WOOD VARNISHES & STAINS

Complete Range of Products for Refining Wood Indoors
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- Aqua FG-401 Filling Primer
- Aqua ANG-404 Intensifying Primer
- Aqua SL-414 Finish
- Aqua SL-410 Finish
- Aqua SL-415 Finish
- Aqua TL-412 Stair Varnish
- Aqua-UV SL-510 Finish
- Aqua 2DS-450-2K Diamond Seal
- Aqua 2HL-411/90 High Gloss
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<td>Aqua PF-430 Pigment Filler</td>
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### Hardener & Thinners for Water Based Varnishes

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### UV Curing Varnishes

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<th>Product</th>
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<th>Page</th>
<th>Product</th>
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<tr>
<td>95</td>
<td>Aidol Hard Wax Polish</td>
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</tbody>
</table>
WOOD VARNISHES & STAINS

Our Wood Refinement Products: NC/PUR Varnishes, Aqua Varnishes, UV Varnishes and Stains

NC/PUR Varnishes

Complete solutions for wood furniture & stairs

As a partner in the wood working trade with more than 60 years of experience, Remmers offers the carpenter and joiner trade a complete range of varnishes for wood from NC varnish for normal loads all the way to a high quality range of PUR varnishes for interior finishing.

- Just one hardener component and one thinner for all varnishes which minimises the risk of storing products past their use-by date and sources of errors.
- Very good resistance to chemicals and extremely resistant to mechanical loads.
- Non-yellowing PUR varnishes without blending with NC.
- Efficient working properties through excellent build, fast drying and excellent sanding behaviour.
- Deco Paint compliant varnish systems for wood stairs.

Aqua Varnishes

An environment-friendly system

So far, law makers have mainly concentrated on reducing the emission of solvent based varnishes that were used in large-scale operations (VOC Directive). Through the “Ordinance on Limiting VOC Emissions from Paints and Varnishes” (Deco Paint Directive), which went into effect on December 23, 2004, the percentage of volatile organic compounds (VOC) in varnishes is now limited by stipulated highest values.

The first stage, which has been in effect since 2007, included the skilled trade, regardless of the quantities they used. The second stage, which reduces VOC limit values even further, went into effect in 2010.

With this initiative, law makers want to force a change from solvent based to water based paints and varnishes. With our Aqua varnishes, users in the carpenter/joiner and interior finishing trade now have a complete programme of water based varnishes at their disposal that are true alternatives to former solvent based, 2-component interior varnishes.

UV varnishes for the wood working trade

The 100% UV varnishes are a novelty in our range of products. They are extremely suitable for efficient coating of flat, 2-dimensional elements such as interior doors, (veneered) wood based panels used for producing furniture and store/trade fair fittings, table tops, stair steps, etc. There are no drying times. After the elements have been cured by UV lamps, the surfaces are completely finished and can be packaged or used.

Oils & Waxes – natural raw materials & natural looking surfaces

Remmers also offers alternatives for conventional varnishes based on natural oils and waxes for the entire interior finishing area and for refining wood stairs.

All types of stains - highly flexible & for universal use

With the completely new, highly flexible stain concept developed by Remmers there are no limits to the shades of stain colours that you can create - thanks to the individual kit principle for solvent based stains, Aqua Compact Stains as well as Positive and Wax Stains.

With just 3 – 4 different coloured base stains that can all be intermixed and even lightened if desired, the most gradual nuances in the colour of wood stains can be produced that are especially coordinated to the species of wood used.

All of the stains (with the exception of wax stains) can be coated with Remmers NC, 2-component PUR and Aqua varnishes without any difficulties.
Since January 1, 2009 the motto is: Together we are strong – Remmers and 3H-Lacke.

The merger with 3H-Lacke – a company with enormous know-how in the field of pioneering water based and UV varnishes – is a significant milestone for Remmers, allowing us to offer our customers in trade a unique, rapidly expanding and complex product portfolio based on the latest, state-of-the-art technologies.

Through this merger Remmers has gained a modern production site with research & development, colour science and application technology, advancing to become the leading manufacturer of high quality wood refinement products in Europe.

All of Remmers customers at home and abroad profit from this:
- A complete assortment of wood varnishes and stains
- Premium quality for the entire wood working trade
- Individual service, thanks to an area wide presence of specialists all over Europe.
CRAFTSMEN AND EXPERTS BET ON REMMERS
Carpenters, Joiners and the Jury Awarded Remmers the Prize for Service

Within the scope of the international Forest and Wood Industry trade fair LIGNA in May 2009, carpenters, joiners and the jury – consisting of specialists from the branch – selected Remmers as the winner of the Service Prize tendered for the first time by the German Association of Wood and Plastics (BHKH) and the German Messe AG.

With the words “The winner is Remmers and their service is simply the best for carpenters and joiners!”, the jury selected the company from Löningen as the winner of this coveted prize. Remmers products, which are oriented to the needs of carpenters and joiners in practice, were praised as well as the professional and social engagement of Remmers employees and their excellent technical support.

Our competence:
- A sophisticated, complete assortment of wood varnishes, stains and coatings for windows
- Innovative products adapted to the needs of carpenters and joiners in practice
- Area-wide, on-site support through special representatives and application technicians
- Provision of product training courses and advanced training for employees
- Fast delivery times through central as well as decentral distribution warehouses/service centres.
If desired, Remmers offers its customers the possibility of tinting Color Varnishes on site in a highly flexible manner.

This allows us to react extremely quickly to customer wishes: The shade of colour can be immediately selected from a continuously growing formula data base and produced without delivery time.

Mixing systems are available for the following systems:

**PUR CL-240/30 Color Varnish**
- **Mixing principle:** Mixing shelf with base varnishes for manual tinting by weighing
- **Performance spectrum:**
  - Extensive data base with thousands of shades of colours in the RAL and NCS range as well as Remmers colour collections
  - EDU supported correction function
  - Very precise metering, even for small quantities
  - If desired: Variation of the degree of gloss can be achieved by adding MM-823 Matting Agent
  - Texture varnishes can also be produced by adding SM-820 Texturing Agent

**Aqua CL-440/30 Color Varnish**
- **Mixing principle:** Fully automatic, efficient metering system based on pigment pastes and base materials
- **Performance spectrum:**
  - Very precise metering
  - Production of texture varnishes by adding SM-820 Texturing Agent
  - Many other products from the Remmers product portfolio can also be tinted: stains, window coatings, facade paints, etc.
Are you interested in our tinting systems? Ask the Remmers representative near you! He’ll be glad to take care of everything else and make you an offer without any obligation!
Solvent Based, Clear Varnishes
# SOLVENT BASED, CLEAR VARNISHES

## Properties & Options for Using at a Glance

<table>
<thead>
<tr>
<th>Products</th>
<th>Options for use</th>
<th>Typical elements</th>
<th>Special properties</th>
<th>Resistance to chemicals according to DIN 68861 part 1</th>
<th>Working time</th>
</tr>
</thead>
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<tr>
<td><strong>Parquet varnishes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PL-113</td>
<td>Single component</td>
<td>Parquet laid on site and for coating stairs</td>
<td>Very good emphasis, good resistance, Deco Paint-compliant</td>
<td>clearly exceeds 1C</td>
<td>–</td>
</tr>
<tr>
<td>PUR FG-201</td>
<td>2-comp.</td>
<td>Particularly beneath matt and high gloss varnishes; interior finishing in ships</td>
<td>Lightfast, dries quickly, high transparency, DIN 4102 B1 (flame resistant), an application has been made for IMO certification</td>
<td>–</td>
<td>8 h</td>
</tr>
<tr>
<td>PUR AG-200</td>
<td>2-comp.</td>
<td>For light and bleached wood to maintain the natural character of the wood</td>
<td>Lightfast, little emphasis; does not hide the substrate</td>
<td>–</td>
<td>8 h</td>
</tr>
<tr>
<td><strong>Primers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NC SL-111</td>
<td>Single component/2-comp.</td>
<td>For wood surfaces subjected to normal loads</td>
<td>Dries very quickly, good emphasis, low cost</td>
<td>1C</td>
<td>–</td>
</tr>
<tr>
<td>Acryl VSL-115</td>
<td>2-comp.</td>
<td>All-round varnish, very economical, for open-pored varnishing; also as a topcoat on opaque (white) varnished surfaces</td>
<td>Lightfast, can be worked single component as well as 2-component, resistant to PVC plasticizers even single component, economical, very fast drying</td>
<td>single component: 1C 2-component: 1B</td>
<td>24 h</td>
</tr>
<tr>
<td>PUR SL-210</td>
<td>2-comp.</td>
<td>Finish for open-pored varnishing; also as a topcoat on opaque (white) varnished surfaces</td>
<td>Lightfast, tested according to DIN 4102 B1 (flame resistant), an application has been made for IMO certification</td>
<td>1B</td>
<td>8 h</td>
</tr>
<tr>
<td>PUR SL-214</td>
<td>2-comp.</td>
<td>Finish for open-pored varnishing; also as a topcoat on opaque (white) varnished surfaces</td>
<td>Lightfast, very fast drying and long pot-life</td>
<td>1B</td>
<td>24 h</td>
</tr>
<tr>
<td><strong>Finishes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PUR BML-215/10</td>
<td>2-comp.</td>
<td>For closed-pore varnishing; also as a topcoat on opaque (white) varnished surfaces; table tops, kitchen counter tops</td>
<td>Lightfast, high build and efficient because of high solid content, very high mechanical resistance</td>
<td>1B</td>
<td>8 h</td>
</tr>
<tr>
<td>PUR TL-222</td>
<td>2-comp.</td>
<td>For very matt, natural looking surfaces that look and feel like natural wood</td>
<td>Lightfast, does not hide dark surfaces, mechanical loads do not cause glossy areas</td>
<td>1B</td>
<td>24 h</td>
</tr>
<tr>
<td>PUR HL-211/90</td>
<td>2-comp.</td>
<td>To achieve high gloss surfaces with a high quality look; for opaque varnished surfaces (PUR CL-240/30); interior finishing in ships</td>
<td>Lightfast, tested according to DIN 4102 B1 (flame resistant), can be polished; an application has been made for IMO certification</td>
<td>1B</td>
<td>6 h</td>
</tr>
</tbody>
</table>

**Products**

- PL-113: Parquet varnish
- PUR FG-201: PUR Primer
- PUR AG-200: Acrylic Primer
- NC SL-111: Natural Coating Primer
- Acryl VSL-115: Acrylic Varnish
- PUR SL-210: PUR Slurry
- PUR SL-214: PUR Slurry
- PUR BML-215/10: PUR BML
- PUR TL-222: PUR TL-222
- PUR HL-211/90: PUR HL-211/90

**Options for use**

- Single component
- 2-comp.

**Typical elements**

- Parquet laid on site and for coating stairs
- Particularly beneath matt and high gloss varnishes; interior finishing in ships
- For light and bleached wood to maintain the natural character of the wood
- For wood surfaces subjected to normal loads
- All-round varnish, very economical, for open-pored varnishing; also as a topcoat on opaque (white) varnished surfaces
- Finish for open-pored varnishing; also as a topcoat on opaque (white) varnished surfaces
- For closed-pore varnishing; also as a topcoat on opaque (white) varnished surfaces; table tops, kitchen counter tops
- For very matt, natural looking surfaces that look and feel like natural wood
- To achieve high gloss surfaces with a high quality look; for opaque varnished surfaces (PUR CL-240/30); interior finishing in ships

**Special properties**

- Very good emphasis, good resistance, Deco Paint-compliant
- Lightfast, dries quickly, high transparency, DIN 4102 B1 (flame resistant), an application has been made for IMO certification
- Lightfast, little emphasis; does not hide the substrate
- Dries very quickly, good emphasis, low cost
- Lightfast, can be worked single component as well as 2-component, resistant to PVC plasticizers even single component, economical, very fast drying
- Lightfast, tested according to DIN 4102 B1 (flame resistant), an application has been made for IMO certification
- Lightfast, very fast drying and long pot-life
- Lightfast, high build and efficient because of high solid content, very high mechanical resistance
- Lightfast, does not hide dark surfaces, mechanical loads do not cause glossy areas
- Lightfast, tested according to DIN 4102 B1 (flame resistant), can be polished; an application has been made for IMO certification

**Resistance to chemicals according to DIN 68861 part 1**

- Clearly exceeds 1C
- 1C
- Single component: 1C 2-component: 1B
- 1B
- 1B
- 1B
- 1B
- 1B
- 1B

**Working time**

- –
- 8 h
- –
- 24 h
- 8 h
- 24 h
- 8 h
- 24 h
- 6 h
PL-113 PARQUET VARNISH

Abrasions Resistant Parquet & Wood Floor Varnish

Properties
Sealing varnish based on high quality, urethane modified, alkyd resin that can be rolled, brushed or sprayed.

