Technical information

Hesse PERFECT-NATURA-BASE HDG 5410

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

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Product description

Special clear HYDRO-PU acrylic primer for combination with PERFECT-NATURA HDE 54500 and PERFECT-NATURA bright HDE 54510. The product is preferably used on Oak and for open-pored applications. Methylpyrrolidone-free and free of phthalate plasticizers, therefore also suitable for coating children's toys.

Areas of application

Single application as a primer, preferably on woods rich in substances, in combination with PERFECT-NATURA HDE 54500 and PERFECT-NATURA bright HDE 54510. In the complete field of interior fittings to preserve the natural wood color; mainly on coarse pored woods such as ash and Oak. Can also be used for stairs and handrails as well as on bleached surfaces (sufficiently dried).

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

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 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		1,5 - 2,5 bar
Compressed air spraying	1,5 - 2 mm	2,5 - 4 bar	

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Times

Pot life	2 h / 20 °C
Usage time	2 h / 20 °C
Drying	2 h / 20 °C
Stackable after	16 h / 20 °C
Complete drying	7 d / 20 °C

Finishing

Finishing	After drying and light smoothing sanding with PERFECT-NATURA HDE 54500 and PERFECT-NATURA bright HDE 54510 or other suitable Hesse HYDRO systems.

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

Do not sand through the material!

The PERFECT-NATURA-BASE HDG 5410 primarily prevents the reaction of the HYDRO lacquer with the tannic acid of the Oak and thus the unwanted discoloration of the wood. The primer has no brightening effect. The desired natural wood effect is only achieved after finishing the dried primer with PERFECT-NATURA HDE 54500 or PERFECT-NATURA bright HDE 54510.

Overcoatability after sufficient drying and proper polish, e.g. with HDE 5400x(gloss level) or HDE 54799.

When 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, this product can only be combined with other approved and technically suitable products. The maximum wet application rate when using this product as a low-flammable coating for seagoing vessels is 100 g/m^2.

"A risk assessment has been carried out in accordance with Directive 2014/90/EU, Annex II, Section 3. The cured and dried coating does not present a physical, health or environmental hazard."

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Technical data

Flow time (+/- 15%)	40 s / DIN4
Yield per coat	9 - 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.
Proportion of renewable raw materi-	0 %
Non-volatile proportion	34.8 %
VOC FR	A+
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)	1
Amount per layer (minimum)	80 g/m²
Amount per layer (max)	120 g/m²
Total application volume	120 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
	Product meets the requirements of solvent based paints and coatings regulation - ChemVOCFarbV (German ordinance on solvent-based paints and

Sign	Product standard / basis
	Quality Assurance System Certificate (Module D); Directive 2014/90/EU (Marine Equipment Directive)

Sample process

Contract installation, oak natural wood effect.

Wood-sanding: 120 - 150 grit with subsequent dust removal.
Basecoat: 1 x 100 -120 g/m² Hesse PERFECT-NATURA-BASE HDG 5410, mixing ratio (by volume) 10 : 1 with HYDRO Hardener HDR 5091.
Drying at least 2 h / 20 °C room temperature and with adequate air circulation.
Smoothing: 400 grit with subsequent dust removal.
Top coat: 1 x 100 - 120 g/m² Hesse PERFECT-NATURA HDE 54500, mixing ratio (by volume) 10 : 1 with HYDRO Hardener HDR 5081.
Packable: after at least 16 h / 20 °C room temperature and with adequate air circulation.

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Ordering information

Order number	Gloss level 60° (Gloss +/-5)	Gloss level
HDG 5410		

Accessories

	Order number	Product description
hardeners	HDR 5091	HYDRO Hardener
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!

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