Technical Information

Hesse Lignal
inspiring you
Hesse GmbH & Co. KG, Warendorfer Str. 21, D 59075 Hamm
www.hesse-lignal.de

Coating: Information on handling and using hydro lacquers

1. STORAGE

- HYDRO lacquers have a flash point above 55 °C.
  Nevertheless, refer to the technical instructions.
- Store HYDRO lacquers in a frost-free environment and not below + 5 °C for extended periods.
- Opened containers are to be closed with care after use and dried residual lacquer is not to be allowed into the opened container.
- After being stored for a longer period, the lacquer container will need to be shaken or, as may apply, agitated.
- Where stored appropriately and in the original sealed containers, the material can be stored for 26 weeks. Where stored for longer periods, in particular with opened containers, it should be tested for suitability for use (e.g. a test coat).
- Leaking or pierced containers are to be dealt with using appropriate products (e.g. Antipestol) and properly disposed of. Under no circumstances let it wash away into or enter the drains (also see point 4 - Disposal).
- Particles of wood and lacquer dust must not get into the container as otherwise, among other things, the shelf life will be affected significantly.

2. TREATMENT

- Please stir or shake the container well as applicable before treating.
- The ideal treatment temperature is between approx. 18 and 20 °C room temperature. Anything significantly below this affects the end result of the lacquering process. It goes without saying that maintaining this temperature also applies to the lacquer and the item to be coated. Where the temperature falls below the above figures, the film is prevented from forming and results in a "pale look" resulting in a defective physical and chemical consistency. Water will also be able to subsequently creep through the layer of lacquer.
- The ideal humidity for treating and drying is between 55 and 65%. During the lacquering process, humidity that is too low leads to shrinkage cracks, and humidity that is too high hinders drying. In order to ensure problem-free drying, additional heating may be of use, even in summer (with increased humidity). Appropriate measuring devices are to be installed.
- HYDRO lacquers are generally processed without thinner. When treating with hydro lacquers, ensure that you use non-corrosive equipment, if possible stainless steel such as V2A or V4A, also supply pipes, suction tubes, etc. If in doubt, discuss with the equipment's manufacturer.
- Specifically with HYDRO lacquers, pay attention to the sanding and avoid too coarse a grain. Recommended grain: 120 - 150 (possibly 180) grain, water compression points.
- The humidity of the wood to be lacquered should not be below 8%, with a maximum of 12%.

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- We recommend a general quantity per order of lacquer of:
  - 80-100 g/m² for clear systems
  - 20-150 g/m² for coloured systems.
  Higher order quantities lead to rougher wood grain and longer drying times.
  Please refer to the respective technical information for product-specific information.
- The following standard values apply to spraying:
  - Compressed air spraying (cup gun) 3 - 4 bar spray pressure
  - 1.7 - 2 mm diameter jet
  - Airless spraying only for clear materials
  - 100 - 120 bar material pressure
  - 0.18 - 0.23 mm diameter jet
  - Air-assisted Airless for clear and coloured materials
  - 80 - 100 bar material pressure
  - 1 - 2 bar air pressure
  - 0.28 - 0.33 mm diameter jet
  - Please refer to the respective technical information for product-specific information.
- When working in hardening agents for 2K HYDRO lacquer, please ensure that:
  The hardening agent is well worked in, then set the spraying viscosity to up to 5% water. The hardening agent must always be added before thinning with water. Never store product mixed with hardening agent in closed containers.
- There are many ways to apply HYDRO lacquer, e.g dipping, pouring, spraying, rolling, spreading and filling.
  When pouring lacquer, the use of a fine screen is recommended (mesh size approx. 150 µ/ e.g XPS 150 or sieve bag), if possible placed before the spout.
- General drying data for Hesse 1K HYDRO lacquer, clear:
  - Temperature 20 °C - 65% relative humidity
  - Order quantity: 80 - 100 g/m²
  - Standard values:
  - dust dry 15 - 30 minutes
  - sandable 2 -3 hours
  - touch dry - 6 - 8 hours depending on type of lacquer
  - resistant overnight
  - completely resilient after approx. 5 - 7 days
- While damp, HYDRO lacquer takes on a milky/cloudy appearance, but is clear when dried. The ideal hardening of lacquered surfaces that have been flashed off is reached at temperatures over 18 °C and no more than 40 °C. Ensure a sufficient, draught-free exchange of air.
  Please refer to the respective technical information for product-specific information.
- The wood fibres swell when coated with hydro lacquers, therefore sand with particular care between coats (240 - 320 grain) to achieve the required mechanical adhesion. In order to avoid problems with bonding, please sand the lacquered surfaces before applying fresh lacquer and apply lacquer to the sanded surfaces as soon as possible.
  With mechanical sanding, use suitable belts due to the higher thermo-plasticity of the hydro surface.