- Extremely abrasion and scratch resistant
- PVC-resistant
- Low odour solvent
- Unproblematic to apply
- Excellent emphasis of the grain

Application
- For abrasion resistant varnishing of parquet and wood floors
- Decorative coating for stairs, parquet and furniture

Test standards:
- DIN EN 71-3 Safety for toys
- DIN 53160 parts 1 and 2 Saliva and sweat resistant
- DIN 68861 part 1, 1B Resistant to chemicals

Product data

<table>
<thead>
<tr>
<th>Shade of colour</th>
<th>Clear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art No.</td>
<td>2377 (semi-matt/30) 2378 (silk gloss/50) 2392 special colours (semi-matt/30)</td>
</tr>
<tr>
<td>Size of container</td>
<td>5 l</td>
</tr>
<tr>
<td>Thinning</td>
<td>The product is formulated ready to use</td>
</tr>
<tr>
<td>Application rate per working operation</td>
<td>approx. 80 – 100 ml/m²</td>
</tr>
<tr>
<td>Application</td>
<td>Brush roller (polyamide yarn), roller with 6 mm pile in 3 layers) Spraying (cup gun 1.8-2.0 mm)</td>
</tr>
<tr>
<td>Drying at 20°C, 65% relative humidity</td>
<td>approx. 1 hour</td>
</tr>
<tr>
<td>Can be sanded and re-varnished after</td>
<td>approx. 6 hours</td>
</tr>
<tr>
<td>Foot traffic after</td>
<td>approx. 24 hours</td>
</tr>
</tbody>
</table>
**PUR FG-201 FILLING PRIMER**

Clear, 2-Component, Spray-On Filler for Semi-Closed to Closed-Pore Elements

### Properties

- Clear, 2-component spray-on filler with excellent drying properties.
- Dries very quickly and can be sanded very quickly
- Very good build; improved compensation of unevenness on the surface
- Lightfast, the varnish film does not change its inherent colour in falling light
- Aromatic hydrocarbon-free

### Application

For all semi-closed and closed-pore constructions as well as for preparing high gloss surfaces. Can also be used on bleached wood.

For high quality furniture such as:
- Chairs
- Office furniture
- Bathroom furnishings
- Kitchen cabinets

### Test standards:

- DIN 4102-B1 Flame resistance (application submitted)
- Flame resistance according to IMO Resolution for Interior Finishing of Ships (application submitted)
- DIN EN 71-3 Safety for toys
- DIN 53160 parts 1 and 2 Resistant to saliva and sweat

### Product data

<table>
<thead>
<tr>
<th>Shade of color</th>
<th>Clear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art. No.</td>
<td>1950</td>
</tr>
<tr>
<td>Container sizes</td>
<td>10 l, 20 l</td>
</tr>
<tr>
<td>Mixing ratio with PUR H-280 Hardener</td>
<td>10:1</td>
</tr>
<tr>
<td>Airless</td>
<td>-</td>
</tr>
<tr>
<td>Airmix</td>
<td>-</td>
</tr>
<tr>
<td>Cup gun</td>
<td>1.8 – 2.0 mm</td>
</tr>
<tr>
<td>Nozzle (mm)</td>
<td>-</td>
</tr>
<tr>
<td>Air pressure</td>
<td>2 – 3 bar</td>
</tr>
<tr>
<td>Material pressure</td>
<td>80 – 120 bar</td>
</tr>
<tr>
<td>Application</td>
<td>Spraying</td>
</tr>
<tr>
<td>Thinning</td>
<td>If required with V-890 Thinner (p. 42)</td>
</tr>
<tr>
<td>Working time</td>
<td>1 work day</td>
</tr>
<tr>
<td>Working rate per working operation</td>
<td>approx. 100 – 150 ml/m²</td>
</tr>
<tr>
<td>Thinning</td>
<td>-</td>
</tr>
<tr>
<td>Thinning</td>
<td>-</td>
</tr>
<tr>
<td>Thinning</td>
<td>-</td>
</tr>
<tr>
<td>Thinning</td>
<td>-</td>
</tr>
</tbody>
</table>

### Drying at 20°C, 65% relative humidity

- Dust dry after | approx. 15 min. |
- Touch dry after | approx. 45 min. |
- Can be sanded and re-coated after | approx. 90 min. |
- Stacking after | approx. 2 hours |

### Application rate per working operation

approx. 100 – 150 ml/m²
## PUR AG-200 LIGHTENING PRIMER

2-Component Primer to Achieve Natural Wood Effects

### Properties

- Clear, 2-component primer with a lightening effect.
- Special binder, little emphasis of the surface, does not hide the texture of the wood
- Very good resistance against a number of household chemicals
- Efficient working through early, good sanding behaviour

### Application

For high quality furniture made of light and bleached wood.

For high quality furniture such as:
- Chairs
- Office furniture
- Bathroom furnishings
- Kitchen cabinets
- For treatment of dark wood on dark wood or dark stained wood, we recommend PUR-BML-215/10.

### Test standards:

- DIN EN 71-3
- Safety for toys
- DIN 53160 parts 1 and 2
- Resistant to saliva and sweat

### Product data

<table>
<thead>
<tr>
<th>Shade of colour</th>
<th>Clear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art. No.</td>
<td>1957 (dull matt/10)</td>
</tr>
<tr>
<td>Container sizes</td>
<td>10 l, 20 l</td>
</tr>
<tr>
<td>Mixing ratio with PUR H-280 Hardener</td>
<td>10:1</td>
</tr>
<tr>
<td>Thinning</td>
<td>If required with V-890 Thinner (p. 42)</td>
</tr>
<tr>
<td>Working time</td>
<td>1 work day</td>
</tr>
<tr>
<td>Application rate per working operation</td>
<td>approx. 80-120 ml/m²</td>
</tr>
<tr>
<td>Application</td>
<td>Spraying</td>
</tr>
</tbody>
</table>

### Nozzle [mm]

<table>
<thead>
<tr>
<th>Cup gun</th>
<th>Airless</th>
<th>Airmix</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.8 – 2.0</td>
<td>0.23 – 0.28</td>
<td>0.23 – 0.28</td>
</tr>
</tbody>
</table>

### Air pressure

<table>
<thead>
<tr>
<th>Cup gun</th>
<th>Airless</th>
<th>Airmix</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 – 3 bar</td>
<td>_</td>
<td>1.2 – 2.0 bar</td>
</tr>
</tbody>
</table>

### Material pressure

<table>
<thead>
<tr>
<th>Cup gun</th>
<th>Airless</th>
<th>Airmix</th>
</tr>
</thead>
<tbody>
<tr>
<td>_</td>
<td>80 – 120 bar</td>
<td>80 – 100 bar</td>
</tr>
</tbody>
</table>

### Drying at 20°C, 65% relative humidity

<table>
<thead>
<tr>
<th>Work standard</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust dry after</td>
<td>approx. 15 min.</td>
</tr>
<tr>
<td>Touch dry after</td>
<td>approx. 40 – 50 min.</td>
</tr>
<tr>
<td>Can be sanded and re-coated after</td>
<td>approx. 90 min.</td>
</tr>
<tr>
<td>Stacked after</td>
<td>approx. 2 hours</td>
</tr>
</tbody>
</table>
## SUGGESTION FOR WORKING

### Natural Oak Effect with 2-Component PUR Varnishes

<table>
<thead>
<tr>
<th>Suitable species of wood</th>
<th>Note: Not suitable for dark species of wood</th>
</tr>
</thead>
</table>

**Sanding**

**Note:** 150 – 180 grit, remove dust afterward

**Priming**

**Note:** Prime twice if necessary

**Intermediate sanding**

**Note:** Oak with uniform grading, for other light-coloured and bleached species of wood, trial varnishing is necessary. Solid wood might need to be moistened in advance!

**PUR AG-200 Lightening Primer, mixing ratio 10:1 with PUR H-280 Hardener**

- Application rate approx. 80 - 120 ml/m², allow to dry overnight at room temperature to develop the best possible lightening effect!
- 220 – 280 grit, try not to sand through

**Note:** To ensure that the hardener is properly stirred in and mixed, we recommend the use of the Remmers Patent Disperser (see page 93).

<table>
<thead>
<tr>
<th>PUR SL-210/20 Finish matt, mixing ratio 10:1 with PUR H-280 Hardener</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spray with a cup gun nozzle: 1.8 mm, air pressure: 2–3 bar</td>
</tr>
<tr>
<td>Spray with airless / airmix nozzle: 0.23 - 0.28 mm</td>
</tr>
<tr>
<td>material pressure: approx. 100 bar</td>
</tr>
<tr>
<td>air pressure: 1.2–2 bar</td>
</tr>
</tbody>
</table>

**Note:** Prime twice if necessary

**Note:** Not suitable for dark species of wood

### Finishing

**Note:** To ensure that the hardener is properly stirred in and mixed, we recommend the use of the Remmers Patent Disperser (see page 93).

- Prime twice if necessary

**Note:** Not suitable for dark species of wood

**PUR SL-210/20 Finish matt, mixing ratio 10:1 with PUR H-280 Hardener**

- Application rate approx. 80 - 120 ml/m², drying time at least 3 hours at room temperature, better overnight

**Optimum Drying Conditions**

- 20°C room temperature, at least 50% relative humidity and a sufficient air exchange rate
- Lower temperatures may impair film formation on the surface.
- Humidity that is too low may initially dry the film of varnish too quickly; insufficient air exchange rate delays initial and thorough drying.
NC SL-111 FINISH
Clear Finish for Wood Surfaces Subjected to Normal Loads

Properties
- Formaldehyde-free, clear finish for wood surfaces subjected to normal loads.
- Dries quickly, good sanding properties
- Very good flow, the texture and inherent colour of the surface of the wood are emphasised
- Resistant to a number of household chemicals
- High solid content (approx. 24%), very good build and smoothness

Application
- For wood home furniture surfaces subjected to normal loads

Test standards:
- DIN EN 71-3 Safety for toys
- DIN 53160 parts 1 and 2
- Resistant to saliva and sweat
- DIN 68861 part 1, 1C
- Resistant to chemicals

Product data

<table>
<thead>
<tr>
<th>Colour</th>
<th>clear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art. No.</td>
<td>1952 (silk gloss/50) 1953 (semi-matt/30) 1954 (matte/20)</td>
</tr>
<tr>
<td>Size of containers</td>
<td>10 l, 20 l</td>
</tr>
<tr>
<td>Thinning</td>
<td>If required with V-890 Thinner (p. 42)</td>
</tr>
<tr>
<td>Retarder</td>
<td>If required with V-893 Retarder (p. 43)</td>
</tr>
<tr>
<td>Application rate per coat</td>
<td>approx. 120 ml/m²</td>
</tr>
<tr>
<td>Application</td>
<td>spraying, curtain coating</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cup gun</th>
<th>Airless</th>
<th>Airmix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nozzle [mm]</td>
<td>1.8</td>
<td>0.18 – 0.23</td>
</tr>
<tr>
<td>Air pressure</td>
<td>2 – 3 bar</td>
<td>–</td>
</tr>
<tr>
<td>Material pressure</td>
<td>80 – 120 bar</td>
<td>80 – 100 bar</td>
</tr>
</tbody>
</table>

Drying at 20°C, 65% relative humidity
- Dust dry after: approx. 10 – 15 min.
- Touch dry after: approx. 20 – 30 min.
- Can be sanded and re-coated after: approx. 45 – 60 min.
- Stacked after: approx. 90 – 120 min.
Acrylic VSL-115 VARIO FINISH
Solvent Based, Lightfast, Acrylic Varnish for Universal Use

Properties

- Very fast drying, clear, solvent based, PVC resistant, single component, acrylic varnish
- Extremely lightfast and non-yellowing which makes it particularly suitable as a topcoat for white varnished substrates compared to NC varnishes
- Resistance to chemicals and water is clearly improved by adding 5% PUR H-280 Hardener (resistance similar to 2-component PUR varnish)

Application

- For universal use in furniture construction
- For living and bedroom furniture, chairs and shelves
- For open-pored wood varnishing in interior areas
- As a topcoat for white varnished substrates

Test standards:

- DIN EN 71-3 Safety for toys
- DIN 53160 parts 1 and 2 Resistant to saliva and sweat
- Without a hardener: DIN 68861 Teil 1, 1C Resistant to chemicals
- With hardener: DIN 68861 part 1, 1B Resistant to chemicals with restrictions

