

**2010**

**Furwa - The Expert for Lacquered Veneer Edges and Profile Wrapping Veneers**

We adapt our lacquering system to your requirements

<b>Natural Lacquer PUR</b>	(5-6x PUR coat)
Pigmented lacquered PUR	(1-3x pigment lacquer + 2-3x PUR coat)
Stained and lacquered PUR	(1x stain + 5x PUR coat)
<b>UV Lacquer, natural</b>	(2 coats of UV lacquer)
UV lacquered with pigment	(1x UV basic coat + 1x UV top pigmented)
Stained and UV lacquered	(1x stain + 2x UV lacquer)
<b>UV Top Lacquer natural</b>	(3 coats UV lacquer)
UV top with pigment	(1x UV basic coat + 1x UV pigment + 1x UV top coat)
Stained and UV top lacquering	(1x stain + 3x UV lacquer)
<b>UV Flex Lacquer, natural</b>	(1x UV flex basic coat + 1x UV top coat)
UV flex lacquer with pigment	(1x UV flex basic coat + 1x UV pigment)
Stained and UV flex lacquer	(1x Stain + 1x UV flex basic coat + 1x UV top coat)
<b>UV Flex Lacquer Top</b>	(2x UV flex basic coat + 1x UV top coat)
UV flex lacquer Top w/pigment	(1x UV flex basic coat + 1x UV pigment + 1x UV top coat)
Stained and UV flex Top lacquer	(1x Stain + 2x UV flex basic coat + 1x UV top coat)
<b>Hydro Top Lacquer, natural</b>	2x Hydro lacquer natural+1xUV flex basic coat+1xUV top coat
Hydro Top lacquer w/pigment	2x Hydro lacquer natural+1xUV flex basic coat+1xUV pigment
<b>Hydro lacquer, natural</b>	- 4-fold 4 layers water lacquer (as basic coat) - 6-fold 6 layers water lacquer
Stained + Hydro lacquer, natural	- 6-fold 1x stain + 6 layers water lacquer
Hydro lacquer with pigment	- 4-fold 1-2x water lacquer pigmented+1-2xwater lacquer natural - 6-fold 1-2x water lacquer pigmented+4-5xwater lacquer natural
<b>Hot Coating, natural</b>	1x hot coating + 1x UV natural
Hot Coating with pigment	1x hot coating + 1x UV pigmented

Lacquering of **opaque/coating varnish** (white): (SH lacquering systems, divers structure)

**Basic Coats:** Basis SH lacquer, PUR lacquer, UV lacquer and Hydro lacquer  
We match our basic coats with your top lacquer.  
Stained and pigmented basic coats are possible.

Colour setting by means of **staining**: Individual colour settings according to colour patterns are possible apart from top coats.

Users always have to execute approval tests for all lacquered and coated veneer rolls.  
Please ask us, we would be glad to assist you.

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*Apart from our previous comments, there are changes in the designation and/or the technical use of the different lacquering versions according to the progress in technique.*

On the front page you will find all lacquering versions out of which the customer may individually choose depending on his requirements and technical necessities. The advantages of lacquering systems partly overlap with the disadvantages. For softforming and profile wrapping we make a preselection depending on the profile, however, then a series of tests has to be made. In the field of softforming, the processing method with small segmental pressure pads in combination with flexible UV lacquers has proven absolutely successful. If you need further information of this method, we kindly ask you to contact us.

It is always important to submit a profile sketch in the case of softforming and profile wrapping to enable us to inform you about problems and to make a preselection.

For crack-free and fissure-free wrapping of the smallest radii (1mm) an additional lacquering system, the so-called Hot Coating, has been available since 2009.

Please find the various kinds of lacquers below in detail:

### **Natural Lacquer (PUR lacquer):**

PUR lacquering is a very inexpensive system, which is the most widely spread system nowadays because of its 15 years of use. The major advantage is that it is possible to overpaint the material with many lacquering systems without sanding it beforehand. Exception: When overpainting by means of UV lacquer an intermediate sanding process is essential. This lacquering method is mainly used for straight edges, but also for softforming and door foldings. On this basis, the colour setting can be done inexpensively apart from pigmentation also by means of staining as an integrated method.

### **UV Lacquer:**

The standard UV lacquering has a good surface quality; however, it is not very flexible. However, it is more inexpensive than the latter and is used for straight edges as the counterpart to PUR lacquerings. Disadvantage: there is only a limited period of time available for sanding the material before overpainting it. Advantage: good gloss grade settings and certainly "solvent-free".

