Technical Information

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

Coating: Applying lacquer to wenge

Wenge: Millettia laurentii, origin - Africa

Wenge is an expressive wood whose grain is full of contrast and is principally used as a veneer for high-quality furniture and interior furnishings.
The features of this wood such as
- mineral deposits
- deep, narrow pores
- bleaching when exposed to UV rays
- uneven distribution and direction of pores
- ingredients
- surface hardness

require special pre-treatment of the wood and coatings.

Selection and pre-treatment of the wood:
Even when selecting the veneer, check for mineral deposits (recognisable as white dots next to each other in the pores) as these deposits can only be removed with a great deal of effort. The irregularly distributed deep, narrow pores often cut through the entire thickness of the veneer, allowing the glue to rise up through the pores. To prevent the glue-filled pores from affecting the overall look of the surface, the glue should be dyed.

Wenge is not lightfast, i.e. the dark brown wood colourant fades in sunlight. Even the addition of light stabilisers is unable to prevent fading in the long term.
This must be considered with the item to be prepared, e.g. wall panelling partly facing a window.

Our recommendation:
First bleach the Wenge and then re-stain it with lightfast stain in the shade of the wood:
- bleach with HWW 224 bleaching agent with 5 % HWB 202 activator
- stain with priming stain, for example BG-70054 (natural Wenge shade) or BG 85-21657 (Wenge shade)

Coating:
In order to prevent air pockets ("silver pores") in the deep, narrow pores, ensure the pores are wetted with lacquer right up to the bottom of the pores. This requires the coating material to flow well. The extreme surface hardness and composition of the wood requires varnish with particularly good bonding and sufficient elasticity to offset stresses due to cracks in the veneer.

Our recommendations:
If possible, apply lacquer with open pores, sanding twice between each coat and then removing the dust from the pores.

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Suitable systems:

On natural Wenge (unbleached)

- PERFECT-TOP HDE 5400x(gloss level)
  mixing ratio 10 : 1 with HDR 5091
  + 10 % water
- PUR finish DE 4500x(gloss level)
  mixing ratio 10 : 1 with DR 4070
  + 10 % thinner
  or
  MULTI-PUR DE 45x(gloss level)
  mixing ratio 5 : 1 with DR 4070
  + 30 % thinner
  or
  PU Multicoat lacquer DE 4532x(gloss level)-0004
  mixing ratio 5 : 1 with DR 4070
  + 30 % thinner
- or as equalising version:
  PUR finish, lightening with light stabiliser DA 408-0
  mixing ratio 10 : 1 with DR 4070
  + 20 % thinner

On bleached and stained Wenge

- all the varnishes listed above
  as well as UNA-PUR DE 55x(gloss level)
  mixing ratio 10 : 1 with DR 4070
  + 30 % thinner
  if necessary as well as mixing ratio 5 : 1 with DR 4070
  + 30 % thinner
  or
  UNA-PUR DE 4259x(gloss level)
  mixing ratio 10 : 1 with DR 4070
  + 30 % thinner, possibly also
  mixing ratio 5 : 1 with DR 4070
  + 30 % thinner

Wenge, closed pores

Painting Wenge with closed pores is only to be advised under specific conditions in order to avoid "silver pores" (bonding problems in the pores):

- only on bleached and stained Wenge
- only with selected primers

Construction

- Selection of wood and pre-treatment, see above.

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- Bleaching and staining Wenge, see above.
- 2 x short intervals (10 - 30 minutes) without sanding in between coats, optional priming with PUR finish DE 45004
  mixing ratio 10 : 1 with DR 4070
  + 10 % thinner or
- MULTI-PUR DE 454
  mixing ratio 5 : 1 with DR 4070
  + 30 % thinner

Further composition

After drying for 16 - 48 hours and sanding with dust removed from the pores,
apply 2 - 4 x PUR Basecoat DG 468-3
mixing ratio 1 : 3 with DR 438
or
PU Basecoat DG 4760
mixing ratio 1 : 3 with DR 4038

- after drying and sanding in accordance with the instructions, paint with PU top coat, e.g. Brilliant Lacquer DU 449
  mixing ratio 2 : 1 with DR 404
  or
- PU Brilliant Lacquer DU 44099
  mixing ratio 2 : 1 with DR 4080

We recommend a test coat under practical conditions on the veneer intended to be used. In order to safeguard the composition a climatic change test can be processed.

Potential for risk:

- Painting with thixotropic, highly viscous and high-solid lacquers.
- Primers containing adhesives
- Quick-drying lacquers
- CN lacquer
- Closed pore painting
- Lacquering too dry (fogging of the lacquer)

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Note:
Please consult the latest technical information on the respective products for the special characteristics of individual varnish systems.

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.