Product data

<table>
<thead>
<tr>
<th>Colour</th>
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<tbody>
<tr>
<td>Art No.</td>
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</tr>
<tr>
<td>Size of container</td>
<td>10 l, 20 l</td>
</tr>
<tr>
<td>Working time</td>
<td>approx. 24 hours*</td>
</tr>
<tr>
<td>Pot-life</td>
<td>approx. 48 hours*</td>
</tr>
<tr>
<td>Application rate per coat</td>
<td>approx. 80 - 100 ml/m²</td>
</tr>
<tr>
<td>Application</td>
<td>spraying</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nozzle [mm]</th>
<th>Cup gun</th>
<th>Airless</th>
<th>Airmix</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.8</td>
<td>0.18 – 0.23</td>
<td>0.18 – 0.23</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Air pressure</th>
<th>2 – 3 bar</th>
<th>–</th>
<th>1.2 – 2.0 bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material pressure</td>
<td>80 – 120 bar</td>
<td>80 – 100 bar</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Drying at 20°C, 65% relative humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust dry after</td>
</tr>
<tr>
<td>Touch dry after</td>
</tr>
<tr>
<td>Can be sanded and re-coated after</td>
</tr>
<tr>
<td>Stacked after</td>
</tr>
</tbody>
</table>

* when worked with PUR H-280 Hardener
# A Comparison of Single and 2-Component Varnishes

## An Overview of Properties & Application Options

<table>
<thead>
<tr>
<th>Costs</th>
<th>Single component</th>
<th>Acrylic VSL-115 Vario Finish</th>
<th>2-component mixing ratio with hardener 20:1</th>
<th>High quality PUR finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Varnish</td>
<td>● ● ● ● ● ● ● ●</td>
<td>● ● ● ● ● ● ● ●</td>
<td>● ● ● ● ● ● ● ●</td>
<td>● ● ● ● ● ● ● ●</td>
</tr>
<tr>
<td>Hardener</td>
<td>Not required</td>
<td>Not required</td>
<td>Not required</td>
<td>Not required</td>
</tr>
<tr>
<td>Ready-to-use material</td>
<td>● ● ● ● ● ● ● ●</td>
<td>● ● ● ● ● ● ● ●</td>
<td>● ● ● ● ● ● ● ●</td>
<td>● ● ● ● ● ● ● ●</td>
</tr>
<tr>
<td>Loss approx. 10% (pot-life)</td>
<td>No loss</td>
<td>No loss</td>
<td>No loss</td>
<td>No loss</td>
</tr>
<tr>
<td>Ready-to-use material after loss</td>
<td>● ● ● ● ● ● ● ●</td>
<td>● ● ● ● ● ● ● ●</td>
<td>● ● ● ● ● ● ● ●</td>
<td>● ● ● ● ● ● ● ●</td>
</tr>
<tr>
<td>Lightfast</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>PVC resistant</td>
<td>conditionally</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Resistance to chemicals</td>
<td>DIN 68861, part 1, 1C</td>
<td>DIN 68861, part 1, 1C</td>
<td>DIN 68861, part 1, 1B with restrictions</td>
<td>DIN 68861, part 1, 1B</td>
</tr>
<tr>
<td>Resistance to ethanol (school grade)</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Scratch resistance (school grade)</td>
<td>4</td>
<td>3,5</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Drying time</td>
<td>approx. 45 - 60 min.</td>
<td>approx. 60 min.</td>
<td>approx . 90 - 120 min.</td>
<td>at least 120 min.</td>
</tr>
<tr>
<td>White varnished surfaces</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Bleached wood</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Kitchen &amp; bath furniture</td>
<td>✗</td>
<td>✓</td>
<td>✗</td>
<td>✓</td>
</tr>
<tr>
<td>Interior finishing</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Living and bedroom furniture, chairs and shelves</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

## Costs

- **Inexpensive finish**
  - Base: nitrocellulose
  - **High quality finish**
  - Base: acrylate

## Varnish Properties

- **Lightfast**: Conditionally
- **PVC resistant**: DIN 68861, part 1, 1C
- **Resistance to ethanol (school grade)**: 4
- **Scratch resistance (school grade)**: 4
- **Drying time**: approx. 45 - 60 min.
- **White varnished surfaces**: ✗
- **Bleached wood**: ✗
- **Kitchen & bath furniture**: ✗
- **Interior finishing**: ✓
- **Living and bedroom furniture, chairs and shelves**: ✓
**PUR SL-210 FINISH**

**Flame Resistant, 2-Component Finish**

**Properties**

High quality, 2-component PU varnish for open-pore to semi-open-pore varnishing of high quality wood elements.

- Dries quickly, good sanding behaviour
- Good flow properties
- Very good resistance to a number of household chemicals
- Lightfast, the varnish film does not change its inherent colour in falling light
- Flame resistant when combined with flame resistant surfaces, suitable e.g. for shop fitting and public buildings
- Aromatic hydrocarbon-free

**Application**

For all clear, open-pored to semi-open pore varnishing of furniture or as a topcoat on Color Varnishes.

For high quality furniture such as:
- Chairs
- Office furniture
- Bathroom furnishings
- Kitchen cabinets

**Test standards:**

- DIN 4102-B1
- Flame resistant
- Flame resistance according to IMO Resolution for finishing ship interiors (application submitted)
- DIN EN 71-3
- Safety for toys
- DIN 53160 parts 1 and 2
- Resistant to saliva and sweat
- DIN 68861 part 1, 1B
- Resistant to chemicals

**Product data**

<table>
<thead>
<tr>
<th>Colour</th>
<th>Art No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>clear</td>
<td>1962 (silk gloss/50)</td>
</tr>
<tr>
<td></td>
<td>1963 (semi-matt/30)</td>
</tr>
<tr>
<td></td>
<td>1964 (matt/20)</td>
</tr>
<tr>
<td></td>
<td>1960 (dull matt/10)</td>
</tr>
</tbody>
</table>

| Size of container | 10 l, 20 l |
| Mixing ratio with PUR H-280 Hardener | 10:1 |
| Thinning | if required with V-890 Thinner (p. 42) |
| Working time | 1 work day |
| Application rate per coat | approx. 80 – 120 ml/m² |
| Application | spraying |

<table>
<thead>
<tr>
<th>Nozzle [mm]</th>
<th>Cup gun</th>
<th>Airless</th>
<th>Airmix</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.8</td>
<td>0.23 – 0.28</td>
<td>0.23 – 0.28</td>
<td></td>
</tr>
<tr>
<td>Air pressure</td>
<td>2 – 3 bar</td>
<td>–</td>
<td>1.2 – 2.0 bar</td>
</tr>
<tr>
<td>Material pressure</td>
<td>80 – 120 bar</td>
<td>80 – 100 bar</td>
<td></td>
</tr>
</tbody>
</table>

| Drying at 20°C, 65% relative humidity |
| Dust dry after | approx. 20 – 30 min. |
| Touch dry after | approx. 40 – 50 min. |
| Can be sanded and re-coated after | approx. 2 hours |
| Stacked after | drying overnight |
PUR SL-214 FINISH
Especially Fast Drying, 2-Component Finish with a Long Pot-Life

**Properties**

High quality, 2-component PU varnish for open-pore to semi-open pore varnishing of high quality wood elements.

- Very fast drying and good sanding properties
- Increased working time and pot-life
- Good flow, the texture and pore marks on the surface of the wood are emphasised
- Very good resistance to a number of household chemicals
- Lightfast, the film of varnish does not change its inherent colour in falling light

**Application**

For all clear open-pore to semi-open pore varnishing on furniture or as a topcoat on Color Varnishes

For high quality furniture such as:
- Chairs
- Office furniture
- Bathroom furnishings
- Kitchen cabinets

**Test standards:**
- DIN EN 71-3 Safety for toys
- DIN 53160 parts 1 and 2 Resistant to saliva and sweat
- DIN 68861 part 1, 1B Resistance to chemicals

**Product data**

<table>
<thead>
<tr>
<th>Colour</th>
<th>clear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art. No.</td>
<td>1851 (silk gloss/50) 1850 (semi-matt/30) 1849 (matt/20) 1857 (dull matt/10)</td>
</tr>
<tr>
<td>Size of containers</td>
<td>10 l, 20 l</td>
</tr>
<tr>
<td>Mixing ratio with PUR H-280 Hardener</td>
<td>10:1</td>
</tr>
<tr>
<td>Thinning</td>
<td>if required with V-890 Thinner (p. 42)</td>
</tr>
<tr>
<td>Working time</td>
<td>approx. 24 hours</td>
</tr>
<tr>
<td>Pot-life</td>
<td>approx. 48 hours</td>
</tr>
<tr>
<td>Application rate per coat</td>
<td>approx. 120 ml/m²</td>
</tr>
<tr>
<td>Application</td>
<td>spraying</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cup gun</th>
<th>Airless</th>
<th>Airmix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nozzle [mm]</td>
<td>1.8</td>
<td>0.23 - 0.28</td>
</tr>
<tr>
<td>Air pressure</td>
<td>2 – 3 bar</td>
<td>–</td>
</tr>
<tr>
<td>Material pressure</td>
<td>–</td>
<td>80 – 120 bar</td>
</tr>
</tbody>
</table>

- Drying at 20°C, 65% relative humidity
  - Dust dry after: approx. 10 mn.
  - Touch dry after: approx. 40 min.
  - Can be sanded and re-coated after: approx. 90 min.
  - Stacked after: drying overnight
**PUR SL-212 FINISH**

Very Scratch Resistant, 2-Component Finish for Closed-Pore Systems

### Properties

- High quality, 2-component PU varnish for closed-pore varnishing of high grade species of wood.
- Very good stability on vertical edges
- Good flow
- Very good resistance to a number of household chemicals
- Lightfast, the varnish film does not change its inherent colour in falling light
- Very good scratch resistance, the surface is insensitive to heavier loads (e.g. desks)

### Application

For clear, closed-pore finishing of high quality furniture or as a topcoat on Color Varnishes subjected to heavy loads such as:

- Chairs
- Office furniture
- Bathroom furnishings
- Kitchen cabinets

**Test standards:**

- DIN EN 71-3 Safety for toys
- DIN 53160 parts 1 and 2
- Resistant to saliva and sweat
- DIN 68861 part 1, 1B
- Resistant to chemicals

### Artikeldaten

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<thead>
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<tbody>
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<td></td>
<td>1971 (semi-matt/30)</td>
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<tr>
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<td>1972 (matt/20)</td>
</tr>
<tr>
<td>Size of containers</td>
<td>10 l, 20 l</td>
</tr>
<tr>
<td>Mixing ratio with PUR H-280-Hardener</td>
<td>10:1</td>
</tr>
<tr>
<td>Thinning</td>
<td>if required with V-890 Thinner (p. 42)</td>
</tr>
<tr>
<td>Retarder</td>
<td>if required with V-893 Retarder (p. 43)</td>
</tr>
<tr>
<td>Working time</td>
<td>1 work day</td>
</tr>
<tr>
<td>Application rate per coat</td>
<td>approx. 120–150 ml/m²</td>
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<tr>
<td>Application</td>
<td>spraying, pouring</td>
</tr>
<tr>
<td>Cup gun</td>
<td>1.8 – 2.0</td>
</tr>
<tr>
<td>Airless</td>
<td>0.23 – 0.28</td>
</tr>
<tr>
<td>Airmix</td>
<td>0.23 – 0.28</td>
</tr>
<tr>
<td>Nozzle [mm]</td>
<td>2 – 3 bar</td>
</tr>
<tr>
<td>Air pressure</td>
<td>2 – 3 bar</td>
</tr>
<tr>
<td>Material pressure</td>
<td>80 – 120 bar</td>
</tr>
<tr>
<td></td>
<td>80 – 100 bar</td>
</tr>
</tbody>
</table>

Drying at 20°C, 65% relative humidity
- Dust dry after: approx. 30 – 40 min.
- Touch dry after: approx. 60 min.
- Can be sanded and re-coated after: approx. 2 hours
- Stacked after: drying overnight
## SUGGESTIONS FOR WORKING

### Clear Finishing with 2-Component PUR Varnishes

<table>
<thead>
<tr>
<th>Suitable species of wood</th>
<th>Open-pore</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beech, maple, pine ... , various species of tropical wood (test system in advance)</td>
<td>Oak, ash, walnut... , various species of tropical wood (test system in advance)</td>
</tr>
</tbody>
</table>

### Sanding

### Staining (if applicable)

**Note:** Prime twice if necessary.

**Open-pore varnishing:** Open pores should be varnished with diluted material to achieve elegant looking pore marks. This also ensures that deep pores are sealed off from liquids (water, red wine, tea, etc.).