### **UV Top Lacquer:**

In this field dull and lustreless lacquerings (5°) up to high gloss lacquerings (max 50°) are possible. UV top lacquer offers the highest standards with regard to the surface quality, however, it is not very flexible.

### **UV Flex Lacquer or UV Flex Lacquer Top (also with pigment):**

These lacquers are flexible (if "top", highly flexible) and are UV hardening systems, which have to be defined in detail with the edge user or the profile wrapper. These systems are much more flexible than all systems mentioned above, because of the use of specially highly flexible UV lacquers, and additionally they offer a correspondingly high surface quality.

These lacquers provide high flexibility coupled with a high surface quality. Radius R 5 mm and even less function without any problems; however, under the precondition of a corresponding edge structure (fleece backing and sanding thickness) and a corresponding setting of the pressure zone.

### **Hydro Top Lacquering System:**

The Hydro Top lacquering system consists of a 2-fold Hydro basic coat. Then a flexible UV basic coat and a UV top coat is applied. Thus the surface is finished. This system can be distinguished from the UV flex lacquer by its additionally improved flexibility.

The lacquering system can also be pigmented. The fact that the Hydro lacquer usually turns slightly grey or becomes slightly turbid is compensated by means of the UV top coat. Furthermore, this lacquering system has the favourable effect of achieving an improved surface stability in comparison to pure Hydro lacquering systems, even at a similar flexibility. This lacquering system is mainly used in the field of softforming and in the production of door foldings.

### **Hydro Lacquering Systems:**

Pure Hydro lacquering systems are currently the most flexible conventional lacquering systems. The flexibility increases with the number of lacquering layers applied (layer thickness). In this case, radii up to 2mm are technically possible; however, this always depends upon the machine setting and edge technique. The Hydro lacquering systems also have the advantage that they can be overpainted without any problems as a rule (without previous sanding). However, the user himself must check upon it by considering the finishing varnish used.

The disadvantage of a water lacquer surface is mainly the surface quality (reduced resistance against chemicals; becoming slightly grey or turbid).

This lacquering system is used in every field in which the pressure zone is not set perfectly, or there are not any pressure pads, or for extreme shapings ( $R < 3 \text{ mm}$ ).

### **Hot Coating:**

Hot coating is a transparent UV film which is applied by means of a slotted nozzle as hot melt adhesive is applied as well, and has to be overpainted with a UV top coat in any case. The advantage of this lacquering system is the fact that even radii with  $R = 1 \text{ mm}$  can be wrapped without cracking. This lacquering version achieves the highest abrasion resistances, and thus it is used for profiles subject to high stress, such as profiles in the field of transitional skirting boards. A disadvantage of this process is the relatively high price which is caused by the use of specially UV resistant PUR and by always achieving a closed-porous surface, which lets the veneer often appear as a foil.

### **Opaque/Coating varnish:**

In this field we use SH lacquering systems which are used to produce white coats of coating varnishes, grey coats of coating varnishes, or other colours as well. The porosity of the desired lacquering is the decisive factor for the price quotation, as depending on the design, sometimes more and sometimes less lacquer needs to be applied, and additional operating cycles are necessary. Please ask us for delivery times and minimum quantities.

### **Important Note:**

We are able to set the gloss grade of surfaces; this is quite simply done in case of UV lacquerings; however, with some other system limits are reached. We are able to match and to adjust the customer's colour requirements by adding pigments or by staining the material.

It is always important to receive corresponding boundary samples.

### **Colour Sample and Gloss Grade Sample:**

Please always mark the samples and patterns with your entire customer data (customer, sample designation, colour number, gloss grade, date).

Size preferred ~ 20 x 30 cm (DIN A4)

It would be ideal to receive three samples, as by that the permissible range is defined and limited.

- 1. Ideal Sample / Desired Colour Shade**
- 2. Boundary Sample Light**
- 3. Boundary Sample Dark**

Please note that the higher the requirements of our lacquerings are, the better the submitted samples must be. You as well as we work with wood as a raw material, thus variations in colour might be possible!

We are prepared to adapt to your demands, please define those by means of your colour samples.

Annually, we lacquer more than 500.000 sqm of veneer edges, softforming edges, reconstituted veneer edges, and profile wrapping veneers as well as thick veneer edges.

If Furwa uses the expression "overpaintability" for some kinds of lacquer, we talk about our experiences which, however, have to be checked upon by the user by making own tests. We cannot test all kinds of lacquers used in the world market, and kindly ask you to always test them yourself in every case. We are prepared to assist you and be of help to you.

Walkertshofen, March 2010  
Furwa Furnierkanten GmbH