen peroxide and thoroughly dried.

We recommend using PERFECT-NATURA-BASE HDG 5410 in association with PERFECT-NATURA bright HDG 54510 (adding at most 5 % water) on tannin-rich woods with coarse pores, such as oak, to minimise wood discoloration and ensure effective pore wetting. Complete pore wetting substantially reduces the risk of impurities in the wood pores and facilitates surface care. The lightening effect is significantly dependent on the type of wood and its quality. Please therefore conduct a trial coating on the original bare wood in advance to check the result.

Caution! Avoid sanding through the basecoat. There is a risk of blotching.

This product is only permitted to be combined with other approved and technically suitable products if it is to be used as a low-flammable coating for seagoing vessels in accordance with SOLAS 74 Reg. II-2/3, II-2/5, II-2/6 and X/3, latest version, 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 this product is used as a low-flammable coating for seagoing vessels is 160 g/m².
"A risk assessment has been conducted in accordance with Directive 2014/90/EU, Annex II, Section 3. The hardened and dried coating poses neither a physical or health hazard nor a hazard to the environment."

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Technical data

Flow time (+/- 15%)	50 s / DIN4
Yield per coat	10 - 13 m²/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.
Giscode	W3/DD+
Proportion of renewable raw materi-	11.35 %
NfA	29.8 %
VOC EU	5.2 %
VOC FR	A+
conditions of transport	10 - 30 °C
Shelf life in weeks	52
Storage temperature	10 - 30 °C
Working Temperature Range	18 - 22 °C
Number of coats (max)	2
Amount per layer (minimum)	80 g/m²
Amount per layer (max)	120 g/m²
Total application volume	240 g/m²
Mixing ratio (by volume)	10 : 1 HYDRO Hardener HDR 5091
Mixing information (gravimetric)	100 : 11 HYDRO Hardener HDR 5091

Particular properties / testing standards

Sign	Product standard / basis
	Toy safety as per DIN EN 71-3
	German Industrial Standard 68861-Part 1B (finishes; behaviour when exposed to chemicals with the exception of coffee and red wine)
	Quality Assurance System Certificate (Module D); Directive 2014/90/EU (Marine Equipment Directive)

Sign	Product standard / basis
	Classification of fire behaviour under DIN EN 13501-1 on validated substrate materials
	The DGNB criteria for quality level 4 (VOC specifications Blue Angel RAL UZ 12a) are met. (Manufacturer's declaration available on request

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Sample process

Object furnishing, oak natural wood effect

Wood sanding at 120 - 150 grit with subsequent dedusting.
Basecoat: 1 - 2 x 80 - 120 g/m² PERFECT-NATURA-BASE HDG 5410, mixing ratio (by volume) 10 : 1 with Hardener HDR 5091.
Intermediate drying: at least 2 h / 20 °C room temperature with adequate air circulation.
Smoothing: 400 grit with subsequent dedusting.
Top coat: 1 x 100 - 120 g/m² Hesse PERFECT-NATURA bright HDE 54510, mixing ratio (by volume) 10 : 1 with Hardener HDR 5091
Packable: after at least 16 h / 20 °C room temperature with sufficient air circulation.

Ordering information

Order number	Gloss level 60° (Gloss +/-5)	Gloss level
HDE 54510	2	dull matt

Accessories

	Order number	Product description
hardeners	HDR 5091	HYDRO Hardener
Retarder	HZ 5-56	HYDRO Retarder
Equipment cleaner	HV 6904	HYDRO Reversing agent
	HV 6917	HYDRO Cleaning agent

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 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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