### Priming

**Note:** Highly absorbent species of wood may need to be primed twice to achieve the desired build. Trial varnishing in advance is recommended in general. To ensure that the hardener is thoroughly stirred and worked into the varnish, we recommend the use of the Remmers Patent Disperser (see page 93).

### Intermediate sanding

**Note:** If relative humidity is too low, the varnish film may initially dry too quickly; an insufficient air exchange rate delays initial and thorough drying.

### Finishing

**Note:** If relative humidity is too low, the varnish film may initially dry too quickly; an insufficient air exchange rate delays initial and thorough drying.

#### PUR SL-212 Finish, mixing ratio 10:1 with PUR H-280 Hardener

- Application rate approx. 120-150 ml/m², dry for 2-3 hours at room temperature
- 220 - 280 grit, remove dust thoroughly afterward (dust binding cloth)

#### PUR SL-210 Finish*, mixing ratio 10:1 with PUR H-280 Hardener

- Diluted with 10 - 20% V-890 Thinner, application rate approx. 100-120 ml/m², dry for 2-3 hours at room temperature
- 180 - 220 grit, remove dust afterward

### Spray application

- **Spray with cup gun,** 1.8 mm nozzle, air pressure 2-3 bar
- or **spray with airless / airmix,** 0.28 mm nozzle, material pressure approx. 100 bar, air pressure 1.2 - 2 bar

#### PUR SL-210 Finish*, mixing ratio 10:1 with PUR H-280 Hardener

- Application rate approx. 100-120 ml/m², dry for at least 3 hours at room temperature, best over night

### Optimum drying conditions

- **20°C room temperature, at least 50% rel. humidity and a sufficient air exchange rate**
- **Room temperatures that are too low can impair the formation of a film on the surface.**

* To achieve even faster drying times, PUR SL-214 can also be used instead of PUR SL-210.
PUR BML-215/10 BRILLIANT MATT VARNISH

Highest Quality, 2-Component PUR Varnish for a Raw Wood Effect – Also on Dark Wood

Properties

PUR BML-215/10 Brilliant Matt Varnish was especially developed to achieve a very natural looking wood surface. This product thus consequently meets the wishes of many consumers for exclusive furnishings with very hard wearing surfaces that do not look or feel varnished (raw wood effect).

- Dull matt yet highly transparent
- Very velvety feeling
- Insensitive to scratches and can be polished
- Highly resistant to household chemicals
- Dries quickly, fast release of solvents and fast full cure

Test standards:
- DIN EN 71-3 Safety for toys
- DIN 53160 parts 1 and 2 Resistant to saliva and sweat
- DIN 68861 part 1, 1B Resistant to chemicals

Application

- For high quality furniture in living areas, kitchens and baths
- As a primer and topcoat for all species of wood
- For dark wood, dark stained wood (e.g. Mocca + dull matt) or Color varnishes

Product data

<table>
<thead>
<tr>
<th>Colour</th>
<th>clear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art. No.</td>
<td>1941 (dull matt/10)</td>
</tr>
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<td>Size of container</td>
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<td>Mixing ratio with PUR H-280-Hardener</td>
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</tr>
<tr>
<td>Thinning</td>
<td>if required with V-890 Thinner (p. 42)</td>
</tr>
<tr>
<td>Retarder</td>
<td>if required with V-893 Retarder (p. 43)</td>
</tr>
<tr>
<td>Working time</td>
<td>24 hours</td>
</tr>
<tr>
<td>Pot-life</td>
<td>48 hours</td>
</tr>
<tr>
<td>Application rate per coat</td>
<td>120 ml/m²</td>
</tr>
<tr>
<td>Application</td>
<td>spraying, curtain coating</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cup gun</th>
<th>Airless</th>
<th>Airmix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nozzle [mm]</td>
<td>1.8</td>
<td>0.23 – 0.28</td>
</tr>
<tr>
<td>Air pressure</td>
<td>2 – 3 bar</td>
<td>–</td>
</tr>
<tr>
<td>Material pressure</td>
<td>–</td>
<td>80 – 120 bar</td>
</tr>
</tbody>
</table>

- Drying at 20°C, 65% relative humidity
- Dust dry after approx. 10 min.
- Touch dry after approx. 40 min.
- Can be sanded and re-coated after approx. 90 min.
- Stacked after drying overnight
## SUGGESTIONS FOR WORKING

### Raw Wood Effect on Walnut

## Suitable species of wood

All species of wood, also dark wood and dark stained wood

## Sanding

150 – 180 grit, remove dust thoroughly afterward

## Priming

**Note:** To ensure that the hardener is stirred and worked in thoroughly, we recommend the use of the Remmers Patent Disperser (see page 93).

## Intermediate sanding

### Finishing

**PUR BML-215/10 Brilliant Matt Varnish, mixing ratio 10:1 with PUR H-280 Hardener**

- Application rate 120 ml/m², dry for 90 minutes at room temperature
- Spray with cup gun, 1.8 mm nozzle, air pressure 2–3 bar
- Spray with airless / airmix 0.28 mm nozzle, material pressure max. 100 bar, air pressure 1.2–2 bar
- Application rate approx. 120 ml/m², dry for at least 3 hours at room temperature, best overnight
- Spray with airless / airmix 0.28 mm nozzle, material pressure max. 100 bar, air pressure 1.2–2 bar

**Optimum drying conditions**

- 20°C room temperature, at least 50% relative humidity and a sufficient air exchange rate
- Room temperatures that are too low may impair film formation on the surface
- Relative humidity that is too low can cause the varnish film to initially dry too quickly; an insufficient air exchange rate delays initial drying and full cure.
Because of the Deco Paint Directive, solvent based PUR varnishes have been practically (at least officially) banned from stair construction. So far, Deco Paint-compliant variations in this area were only possible by clearly increasing the solid content from just under 30% to more than 55% which had many disadvantages such as:

- Pot-life is clearly reduced – some times even under 4 hours
- Drying is considerably delayed: it takes at least 1/2 a work day before the substrate can be sanded
- Since a larger quantity of hardener is required, the products are much less economical
- Because of the high solid content, surfaces look unnatural (a “plastic-look”)

**The Solution – Hybrid Varnish**

PUR TL-222 Stair Varnish is completely different. PUR TL-222 Stair Varnish is a so-called hybrid varnish in which a part of the VOC content has not been replaced by a binder/solid. Through a unique technology, a part of the solvents that contain VOC have been replaced with special, VOC-free solvents.

### Former 2-component PUR stair varnish before 2007

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast drying</td>
<td></td>
</tr>
<tr>
<td>Good flow properties</td>
<td></td>
</tr>
<tr>
<td>Attractive emphasis of grain</td>
<td></td>
</tr>
<tr>
<td>Very good resistance</td>
<td></td>
</tr>
<tr>
<td>Economical mixing ratio “varnish : hardener”</td>
<td>(10:1)</td>
</tr>
<tr>
<td>Not compliant with the Deco Paint Directive</td>
<td></td>
</tr>
<tr>
<td>May no longer be used for varnishing stairs</td>
<td>because of the high VOC content</td>
</tr>
</tbody>
</table>

### Today’s conventional, 2-component, PUR “high solid” stair varnishes

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deco Paint Directive-compliant</td>
<td></td>
</tr>
<tr>
<td>Attractive emphasis of grain</td>
<td></td>
</tr>
<tr>
<td>Very good resistance</td>
<td></td>
</tr>
<tr>
<td>Higher price of the varnish because of high solid content</td>
<td></td>
</tr>
<tr>
<td>Mixing ratio of “varnish:hardener” is not economical (often 2:1)</td>
<td></td>
</tr>
<tr>
<td>Short working time &amp; pot-life</td>
<td></td>
</tr>
<tr>
<td>Dries slowly</td>
<td></td>
</tr>
<tr>
<td>Surfaces have a plastic-look because of the high solid content</td>
<td></td>
</tr>
</tbody>
</table>

### PUR TL-222 Stair Varnish “Hybrid varnish system”

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deco Paint Directive-compliant</td>
<td></td>
</tr>
<tr>
<td>Good flow properties</td>
<td></td>
</tr>
<tr>
<td>Attractive emphasis of grain</td>
<td></td>
</tr>
<tr>
<td>Very good resistance</td>
<td></td>
</tr>
<tr>
<td>Economical mixing ratio of “varnish:hardener”</td>
<td>(10:1)</td>
</tr>
<tr>
<td>Pot-life &amp; working time appropriate for use in practice</td>
<td></td>
</tr>
</tbody>
</table>
Properties

- Full quality, solvent based, 2-component PUR varnish for stairs
- Deco Paint-compliant
- Solid content in the ideal range (approx. 30 %)
- Natural looking surfaces and an elegant flow
- Very economical: mixing ratio with PUR H-280 Hardener: 10:1
- Long working time (8 hours) and pot-life (16 hours)
- PUR TL-222 Stair Varnish is highly resistant just like PUR varnishes in general
- PUR TL-222 Stair Varnish is milky immediately after application but dries clear

Application

- Solvent based stair varnish – ideal for users that want to use a solvent based varnish system that complies with the law
- For semi-open to closed-pore varnishing
- Also for other high grade of wood in interior areas

Test standards:

- DIN EN 71-3
- Safety for toys
- DIN 53160 parts 1 and 2
- Resistant to saliva and sweat
- DIN 68861 part 1, 1B
- Resistant to chemicals

Product data

<table>
<thead>
<tr>
<th>Colour</th>
<th>clear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art. No.</td>
<td>1821 (semi-matt/30) 1822 (silk gloss/50)</td>
</tr>
<tr>
<td>Size of container</td>
<td>10 l, 20 l</td>
</tr>
<tr>
<td>Mixing ratio with PUR-H-280 Hardener</td>
<td>10 :1</td>
</tr>
<tr>
<td>Thinning</td>
<td>product is formulated ready to use</td>
</tr>
<tr>
<td>Working time</td>
<td>8 hours</td>
</tr>
<tr>
<td>Pot-life</td>
<td>16 hours</td>
</tr>
<tr>
<td>Application rate per coat</td>
<td>approx. 100–125 ml/m²</td>
</tr>
<tr>
<td>Application</td>
<td>spraying</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cup gun</th>
<th>Airmix</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.8 – 2.0</td>
<td>0.23 – 0.28</td>
</tr>
<tr>
<td>2 – 3 bar</td>
<td>0.8 – 1.3 bar</td>
</tr>
<tr>
<td>–</td>
<td>80 – 100 bar</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Drying at 20°C, 65% relative humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust dry after</td>
</tr>
<tr>
<td>Can be sanded and re-coated after</td>
</tr>
<tr>
<td>Stacked after</td>
</tr>
</tbody>
</table>
SUGGESTION FOR WORKING

Varnishing Stairs with Remmers PUR TL-222 Stair Varnish

Suitable species of wood

| Beech, maple, oak,…, various species of tropical wood (test the system in advance) |

Sanding

| 180 - 220 grit, remove dust afterward |

Staining (if applicable)

| Aqua KB-004 Compact Stain in the desired shade of colour |
| Spray with a cup gun, 1.3-1.5 mm nozzle, air pressure 2-3 bar, dry for at least 3 hours at room temperature |

Priming

**Note:** Highly absorbent types of wood may need to be primed twice to achieve the desired build. Trial varnishing in advance is recommended in general.

| Spray with a cup gun 1.8 mm nozzle, air pressure 2-3 bar |

Intermediate sanding

| Prime a second time if required! |

Finishing

**Note:** To ensure that the hardener is thoroughly stirred and worked into the varnish, we recommend the use of the Remmers Patent Disperser. Ask your Remmers representative for information!

| PUR TL-222 Stair Varnish, mixing ratio 10:1 with PUR H-280 Hardener |
| Application rate approx. 100-125 ml/m², pot-life 1 work day, dry for at least 2 hours at room temperature |

| Spray with airless / airmix 0.28 mm nozzle, material pressure max. 100 bar, air pressure 0.8 – 1.3 bar |
| 220 - 280 grit, remove dust thoroughly afterward (dust binding cloth) |

| Spray with a cup gun 1.8 mm nozzle, air pressure 2-3 bar |

| PUR TL-222 Stair Varnish, mixing ratio 10:1 with PUR H-280 Hardener |
| Application rate approx. 100-125 ml/m², pot-life 1 work day, dry for at least 2 hours at room temperature, repeat the process if necessary! |

| Spray with airless / airmix 0.23 - 0.28 mm nozzle, material pressure approx. 100 bar, air pressure 0.8 – 1.3 bar |

