

## Technical information

# Hesse PERFECT-NATURA HDE 54500

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

## Product description

The light fastness PERFECT-NATURA HDE 54500 can be used to create open-pored, dull matt, scratch resistant and mechanically durable natural wood effects. The 11% renewable raw material content makes this coating material particularly interesting for sustainable objects. Due to its balanced brightening properties, it can be used on both light and dark furniture woods. The natural character, the feel of the wood and the wood color remain almost unchanged. This makes it the ideal alternative to solvent-based natural wood effect varnishes.

## Areas of application

For all interior fittings in living areas, with a natural wood effect; predominantly on light woods. Also for stairs and handrails. Can also be used on bleached surfaces (that are adequately dry).

## Area of application

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

## Substrate material

- Dark, fine pored hardwood
- dark deciduous woods with coarse pores
- 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
<b>2C line</b>				
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

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After suitable drying can be recoated with the same product.

If required, the PERFECT-NATURA bright can be top coated with PERFECT-TOP HDE 5400x(GG) after sufficient drying, without Intermediate sanding.

This can influence the gloss level and improve the resistance of the surface.

Finishing with PERFECT-TOP complies with German Industrial Standard 68861 1B.

However, this can change the natural wood effect.

Therefore, please check the result in advance by applying a test coating under practical conditions.

## Processing instructions

Add hardener slowly whilst stirring. Adjust the spray viscosity with water if required. Maximum additive volume 5 %. The hardener must always be added before thinning! Never store product mixed with hardener in closed containers. Over-paintability: possible with another coat of the same product or with suitable colourless materials. 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

Stir the material well!

**To minimize wood discolouration and ensure effective pore wetting, we recommend using PERFECT-NATURA-BASE HDG 5410 in compound with PERFECT-NATURA HDG 54500 (addition of a maximum of 5% water) on wood types rich in tannins and with coarse pores, such as Oak. Complete pore wetting considerably reduces the risk of impurities in the wood pores and makes surface maintenance easier. The brightening effect is highly dependent on the type and quality of the wood. Therefore, please carry out a test coating on the original raw wood in advance and convince yourself of the result.**















Caution! Do not sand through the primer. Risk of staining.

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Flow time (+/- 15%)	 50 s / DIN4
Yield per coat	 10 - 13 m <sup>2</sup> /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-	 11.37 %
Non-volatile proportion	 29.7 %
VOC FR	C
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/m <sup>2</sup>
Amount per layer (max)	 120 g/m <sup>2</sup>
Total application volume	 240 g/m <sup>2</sup>
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	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)

## Sample process

### Object furnishing, Oak natural wood effect

Wood-sanding grain 120 - 150 with subsequent dedusting.

Primer: 1 - 2 x 80 - 120 g/m<sup>2</sup> 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 sufficient air circulation.

Smoothing: 400 grit with subsequent dedusting.

Top coat: 1 x 100 - 120 g/m<sup>2</sup> Hesse HYDRO-PU natural wood effect HDE 54500, mixing ratio (by volume) 10 : 1 with hardener HDR 5091

Packable: after at least 16 h / 20 °C room temperature and sufficient air circulation.

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## Ordering information

Order number	Gloss level 60° (Gloss +/-5)	Gloss level
HDE 54500	2	dull matt

## Accessories

	Order number	Product description
<b>hardeners</b>	HDR 5091	HYDRO Hardener
<b>Equipment cleaner</b>	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](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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