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Thoroughly remove sanding dust with a duster or clean, damp cloth as remaining sanding dust is not dissolved by subsequent lacquering and may lead to surface defects.

- Never allow Hesse HYDRO lacquers to come into contact with organic solvents (thinners, rinsing agents or, as may apply, lacquer systems containing solvents). The consequences are precipitations that present themselves as mistakes in lacquering or problems with equipment (affected filters, screens, nozzles).
- Please use rinsing agent when using a HYDRO lacquer and a system containing solvent in a piece of equipment. Neither lacquer system is compatible. Use Hesse HV 6904 rinsing agent when changing from a system containing solvent to HYDRO system and vice versa. Do not use rinsing agent for cleaning or to thin HYDRO lacquers.
  Sequence to be followed:
  System containing solvent (2K-PUR lacquer, NC lacquer or other.) - solvent/thinner- rinsing agent - water - HYDRO lacquer.
  When changing from HYDRO lacquer to lacquer containing solvent, reverse the sequence.
  When changing the material, extreme care is required to prevent flocculation and clogging of the spraying equipment.
- Promptly and carefully clean equipment after use with mains water. Remove dried on lacquer residues with HV 6917 HYDRO cleaner. Clean nozzles after prolonged periods of non-use.
- When treating with HYDRO lacquers, the safety data sheets and general precautionary measures for working with lacquers are to be observed. (Suction etc.) - see BGV D25. Avoid breathing in spray vapour under any circumstance. The personal protective equipment includes a respirator mask with A2-P2 combination filter in line with DIN EN 141, 143, 371, appropriate gloves and safety goggles.
- Please refer to the respective product-specific technical information for details about working with Hesse UV lacquers.

GENERAL INFORMATION

- HYDRO lacquers can be delivered as 1K, 2K and UV hardening products in many degrees of gloss.
- HYDRO colour lacquers are available in almost every colour.
- HYDRO lacquers do not turn yellow, but they cannot prevent the wood from yellowing. Specialist lacquers with light stabilisation are also available.
- HYDRO lacquer systems have less “firing” effect than systems containing solvents, and to a large extent they leave the natural colour of the wood.
- HYDRO lacquers for use in a modern, environmentally friendly lacquering system (decorative paint guidelines).
- The physical qualities are comparable with conventional systems.
- HYDRO lacquers are free from toxic materials such as heavy metals and formaldehyde. They do not give off any fission products during and after drying.
- Due to their high solid state, HYDRO lacquers have a good filling capacity.
- Please use suitable HYDRO 2K systems for applying clear lacquer to exotic woods (rosewood, wenge, framire etc.). With white and pastel topcoats on, for example, softwoods

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(pine, hemlock, Oregon pine) we recommend initial insulation with DG 572-1 PUR insulating primer due to the types of wood.
A test coating of lacquer on the original substrate is essential.
Pay attention to any discolouration or change in shade.
Information on specialist technical matters can be found in the product-specific technical information.

DISPOSAL

- Those using HYDRO lacquers are responsible for ensuring disposal of their waste lacquer (as per the Waste Act of September 1994).
- For the sake of a clean environment, do not allow HYDRO lacquers to enter the drains.
- Special products (so-called coagulating products and specialist technical systems) are suited to the precipitation of lacquer products from waste water (thinners, spray booths) and have been tested in practice. Instructions and information about such products/devices are provided by the manufacturer. We are happy to provide addresses.
- Specialist companies can be engaged to dispose of liquid waste lacquer. We are also happy to assist you with points of contact.

Note:
This information is advisory 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.
The Material Safety Data Sheet according to the regulation (EC) No. 1907/2006 is available.