Optimum drying conditions

- 20°C room temperature, at least 50% rel. humidity and a sufficient air exchange rate
- Room temperatures that are too low may impair film formation on the surface.
- Relative humidity that is too low may cause initial drying of the varnish film that is too fast; an insufficient air exchange rate delays initial drying and full cure.
**Properties**

- High quality, 2-component PU varnish that is extremely resistant.
- Used as a topcoat; stands out because of excellent flow
- Dries blemish-free
- Extremely hard and scratch resistant
- Excellent adhesion
- Outstanding elasticity
- The product is lightfast and does not change its inherent colour in falling light
- After drying the surface of the varnish can be polished/buffed
- High solid content

**Application**

- Ideal as a topcoat in a system with PUR FG-201 Filling Primer for high quality furniture such as:
  - Chairs
  - Office furniture
  - Bathroom furnishings
  - Kitchen cabinets

**Test standards:**
- DIN 4102-B1
  - Flame resistant (application submitted)
  - Flame resistant according to IMO Resolution for interior finishing of ships (application submitted)
- DIN EN 71-3
  - Safety for toys
- DIN 53160 parts 1 and 2
  - Resistant to saliva and sweat
- DIN 68861 part 1, 1B
  - Resistance to chemicals

**Product data**

<table>
<thead>
<tr>
<th>Colour</th>
<th>clear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art. No.</td>
<td>1961</td>
</tr>
<tr>
<td>Size of container</td>
<td>10 l</td>
</tr>
<tr>
<td>Mixing ratio with PUR H-280-Hardener</td>
<td>5:1</td>
</tr>
<tr>
<td>Thinning</td>
<td>if required with V-890 Thinner (p. 42)</td>
</tr>
<tr>
<td>Retarder</td>
<td>if required with V-893 Retarder (p. 43)</td>
</tr>
<tr>
<td>Working time</td>
<td>6 hours</td>
</tr>
<tr>
<td>Application rate per coat</td>
<td>approx. 120–150 ml/m²</td>
</tr>
<tr>
<td>Application</td>
<td>spraying, curtain coating</td>
</tr>
<tr>
<td>Nozzle [mm]</td>
<td>1.8</td>
</tr>
<tr>
<td>Air pressure</td>
<td>2–3 bar</td>
</tr>
<tr>
<td>Material pressure</td>
<td>-</td>
</tr>
<tr>
<td>Drying at 20°C, 65% relative humidity</td>
<td></td>
</tr>
<tr>
<td>Dust dry after</td>
<td>ca. 20–30 min.</td>
</tr>
<tr>
<td>Touch dry after</td>
<td>40–50 min.</td>
</tr>
<tr>
<td>Can be sanded and re-coated after</td>
<td>60 min.</td>
</tr>
<tr>
<td>Stacked after</td>
<td>drying overnight</td>
</tr>
<tr>
<td>Polished after</td>
<td>approx. 3 days</td>
</tr>
</tbody>
</table>
### SUGGESTIONS FOR WORKING

**High Gloss Varnishing with 2-Component PUR Varnishes**

<table>
<thead>
<tr>
<th>Suitable species of wood</th>
<th>Cherry, mahogany, walnut... , various species of tropical wood (test system in advance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sanding</td>
<td>180 - 220 grit, remove dust afterward</td>
</tr>
<tr>
<td>Staining (if applicable)</td>
<td>Aqua KB-004 Compact Stain</td>
</tr>
<tr>
<td></td>
<td>Spray with a cup gun, 1.3-1.5 mm nozzle, air pressure 2-3 bar, dry for 2-3 hours at room temperature</td>
</tr>
<tr>
<td>Priming</td>
<td><strong>Note:</strong> To ensure that the hardener is thoroughly stirred and worked into the varnish, we recommend the use of the Remmers Patent Disperser (see page 93). If necessary, apply PUR-FG-201 Filling Primer several times, &quot;wet-on-wet&quot;.</td>
</tr>
<tr>
<td>Intermediate sanding</td>
<td>400 - 600 grit, remove dust thoroughly afterward (dust binding cloth)</td>
</tr>
<tr>
<td>Finishing</td>
<td><strong>Note:</strong> When working on larger surfaces, we recommend the addition of approx. 5% V-893 Retarder to improve flow and achieve slower drying. When varnishing certain species of tropical wood, e.g. mahogany, applying several layers of strongly diluted varnish has proved advantageous so that very fine pores are closed. Highly absorbent species of wood, e.g. limba, may need to be primed more than once to achieve sufficient build. Please remember that the surroundings should be absolutely dust-free when working with this high gloss varnish. It is also helpful if the varnishing booth and varnishing equipment are thoroughly cleaned and if necessary, the floor should be wet down before varnishing. Trial varnishing in advance is always advisable.</td>
</tr>
<tr>
<td></td>
<td>PUR FG-201 Filling Primer, mixing ratio 10:1 with PUR H-280 Hardener</td>
</tr>
<tr>
<td></td>
<td>if necessary thin the first coat with 20% V-890 Thinner</td>
</tr>
<tr>
<td></td>
<td>Application rate approx. 130-180 ml/m², dry for 2-3 hours at room temperature</td>
</tr>
<tr>
<td></td>
<td>Spray with a cup gun</td>
</tr>
<tr>
<td></td>
<td>1.8 mm nozzle, air pressure 2-3 bar</td>
</tr>
<tr>
<td></td>
<td>Plum with airless / airmix</td>
</tr>
<tr>
<td></td>
<td>0.23 - 0.28 mm nozzle, material pressure approx. 100 bar, air pressure 1.2 - 2 bar</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> To ensure that the hardener is thoroughly stirred and worked into the varnish, we recommend the use of the Remmers Patent Disperser (see page 93). If necessary, apply PUR-FG-201 Filling Primer several times, &quot;wet-on-wet&quot;.</td>
</tr>
<tr>
<td></td>
<td>The surfaces can be polished after approx. 3 days</td>
</tr>
<tr>
<td></td>
<td><strong>Optimum drying conditions</strong></td>
</tr>
<tr>
<td></td>
<td>- 20°C room temperature, at least 50% rel. humidity and a sufficient air exchange rate</td>
</tr>
<tr>
<td></td>
<td>- Lower room temperatures may impair film formation on the surface.</td>
</tr>
<tr>
<td></td>
<td>- Relative humidity that is too low may cause initial drying of the varnish film that is too fast; an insufficient air exchange rate delays initial drying and full cure.</td>
</tr>
</tbody>
</table>
PUR PF-230 PIGMENT FILLER
2-Component Spray-On Filler/Sealing Filler for Coloured, Closed-Pore Surfaces

Properties
Highly pigmented, spray-on filler with excellent drying properties and good build.

- Dries very quickly and can be sanded quickly: The complete coating system can be applied in one work day
- High stability for exceptional build
- Highly filled and pigmented for good hiding power and good sanding properties

Variation:
By working with PUR H-280 Hardener in a mixing ratio of 5:1, PUR PF-230 Pigment Filler can be used as a sealing filler without prior clear sealing. In this case, please note that the drying time will be longer.

Application
For priming all normal substrates found in the furniture area such as support films, hardboard, sealed MDF boards and solid wood.

For high quality furniture such as:
- Chairs
- Office furniture
- Bathroom furnishings
- Kitchen cabinets

Test standards:
- DIN 4102-B1
- Flame resistance (application submitted)
- Flame resistance according to IMO Resolution for interior finishing of ships (application submitted)

Product data

| Art. Nr./colour | 1958 white  
<table>
<thead>
<tr>
<th></th>
<th>1959 black</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size of containers</td>
<td>10 l, 20 l</td>
</tr>
<tr>
<td>Mixing ratio with PUR H-280 Hardener (as a sealing filler)</td>
<td>10:1 (5:1)</td>
</tr>
<tr>
<td>Thinning</td>
<td>if required with V-890 Thinner (p. 42)</td>
</tr>
<tr>
<td>Working time</td>
<td>6 hours</td>
</tr>
<tr>
<td>Application rate per coat</td>
<td>approx. 150 ml/m²</td>
</tr>
<tr>
<td>Application</td>
<td>spraying</td>
</tr>
<tr>
<td>Cup gun</td>
<td>Airless</td>
</tr>
<tr>
<td>Nozzle [mm]</td>
<td>2.0 – 2.5</td>
</tr>
<tr>
<td>Air pressure</td>
<td>2 – 3 bar</td>
</tr>
<tr>
<td>Material pressure</td>
<td>-</td>
</tr>
</tbody>
</table>

Drying at 20°C, 65% relative humidity
- Dust dry after (as a sealing filler) | approx. 10 min. (approx. 45 min.)
- Touch dry after | -
- Can be sanded and re-coated after (as a sealing filler) | approx. 2 hours (approx. 5 hours)
- Stacked after | drying over night
**PUR CL-240/30 COLOR VARNISH**

2-Component Color Varnish with High Loading Capacity

**Properties**

- Highly pigmented color varnish for brilliant colours.
- Good resistance to metal rings
- Resistant to hot water and water vapour
- Very good hiding power
- Good flow
- Good stability on vertical surfaces
- Insensitive to substances in the wood

**Test standards:**

- DIN 4102-B1 Flame resistant (application submitted)
- Flame resistant according to IMO for interior finishing of ships (application submitted)
- DIN EN 71-3 Safety for toys
- DIN 68861 part 1, 1B Resistance to chemicals

**Application**

For coloured decoration of all conventional substrates in the furniture industry such as sanded priming films, hardboard, sealed MDF boards and solid wood.

For high quality furniture such as:
- Chairs
- Office furniture
- Bathroom furnishings
- Kitchen cabinets

**Product data**

<table>
<thead>
<tr>
<th>Art. No./colour</th>
<th>Size of container</th>
<th>Mixing ratio with PUR H-280 Hardener</th>
<th>Thinning</th>
<th>Working time</th>
<th>Application rate per coat</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>1801 opaque special colours pc 1</td>
<td>1 l, 2.5 l, 5 l, 10 l, 20 l</td>
<td>10:1</td>
<td>If required with V-890 Thinner (p. 42)</td>
<td>1 work day</td>
<td>approx. 100 – 120 ml/m²</td>
<td>spraying</td>
</tr>
<tr>
<td>1802 opaque special colours pc2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1803 opaque special colours pc3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1995 staining special colours</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>1996 staining special colours pc1</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1997 opaque special colours pc2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1998 opaque special colours pc3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1965 RAL 9010</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1967 white</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Mixing ratio with PUR H-280 Hardener**

<table>
<thead>
<tr>
<th>10:1</th>
<th>10:1</th>
<th>10:1</th>
<th>10:1</th>
<th>10:1</th>
<th>10:1</th>
<th>10:1</th>
</tr>
</thead>
</table>

**Application**

- Spray gun
- Airless
- Airmix

**Drying at 20°C, 65% relative humidity**

- Dust dry after: approx. 30–40 min.
- Touch dry after: approx. 60 min.
- Can be sanded and re-coated after: approx. 2 hours
- Stacked after: drying overnight

**Notes:**

- Dust dry after approx. 30–40 min.
- Touch dry after approx. 60 min.
- Can be sanded and re-coated after approx. 2 hours
- Stacked after drying overnight
SUGGESTIONS FOR WORKING
For Coloured Varnishing with PUR Products

**Suitable species of wood**
MDF, priming films, solid wood

**Sanding**
180 - 220 grit, remove dust afterward

**Sealing (if required)**
Note: Spray edge - surface - edge!

**Filling**
Note: Spray edge - surface - edge! Repeat the process if necessary!

**Intermediate sanding**

**Colour varnishing**

**Clear varnishing (if required)**
Note: Trial varnishing in advance is generally advisable to check the colour and effect!
Sealing is a necessity for elements that will be subjected to strong moisture and heat loads! Finishing with a clear varnish increases the resistance of the surface to metal rings and is recommended for heavy loads! The degree of gloss can be varied by clear varnishing. To ensure that the hardener is thoroughly stirred and worked into the varnish, we recommend the use of the Remmers Patent Disperser (see page 93).

**Optimum drying conditions**
- 20°C room temperature, at least 50% rel. humidity and a sufficient air exchange rate
- Lower room temperatures may impair film formation on the surface.
- Relative humidity that is too low may cause initial drying of the varnish film that is too fast; an insufficient air exchange rate delays initial drying and full cure.

