Technical information

Hesse 2C HYDRO-PU Brilliant lacquer HDE 54799

Mixing ratio (by volume): 5 : 1 HYDRO Hardener HDR 5091

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Product description

Two component HYDRO-PU acrylate lacquer with good body, water soluble, clear, high gloss and with outstanding chemical and mechanical resistance. It can be polished and buffed, PVC-resistant, cream and sweat resistant and light fast. Free from N-methylpyrrolidone and phthalate plasticisers, therefore also suitable for coating children's toys.

Areas of application

For high quality residential furniture with high-demand surfaces and all interior fittings, including those in kitchens and bathrooms. Can also be used on bleached surfaces (that are adequately dry).

Area of application

- Internal fit-out
- Kitchen and bathroom
- Furniture

Substrate material

- Dark, fine pored hardwood
- dark deciduous woods with coarse pores
- light deciduous woods with fine pores
- light deciduous woods with coarse pores
- suitably pre-primed

Surface Preparation

Surface preparation	Clean, dry wood, depending on species and application method. Perform cleaning by sanding on foil or melamine before coating.
Substrate sanding grits	320 - 600
Lacquer sanding grit	400 - 800

Application

Application	Spray nozzle size	Spray pressure	Atomizing pressure
Airless	0.23 - 0.38 mm	100 - 120 bar	
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	2 h / 20 °C
Usage time	2 h / 20 °C
Drying	16 h / 20 °C
Stackable after	3 d / 20 °C
Complete drying	7 d / 20 °C

Finishing

Finishing	After complete hardening and air conditioning, the surfaces can be sanded and polished.

Processing instructions

Work the hardener in well then use water (around 20 %) to adjust the spray viscosity to be 20 - 25" (DIN 4 mm) to prevent reaction foam.
The hardener must always be added before dilution! Never store any material mixed with hardener in closed packaging.
Only ever apply 1 layer at a maximum of 120 g/m² in one application process. Do not, as may be familiar from other high gloss systems, apply several thin layers with brief intermediate drying.
A second application can if necessary follow without intermediate sanding after the first layer of HDE 54799 has dried for 5 – 6 h / 20°C. Lacquer sanding of HDE 54799 is only ever possible after drying for > 16 h / 20°C.
We recommend graduated lacquer sanding with 400 and 600 grit. Graduated sanding up to 800 grit is advisable in the case of dark woods or colour tones.

Our HYDRO-PU Brillant lacquer HDE 54799 is suitable for finishing on PERFECT-COLOR HDB 54345-(colour tone) and on woods pre-primed with PERFECT-BASE HDE 5407.

Particular instructions

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.

"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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Technical data

Flow time (+/- 15%)	45 s / DIN4
Yield per coat	7 - 10 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-	5.931 %
NfA	39.4 %
VOC EU	4.11 %
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)	3
Amount per layer (minimum)	100 g/m²
Amount per layer (max)	150 g/m²
Total application volume	450 g/m²
Mixing ratio (by volume)	5 : 1 HYDRO Hardener HDR 5091
Mixing information (gravimetric)	100 : 21 HYDRO Hardener HDR 5091

Particular properties / testing standards

Sign	Product standard / basis
	Toy safety as per DIN EN 71-3
	PVC-resistant

Sign	Product standard / basis
	DIN 68861-Part 1B (Furniture surfaces; Behaviour under chemical demands)
	Product meets the requirements of solvent based paints and coatings regulation - ChemVOCFarbV (German ordinance on solvent-based paints and

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Sample process

Kitchen front, MDF (foiled) high gloss, white

Foil sanding: 320 - 400 grit
Basecoat: 1 x 130 - 150 g/m² PERFECT-FILL HDP 5650-9343, mixing ratio (by volume) 8 : 1 with HYDRO Hardener HDR 5091
Drying: at least 4 h / 20 °C, preferably 16 h / 20 °C room temperature with adequate air circulation
Filler sanding: graduated 320 – 400 grit with subsequent dedusting
Colour coating: 1x PERFECT-COLOR HDB 54345-9010, mixing ratio (by volume) 10 : 1 with 2C HYDRO Hardener HDR 5091
Drying: 16 - 24 h / 20 °C room temperature with adequate air circulation
Lacquer sanding: graduated, 400, 600 grit
High gloss coating: 1 x 100 - 120 g/m² Hesse HYDRO-PU Brillant lacquer HDE 54799, mixing ratio (by volume) 5 : 1 with 2C HYDRO Hardener HDR 5091, addition of 20 – 25 % water in relation to the lacquer/hardener mixture (processing viscosity 20 - 25" / DIN 4mm)
Intermediate drying: 5 - 6 h / 20 °C room temperature with adequate air circulation
High gloss coating: 1 x 100 - 120 g/m² Hesse HYDRO-PU Brillant lacquer HDE 54799, mixing ratio (by volume) 5 : 1 with 2C HYDRO Hardener HDR 5091, addition of 20 – 25 % water in relation to the lacquer/hardener mixture (processing viscosity 20 - 25" / DIN 4mm)
High gloss polishing can occur after drying for 48 h / 20 °C room temperature with adequate air circulation.

Ordering information

Order number	Gloss level 60° (Gloss +/-5)	Gloss level
HDE 54799	90	high gloss

Accessories

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