**PUR SL-210 Finish, mixing ratio 10:1 with PUR H-280 Hardener**
Application rate approx. 100-120 ml/m², dry for 2-3 hours at room temperature
Spray with a cup gun
1.8 mm nozzle,
air pressure 2 - 3 bar
Spray with airless / airmix
0.23 - 0.28 mm nozzle,
material pressure approx. 100 bar,
air pressure 1.2 - 2 bar

**PUR SL-210 Pigment Filler, mixing ratio 10:1 with PUR H-280 Hardener**
Application rate approx. 120-150 ml/m², dry for 2-3 hours at room temperature
Spray with a cup gun
2 - 2.5 mm nozzle,
air pressure 2 - 3 bar
Spray with airless / airmix
0.33 - 0.38 mm nozzle,
material pressure approx. 100 bar,
air pressure 1.2 - 2 bar

**PUR CL-240/30 Color Varnish, mixing ratio 10:1 with PUR H-280 Hardener**
Application rate approx. 100-120 ml/m², dry for 2-3 hours
Spray with a cup gun
1.8 mm nozzle,
air pressure 2 - 3 bar

**PUR SL-210 Finish in the desired degree of gloss, mixing ratio 10:1 with PUR H-280 Hardener**
Application rate approx. 80-120 ml/m², dry in 2 - 3 hours
Spray with a cup gun
1.8 mm nozzle,
air pressure 2 - 3 bar
Spray with airless / airmix
0.23 - 0.28 mm nozzle,
material pressure approx. 100 bar,
air pressure 1.2 - 2 bar

**Note:**
- Spraying thin layers of varnish closely to each other can achieve better results!
- Optimum drying conditions apply for stable conditions.
- Initial drying and full curing should be considered in the context of the drying conditions after application.

**Sealing (if required)**
220 - 280 grit, remove dust thoroughly afterward

**Intermediate sanding**

**Colour varnishing**

**Clear varnishing (if required)**
Note: Trial varnishing in advance is generally advisable to check the colour and effect!
Sealing is a necessity for elements that will be subjected to strong moisture and heat loads! Finishing with a clear varnish increases the resistance of the surface to metal rings and is recommended for heavy loads! The degree of gloss can be varied by clear varnishing. To ensure that the hardener is thoroughly stirred and worked into the varnish, we recommend the use of the Remmers Patent Disperser (see page 93).

**Optimum drying conditions**
- 20°C room temperature, at least 50% rel. humidity and a sufficient air exchange rate
- Lower room temperatures may impair film formation on the surface.
- Relative humidity that is too low may cause initial drying of the varnish film that is too fast; an insufficient air exchange rate delays initial drying and full cure.

**Note:**
- Spraying thin layers of varnish closely to each other can achieve better results!
- Optimum drying conditions apply for stable conditions.
- Initial drying and full curing should be considered in the context of the drying conditions after application.

**Suitable species of wood**
MDF, priming films, solid wood

**Sanding**
180 - 220 grit, remove dust afterward

**Sealing (if required)**
Note: Spray edge - surface - edge!

**Filling**
Note: Spray edge - surface - edge! Repeat the process if necessary!

**Intermediate sanding**

**Colour varnishing**

**Clear varnishing (if required)**
Note: Trial varnishing in advance is generally advisable to check the colour and effect!
Sealing is a necessity for elements that will be subjected to strong moisture and heat loads! Finishing with a clear varnish increases the resistance of the surface to metal rings and is recommended for heavy loads! The degree of gloss can be varied by clear varnishing. To ensure that the hardener is thoroughly stirred and worked into the varnish, we recommend the use of the Remmers Patent Disperser (see page 93).

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- 20°C room temperature, at least 50% rel. humidity and a sufficient air exchange rate
- Lower room temperatures may impair film formation on the surface.
- Relative humidity that is too low may cause initial drying of the varnish film that is too fast; an insufficient air exchange rate delays initial drying and full cure.

**Suitable species of wood**
MDF, priming films, solid wood

**Sanding**
180 - 220 grit, remove dust afterward

**Sealing (if required)**
Note: Spray edge - surface - edge!

**Filling**
Note: Spray edge - surface - edge! Repeat the process if necessary!

**Intermediate sanding**

**Colour varnishing**

**Clear varnishing (if required)**
Note: Trial varnishing in advance is generally advisable to check the colour and effect!
Sealing is a necessity for elements that will be subjected to strong moisture and heat loads! Finishing with a clear varnish increases the resistance of the surface to metal rings and is recommended for heavy loads! The degree of gloss can be varied by clear varnishing. To ensure that the hardener is thoroughly stirred and worked into the varnish, we recommend the use of the Remmers Patent Disperser (see page 93).

**Optimum drying conditions**
- 20°C room temperature, at least 50% rel. humidity and a sufficient air exchange rate
- Lower room temperatures may impair film formation on the surface.
- Relative humidity that is too low may cause initial drying of the varnish film that is too fast; an insufficient air exchange rate delays initial drying and full cure.

**Suitable species of wood**
MDF, priming films, solid wood

**Sanding**
180 - 220 grit, remove dust afterward

**Sealing (if required)**
Note: Spray edge - surface - edge!

**Filling**
Note: Spray edge - surface - edge! Repeat the process if necessary!

**Intermediate sanding**

**Colour varnishing**

**Clear varnishing (if required)**
Note: Trial varnishing in advance is generally advisable to check the colour and effect!
Sealing is a necessity for elements that will be subjected to strong moisture and heat loads! Finishing with a clear varnish increases the resistance of the surface to metal rings and is recommended for heavy loads! The degree of gloss can be varied by clear varnishing. To ensure that the hardener is thoroughly stirred and worked into the varnish, we recommend the use of the Remmers Patent Disperser (see page 93).

**Optimum drying conditions**
- 20°C room temperature, at least 50% rel. humidity and a sufficient air exchange rate
- Lower room temperatures may impair film formation on the surface.
- Relative humidity that is too low may cause initial drying of the varnish film that is too fast; an insufficient air exchange rate delays initial drying and full cure.

**Suitable species of wood**
MDF, priming films, solid wood

**Sanding**
180 - 220 grit, remove dust afterward

**Sealing (if required)**
Note: Spray edge - surface - edge!

**Filling**
Note: Spray edge - surface - edge! Repeat the process if necessary!

**Intermediate sanding**

**Colour varnishing**

**Clear varnishing (if required)**
Note: Trial varnishing in advance is generally advisable to check the colour and effect!
Sealing is a necessity for elements that will be subjected to strong moisture and heat loads! Finishing with a clear varnish increases the resistance of the surface to metal rings and is recommended for heavy loads! The degree of gloss can be varied by clear varnishing. To ensure that the hardener is thoroughly stirred and worked into the varnish, we recommend the use of the Remmers Patent Disperser (see page 93).

**Optimum drying conditions**
- 20°C room temperature, at least 50% rel. humidity and a sufficient air exchange rate
- Lower room temperatures may impair film formation on the surface.
- Relative humidity that is too low may cause initial drying of the varnish film that is too fast; an insufficient air exchange rate delays initial drying and full cure.

**Suitable species of wood**
MDF, priming films, solid wood

**Sanding**
180 - 220 grit, remove dust afterward

**Sealing (if required)**
Note: Spray edge - surface - edge!

**Filling**
Note: Spray edge - surface - edge! Repeat the process if necessary!

**Intermediate sanding**

**Colour varnishing**

**Clear varnishing (if required)**
Note: Trial varnishing in advance is generally advisable to check the colour and effect!
Sealing is a necessity for elements that will be subjected to strong moisture and heat loads! Finishing with a clear varnish increases the resistance of the surface to metal rings and is recommended for heavy loads! The degree of gloss can be varied by clear varnishing. To ensure that the hardener is thoroughly stirred and worked into the varnish, we recommend the use of the Remmers Patent Disperser (see page 93).

**Optimum drying conditions**
- 20°C room temperature, at least 50% rel. humidity and a sufficient air exchange rate
- Lower room temperatures may impair film formation on the surface.
- Relative humidity that is too low may cause initial drying of the varnish film that is too fast; an insufficient air exchange rate delays initial drying and full cure.
**PUR HCL-242/90 HIGH GLOSS COLOR VARNISH**

Opaque, 2-Component Topcoat for High Gloss, Brilliant Furniture Surfaces

**Properties**
- High quality, opaque, high gloss, 2-component PU varnish.
- Good flow and excellent hiding power
- Dries quickly
- Extremely resistant to scratches and chemicals
- After sufficient drying, varnished surfaces can be polished

**Test standards:**
- DIN 4102-B1
  Flame resistant (application submitted)
- Flame resistant according to IMO Resolution for interior finishing of ships (application submitted)
- DIN EN 71-3
  Safety for toys
- DIN 68861 part 1, 1B
  Resistance to chemicals

**Application**
- Opaque, high gloss varnish for high quality furniture
- For kitchen cabinets and bathroom furnishings
- Ideal for surfaces that have been pre-treated with PUR PF-230 Pigment Filler

**Product data**

<table>
<thead>
<tr>
<th>Art. No./colour</th>
<th>The degree of gloss is high gloss/90 for all shades of colours</th>
</tr>
</thead>
<tbody>
<tr>
<td>3864</td>
<td>pure white (RAL 9010)</td>
</tr>
<tr>
<td>3865</td>
<td>deep black (RAL 9005)</td>
</tr>
<tr>
<td>3817</td>
<td>special colours upon request</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size of container</th>
<th>10 l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixing ratio with PUR H-280-Hardener</td>
<td>5:1</td>
</tr>
<tr>
<td>Thinning</td>
<td>If required with V-890 Thinner (p. 42)</td>
</tr>
<tr>
<td>Working time</td>
<td>4 - 6 hours</td>
</tr>
<tr>
<td>Application rate per coat</td>
<td>approx. 70 - 100 ml/m²</td>
</tr>
<tr>
<td>Application</td>
<td>spraying</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cup gun</th>
<th>Airless</th>
<th>Airmix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nozzle [mm]</td>
<td>1.6 - 1.8</td>
<td>0.23</td>
</tr>
<tr>
<td>Air pressure</td>
<td>2 - 3 bar</td>
<td>-</td>
</tr>
<tr>
<td>Material pressure</td>
<td>-</td>
<td>80 - 120 bar</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Drying at 20°C, 65% relative humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust dry after</td>
</tr>
<tr>
<td>Touch dry after</td>
</tr>
<tr>
<td>Can be sanded and re-coated after</td>
</tr>
<tr>
<td>Stacked after</td>
</tr>
<tr>
<td>Polished after</td>
</tr>
</tbody>
</table>
### SUGGESTIONS FOR WORKING

**High Gloss Varnishing with PUR HCL-242/90**

#### Suitable species of wood

<table>
<thead>
<tr>
<th>MDF, priming foil</th>
</tr>
</thead>
</table>

#### Sanding

**Sealing (if required)**

**Note:** As an alternative, sealing can also be executed with PUR PF-230 Pigment Filler in a mixing ratio of 5:1 with PUR H-280 Hardener.

#### Filling

**Note:** Spray edge - surface – edge! Repeat the process if necessary.

#### Intermediate sanding

**High Gloss Color Varnish**

**Note:** If necessary, 5% PUR V-893 Retarder or 2% PUR BS-895 Accelerator can be added.

#### Polishing

**Note:** When varnishing larger surfaces, the addition of approx. 5% V-893 Retarder is recommended to improve flow and achieve slower drying. Please remember that when applying high gloss varnishes it is essential that work is carried out in a dust-free environment. Thorough cleaning of the varnishing booth and varnishing equipment as well as wetting the floor are helpful measures. Trial varnishing in advance is advisable in general.

### PUR SL-210 Finish, mixing ratio 10:1 with PUR H-280 Hardener

- Application rate approx. 100-120 ml/m², dry for at least 3 hours at room temperature
- Spray with a cup gun 1.8 mm nozzle, air pressure 2-3 bar
- Spray with airless / airmix 0.28 mm nozzle, material pressure max. 100 bar, air pressure 1.2-2 bar

### PUR PF-230 Pigment Filler, mixing ratio 10:1 with PUR H-280 Hardener

- application rate approx. 120-150 ml/m², dry at least 3 hours at room temperature, better over night
- Spray with a cup gun 2-2.5 mm nozzle, air pressure 2-3 bar
- Spray with airless / airmix 0.33-0.38 mm nozzle, material pressure approx. 100 bar, air pressure 1.2-2 bar

### PUR HCL-242/90 High Gloss Color Varnish, mix. ratio 5:1 with PUR H-280 Hardener

- Application rate approx. 70-100 ml/m², dry in approx. 20 min., can be polished after approx. 3 days!
- Spray with a cup gun 1.4-1.6 mm nozzle, air pressure 2-3 bar
- Spray with airless / airmix 0.22 mm nozzle, material pressure max. 80 bar, air pressure 1.2 bar

### Sanding with 800 - 1200 grit paper, wet sanding up to 2000 grit, polish with a polishing attachment using a suitable polishing paste

#### Optimum drying conditions

- 20°C room temperature, at least 50% relative humidity and a sufficient air exchange rate
- Lower room temperatures may impair film formation on the surface.
- Relative humidity that is too low may cause initial drying of the varnish film that is too fast; an insufficient air exchange rate delays initial drying and full cure.
**PUR EL-241/30 GRANITE VARNISH**
Opaque, 2-Component Effect Varnish for a Textured Metallic Effect

**Properties**
Special, 2-component effect varnish. Because of its special pigmentation and texturing agent, it is suitable for producing surfaces with an exceptional appearance and feel.

- Contains special pigments and texturing agents
- Resistant to hot water and water vapour
- Very good hiding power
- Good flow
- Good stability on vertical surfaces
- Very good resistance to a number of household chemicals
- Varnished surfaces are extremely robust in regard to mechanical loads

**Application**
For decorating all conventional substrates in the furniture industry such as sanded priming foils, hardboard, sealed MDF boards and solid wood.

For high quality furniture such as:
- Chairs
- Office furniture
- Bathroom furnishings
- Kitchen cabinets

**Test standards:**
- DIN EN 71-3
- Safety for toys
- DIN 68861 part 1, 1B
- Resistant to chemicals

**Product data**

<table>
<thead>
<tr>
<th>Colour</th>
<th>accord. to colour collec.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art. No.</td>
<td>1969 (semi-matt/30)</td>
</tr>
<tr>
<td>Size of containers</td>
<td>1 kg, 5 kg</td>
</tr>
<tr>
<td>Mixing ratio with PUR H-280 Hardener</td>
<td>10:1</td>
</tr>
<tr>
<td>Thinning</td>
<td>if required with V-890 Thinner (p. 42)</td>
</tr>
<tr>
<td>Working time</td>
<td>1 work day</td>
</tr>
<tr>
<td>Application rate per coat</td>
<td>approx. 120 ml/m²</td>
</tr>
<tr>
<td>Application</td>
<td>spraying</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nozzle [mm]</th>
<th>Cup gun</th>
<th>Airless</th>
<th>Airmix</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.8 - 2.0</td>
<td>0.23 - 0.28</td>
<td>0.23 - 0.28</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Air pressure</th>
<th>2 - 3 bar</th>
<th>-</th>
<th>1.2 - 2.0 bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material pressure</td>
<td>80 - 120 bar</td>
<td>80 - 100 bar</td>
<td></td>
</tr>
</tbody>
</table>

**Drying at 20°C, 65% relative humidity**

- Dust dry after: approx. 30 - 40 min.
- Touch dry after: approx. 60 min.
- Can be sanded and re-coated after: approx. 2 hours
- Stacked after: drying overnight
**Colour Collection**

- Gold satin  Art. No. 1969-FT 19020
- Ochre metallic  Art. No. 1969-FT 19030
- Bronze metallic  Art. No. 1969-FT 19040
- Grey satin  Art. No. 1969-FT 19050
- Blue satin  Art. No. 1969-FT 19060
- Blue metallic  Art. No. 1969-FT 19070
- Violet metallic  Art. No. 1969-FT 19080
- Green metallic  Art. No. 1969-FT 19090
- Black metallic  Art. No. 1969-FT 19100
Hardener & Thinners for Soovent Based Varnishes
### COMBINATION POSSIBILITIES WITH PUR VARNISHES

**Using a Hardener, Thinners and Additives**

<table>
<thead>
<tr>
<th>Additive/Effects</th>
<th>PUR GLA-820 Glass Varnish Additive</th>
<th>SM-820 Texturing Agent</th>
<th>MM-823 Matting Agent</th>
<th>ULM-822 Universal Light Protector</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUR H-280 Hardener</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-890 Thinner</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WV-891 Brush Wash</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PUR BS-895 Accelerator</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PUR BML-215/10 Brilliant Matt Varnish</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Acryl VSL-115-Vario Finish: **Invalid**
- PUR FG-201 Filling Primer: **Invalid**
- PUR AG-200 Lightening Primer: **Invalid**
- PUR SL-210 Finish: **Valid**
- PUR HL-211/90 High Gloss: **Valid**
- PUR SL-214 Finish: **Valid**
- PUR SL-212 Finish: **Valid**
- PUR PF-230 Pigment Filler: **Invalid**
- PUR CL-240/30 Color Varnish: **Valid**
- PUR EL-241 Granite Varnish: **Invalid**
- PUR HCL-242/90 High Gloss Color Varnish: **Invalid**
- PUR TL-222 Stair Varnish: **Invalid**
- PUR BML-215/10 Brilliant Matt Varnish: **Valid**
**PUR H-280 HARDENER**
High Quality, Solvent Based, Isocyanate FOR ALL Remmers PUR Varnishes

**Product data**
- Colour: clear
- Art. No.: 1975
- Size of containers: 1 l, 2 l, 10 l
- Application rate per working operation: according to needs

**Properties**
- Lightfast, the cured varnish film does not change its inherent colour in falling light
- Just one hardener component for all Remmers 2-component PUR varnishes
- Minimises sources of errors by selecting the wrong hardener
- Little risk of the hardener getting past the use-by date
- Resistant to bleaching agents
- Free of aromatic hydrocarbons

**Application**
- For curing Remmers 2-component PUR varnishes and Acrylic VSL-115 in the specified mixing ratio

---

**V-890 THINNER**
High Quality Universal Thinner

**Product data**
- Colour: clear
- Art. No.: 1955
- Size of containers: 10 l, 30 l
- Application rate: according to needs

**Properties**
- Just one thinner for all Remmers NC & 2-component PUR varnishes
- Minimises sources of errors and facilitates stockkeeping
- Free of aromatic hydrocarbons

**Application**
- For thinning Remmers NC & 2-component PUR varnishes and for cleaning tools
- For adjusting solvent based stains for spraying without wiping

---

**WV-891 BRUSH WASH**
Solvent

**Product data**
- Colour: clear
- Art. No.: 1948
- Size of container: 30 l
- Application rate: according to needs

**Properties**
- Inexpensive product
- Good cleaning results
- Free of aromatic hydrocarbons

**Application**
- For cleaning tools after using Remmers NC & 2-component PUR varnishes
- Not suitable for thinning varnishes
**V-893 RETARDER**

**Properties**
- Improves flow properties and slows initial drying when varnishing large surfaces (e.g. table tops)
- Prevents clouding of NC varnishes in high relative humidity
- For application of PUR varnishes by brush or roller

**Application**
- For adjusting PUR SL, PUR HL, PUR HCL and NC SL varnishes
- For adjusting solvent based stains for spraying with wiping

**Product data**
- Colour: clear
- Art. No.: 1981
- Size of container: 1 l
- Quantity required as a retarder: add approx. 2 – 5% to the mixed varnish/hardener
- Quantity required as a retarder for brushing: add approx. 5 – 10% to the mixed varnish/hardener

**PUR BS-895 ACCELERATOR**

**Properties**
- To achieve faster drying time
- For lower working temperatures than specified in the Technical Data Sheets

**Application**
- For all Remmers PUR varnishes
- Not suitable for PUR TL-222 Stair Varnish
- To achieve faster polishing time of PUR HL-211/90 and PUR HCL-242/90

**Product data**
- Colour: clear
- Art. No.: 1945
- Size of container: 1 l
- Quantity required: max. 2% is added to the mixed varnish/hardener
- Working time: drying time for PUR varnishes is reduced to approx. 6 hours

**MM-823 MATTING AGENT**

**Properties**
- Reduces the degree of gloss of the varnish by approx. 10 gloss units

**Application**
- Matting paste for polyurethane and nitrocellulose varnishes to reduce the degree of gloss
- Not suitable for PUR TL-222 Stair Varnish
- Not suitable for matt varnishing systems

**Product data**
- Art. No.: 3867
- Size of container: 1 l
- Quantity required: add approx. 4% to the mixed varnish/hardener
PUR GLA-820 GLASS VARNISH ADDITIVE
Additive for Improving the Adhesion of Remmers PUR Varnishes to Glass

Properties

Glass is becoming more and more popular as a decorative element in furniture construction and shop fitting. PUR GLA-820 Glass Varnish Additive is a simple and inexpensive way to integrate glass into the decoration scheme.

- Special additive for 2-component PUR varnishes
- When mixed with the additive, the varnishes adhere to many types of glass
- Inexpensive alternative, also for small series
- Uncomplicated to use

Application

- For coloured decoration of the back side of glass
- For furniture construction and shop fitting
- Can be used with many of the Remmers 2-component PUR varnishes (see page 41)

Important Notes:

- Glass is not just glass. Carry out trial varnishing and check adhesion after corresponding drying time.
- Clean and de-grease panes of glass with V-890 Thinner. The pane of glass should be free of grease, dirt and dust.
- For example, mix PUR CL-240/30 in the desired shade of colour 10:1 with PUR H-280
- As an option, special effects can be achieved by adding SM-820 Texturing Agent (approx. 70 ml per litre ready-to-use varnish)
- Add 10% PUR GLA-820 Glass Varnish Additive to the mixed varnish/hardener and then work in thoroughly (e.g. with Remmers Patent Disperser)
- Spray 1 x with an application rate of approx. 100 – 120 ml/m²

Product data

<table>
<thead>
<tr>
<th>Colour</th>
<th>clear yellowish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art. No.</td>
<td>1946</td>
</tr>
<tr>
<td>Size of container</td>
<td>0.5 l</td>
</tr>
<tr>
<td>Working time</td>
<td>reduced by approx. 50 % when PUR GLA-820 is added to PUR varnishes</td>
</tr>
<tr>
<td>Quantity required</td>
<td>10% of the mixed varnish/hardener</td>
</tr>
</tbody>
</table>

For examples of varnishing glass*, see page 45
By adding SM-820 Texturing Agent, special effects concerning the appearance and feel of the varnish can be achieved on glass:

**Sand blasted effect:**
- PUR SL-210 Finish
- PUR H-280 Hardener (mixing ratio 10:1)
- PUR GLA-820 Glass Varnish Additive (approx. 10%)
- SM-820/L Texturing Agent coarse (approx. 70 ml per litre ready-to-use varnish)

**Satin effect:**
- PUR SL-210 Finish
- PUR H-280 Hardener (mixing ratio 10:1)
- PUR GLA-820 Glass Varnish Additive (approx. 10%)
- SM-820/S Texturing Agent fine (approx. 70 ml per litre ready-to-use varnish)

**Etched effect:**
- PUR SL-210 Finish
- PUR H-280 Hardener (mixing ratio 10:1)
- PUR GLA-820 Glass Varnish Additive (approx. 10%)
- SM-820/M Texturing Agent medium (approx. 70 ml per litre ready-to-use varnish)
Water Based, Clear Varnishes
# WATER BASED, CLEAR VARNISHES

## Properties and Options for Working at a Glance

<table>
<thead>
<tr>
<th>Products</th>
<th>Options for working</th>
<th>Typical elements</th>
<th>Special properties</th>
<th>Resistance to chemicals accord. to DIN 68861 part 1</th>
<th>Working time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Parquet Varnishes &amp; Primers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aqua FKL-402</td>
<td>Single component</td>
<td>Parquet and wood floors: for filling joints</td>
<td>Low-odour; little volume shrinkage; single component mixed with saw dust form sanding</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Aqua MSV-403</td>
<td>Single component</td>
<td>For priming parquet &amp; batten flooring; minimises glueing on sides</td>
<td>Low-odour; can be quickly sanded; minimises glueing on sides</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Aqua PL-413</td>
<td>Single comp./ 2-comp.</td>
<td>Parquet finished at the building site, batten flooring and for coating stairs</td>
<td>Exceptionally abrasion resistant, optimised for application with a roller</td>
<td>1B with restrictions</td>
<td>4 h</td>
</tr>
<tr>
<td>Aqua FG-401</td>
<td>Single comp./ 2-comp.</td>
<td>Universal</td>
<td>Highly transparent, particularly under matt and high gloss varnishes</td>
<td>-</td>
<td>4 h</td>
</tr>
<tr>
<td>Aqua ANG-404</td>
<td>Single component</td>
<td>Universal</td>
<td>Good emphasis of the grain; after priming varnishing can be continued “wet-on-damp”</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Finishes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aqua SL-414</td>
<td>1K</td>
<td>Panels, moulding, shelves, simple furniture, interior finishing</td>
<td>Very fast drying, can be stacked, particularly for series production</td>
<td>1C</td>
<td>-</td>
</tr>
<tr>
<td>Aqua SL-410</td>
<td>Single comp./ 2-comp.</td>
<td>Simple furniture, interior finishing</td>
<td>All-round finish with good transparency, fast drying</td>
<td>1C</td>
<td>4 h</td>
</tr>
<tr>
<td>Aqua SL-415</td>
<td>Single comp./ 2-comp.</td>
<td>Doors, high quality furniture, entire interior finishing, hand rails (stairs)</td>
<td>Single component: Resistant to PVC-plasticizers &amp; hand creams; very good emphasis of grain</td>
<td>1B (with the exception of alcohol)</td>
<td>4 h</td>
</tr>
<tr>
<td>Aqua TL-412</td>
<td>Single component</td>
<td>Stairs, counter tops, table tops</td>
<td>Very high build and efficient because of the high solid content; single component: very good resistance to abrasion and many handcreams</td>
<td>1B (with the exception of alcohol)</td>
<td>-</td>
</tr>
<tr>
<td>Aqua UV SL-510</td>
<td>Single component</td>
<td>Universal</td>
<td>UV-cured for efficient production; very fast release of water before UV-curing; very high resistance to chemicals</td>
<td>1B</td>
<td>3 h</td>
</tr>
<tr>
<td><strong>Topcoats</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aqua 2DS-450</td>
<td>2-component</td>
<td>Kitchen cabinets and counters, table tops, bathroom furnishings, high quality home furniture</td>
<td>Very high resistance to chemicals because of especially high crosslinking; good transparency</td>
<td>1B</td>
<td>1 h</td>
</tr>
<tr>
<td>Aqua 2HL-411/90</td>
<td>2-component</td>
<td>Kitchen &amp; bath furnishings, high quality home furniture, interior finishing, building elements that comply with the Deco Paint Directive</td>
<td>Deco Paint-compliant alternative to solvent based, high gloss varnishes; can be polished</td>
<td>1B</td>
<td>-</td>
</tr>
</tbody>
</table>
## AQUA FKL-402 JOINT FILLER LIQUID
### Special Product for Parquet and Wood Floors

### Properties
- Water based and mild-odour joint filler liquid for the production of wood fillers.
- Complies with the Deco Paint Directive
- Little volume shrinkage
- Solvent-free and odour-free
- Can be subsequently coated with a sealant or treated with: Aidol Hard Wax Oil, Aqua PL-413 Parquet Varnish, PL-113-Parquet Varnish

### Application
- For producing a filler with wood dust
- For filling parquet and wood floors
- The filler is used before the floor is sanded the last time (fine sanding)
- Aqua FKL-402 Joint Filler Liquid is filled into a separate container and mixed thoroughly with 10–20% wood dust; using too much wood dust has a negative effect on adhesion

### Product data
<table>
<thead>
<tr>
<th>Colour</th>
<th>clear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art. No.</td>
<td>2368</td>
</tr>
<tr>
<td>Size of container</td>
<td>5 l</td>
</tr>
<tr>
<td>Thinning</td>
<td>if necessary with water (2 - 5%)</td>
</tr>
<tr>
<td>Application rate per working operation</td>
<td>approx. 50 ml/m²</td>
</tr>
<tr>
<td>Can be sanded and re-coated after</td>
<td>approx. 30 - 60 min.</td>
</tr>
</tbody>
</table>

### AQUA MSV-403 PARQUET PRIMER
### Special Primer for Parquet and Wood Floors

### Properties
- Water based parquet primer to minimise glueing on the sides.
- Low-odour
- Complies with the Deco Paint Directive
- Minimises glueing on the sides
- Applied with a roller
- Sealed with Aqua PL-413 Parquet Varnish

### Application
- For priming parquet and wood floors when there is a risk of torn joints, e.g.
  - On edge parquet (industrial parquet)
  - Wood block flooring
  - Swimming batten flooring
  - Non-shear resistant parquet

### Product data
<table>
<thead>
<tr>
<th>Colour</th>
<th>clear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art. No.</td>
<td>2369</td>
</tr>
<tr>
<td>Size of container</td>
<td>5 l</td>
</tr>
<tr>
<td>Thinning</td>
<td>material is formulated ready-to-use</td>
</tr>
<tr>
<td>Application rate per coat</td>
<td>approx. 100 - 120 ml/m²</td>
</tr>
<tr>
<td>Drying at 20°C, 65% relative humidity</td>
<td>approx. 1 – 2 hours</td>
</tr>
<tr>
<td>Can be sanded and re-coated after</td>
<td>approximately 1 – 2 hours</td>
</tr>
</tbody>
</table>
AQUA PL-413 PARQUET VARNISH
High Quality, Single Component Sealant Applied with a Roller

Properties
Sealing varnish on a high quality PU/acrylate dispersion base that is applied with a roller.

- Low-odour
- Complies with the Deco Paint Directive
- Extremely abrasion and scratch resistant
- Very good resistance to water
- Excellent emphasis of the wood substrate
- Improved mechanical and chemical loading capacity is achieved when cured with 10 % Aqua H-480 Hardener

Application
As a single component varnish for hard wearing wood substrates in homes. Can also be used as a 2-component varnish with 10% Aqua H-480 Hardener for wood floors in homes and other objects that are subjected to heavy loads.

- Parquet
- Stairs
- Batten flooring

Test standards:
- DIN EN 71-3 Safety for toys
- DIN 53160 parts 1 and 2 Resistant to saliva and sweat
- DIN 68861 part 1, 1B Resistance to chemicals (with restrictions)

Product data

<table>
<thead>
<tr>
<th>Colour</th>
<th>clear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art. No.</td>
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</tr>
<tr>
<td></td>
<td>2375 (silk matt/30)</td>
</tr>
<tr>
<td></td>
<td>2376 (matt/20)</td>
</tr>
<tr>
<td>Size of containers</td>
<td>5 l, 10 l</td>
</tr>
<tr>
<td>Thinning</td>
<td>with water</td>
</tr>
<tr>
<td>Working time</td>
<td>4 hours when worked with Aqua H-480 Hardener</td>
</tr>
<tr>
<td>Application rate per coat</td>
<td>approx. 100 – 120 ml/m²</td>
</tr>
<tr>
<td>Application</td>
<td>roller</td>
</tr>
<tr>
<td>Drying at 20°C, 65% relative humidity</td>
<td>approx. 1 hour</td>
</tr>
<tr>
<td>Dust dry after</td>
<td>approx. 4 hours</td>
</tr>
<tr>
<td>Can be sanded and re-coated after</td>
<td>approx. 4 hours</td>
</tr>
</tbody>
</table>
# SEALING PARQUET

## Standard System for Shear Resistant, Glued Parquet

### Sanding

<table>
<thead>
<tr>
<th>100–120 grit</th>
</tr>
</thead>
</table>

### Filling

Aqua FKL-402 Joint Filler Liquid
Mix with 10–20% wood dust from prior sanding operation, dry for approx. 30–60 minutes at room temperature

### Sanding

<table>
<thead>
<tr>
<th>100–120 grit</th>
</tr>
</thead>
</table>

### Priming

<table>
<thead>
<tr>
<th>Aqua PL-413 Parquet Varnish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application rate approx. 100–120 ml/m², if required, thin with 5% water, dry for approx. 4 hours at room temperature</td>
</tr>
</tbody>
</table>

**Normal loads:** Apply as a single component product

**Heavy loads:** Add 10% Aqua H-480 Hardener

### Intermediate Sanding

<table>
<thead>
<tr>
<th>100–120 grit</th>
</tr>
</thead>
</table>

### Sealing

#### Normal loads:
Apply as a single component product

#### Heavy loads:
Add 10% Aqua H-480 Hardener

Aqua PL-413 Parquet Varnish
Application rate approx. 100–120 ml/m²

**180–220 grit (not necessary if sealed the same day)**

Aqua PL-413 Parquet Varnish
Application rate approx. 100–120 ml/m²

**Optimum drying conditions**
- 20°C room temperature, at least 50% rel. humidity and a sufficient air exchange rate
- Lower room temperatures may impair film formation on the surface.
- Relative humidity that is too low may cause initial drying of the varnish film that is too fast; an insufficient air exchange rate delays initial drying and full cure.
**SEALING PARQUET**

System for Minimising Glueing on the Sides

<table>
<thead>
<tr>
<th>Process</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sanding</td>
<td>100 - 120 grit</td>
</tr>
<tr>
<td>Filling</td>
<td>Aqua FKL-402 Joint Filler Liquid</td>
</tr>
<tr>
<td></td>
<td>Mix with 10-20% wood dust from previous sanding operation,</td>
</tr>
<tr>
<td></td>
<td>dry for approx. 30-60 minutes at room temperature</td>
</tr>
<tr>
<td>Sanding</td>
<td>100 - 120 grit</td>
</tr>
<tr>
<td>Priming</td>
<td>Aqua MSV-403 Parquet Primer</td>
</tr>
<tr>
<td></td>
<td>Application rate approx. 100-120 ml/m²,</td>
</tr>
<tr>
<td></td>
<td>dry for approx. 1-2 hours at room temperature</td>
</tr>
<tr>
<td>Intermediate sanding</td>
<td>Light intermediate sanding (not necessary if sealed the same day)</td>
</tr>
<tr>
<td>Priming</td>
<td>Aqua PL-413 Parquet Varnish</td>
</tr>
<tr>
<td></td>
<td>Application rate approx. 100-120 ml/m²,</td>
</tr>
<tr>
<td></td>
<td>dry for approx. 4 hours at room temperature</td>
</tr>
<tr>
<td>Intermediate sanding</td>
<td>Normal loads:</td>
</tr>
<tr>
<td></td>
<td>Apply as a single component product</td>
</tr>
<tr>
<td></td>
<td>Heavy loads:</td>
</tr>
<tr>
<td></td>
<td>Add 10% Aqua H-480 Hardener</td>
</tr>
<tr>
<td>Sealing</td>
<td>100 - 120 grit</td>
</tr>
<tr>
<td></td>
<td>Aqua PL-413 Parquet Varnish</td>
</tr>
<tr>
<td></td>
<td>Application rate approx. 100-120 ml/m²,</td>
</tr>
<tr>
<td></td>
<td>dry for approx. 4 hours at room temperature</td>
</tr>
<tr>
<td></td>
<td>Normal loads:</td>
</tr>
<tr>
<td></td>
<td>Apply as a single component product</td>
</tr>
<tr>
<td></td>
<td>Heavy loads:</td>
</tr>
<tr>
<td></td>
<td>Add 10% Aqua H-480 Hardener</td>
</tr>
<tr>
<td>Intermediate sanding</td>
<td>180 - 220 grit (not necessary if resealed the same day)</td>
</tr>
<tr>
<td></td>
<td>Aqua PL-413 Parquet Varnish</td>
</tr>
<tr>
<td></td>
<td>Application rate approx. 100-120 ml/m²,</td>
</tr>
<tr>
<td></td>
<td>Normal loads:</td>
</tr>
<tr>
<td></td>
<td>Apply as a single component product</td>
</tr>
<tr>
<td></td>
<td>Heavy loads:</td>
</tr>
<tr>
<td></td>
<td>Add 10% Aqua H-480 Hardener</td>
</tr>
</tbody>
</table>

**Essential differences between Aqua PL-413 Parquet Varnish with and without the addition of Aqua H-480 Hardener:**
- Abrasion resistant
- Alcohol resistant

The 2-component version is more resistant to alcohol, insensitive to strong cleaning agents and resistance to abrasion is approx. 30% higher. That is why the 2-component solution is more suitable for areas with heavier wear.

Regular maintenance of sealed parquet is also essential to maintain its good looks.

**Notes on maintenance:**
After 7 days, we recommend initial care with Aidol Stair and Parquet Fresh.
AQUA FG-401 FILLING PRIMER
Single Component Filling Primer for Varnishing in Interior Areas

Properties

- Highly transparent, water based filling primer for varnishing in interior areas.
- Very good build and good sanding behaviour
- By adding 10% Aqua H-480 Hardener the substrate is sealed off extremely well
- Low-odour
- Complies with the Deco Paint Directive

**Note:** The use of Aqua H-480 Hardener is especially recommended for preparing high gloss surfaces.

Application

- For refinishing elements made of MDF boards and wood used in interior areas
- Especially as a primer varnish beneath matt finishes for optimum transparency
- For preparing high gloss surfaces
- For sealing MDF boards in combination with Aqua H-480 Hardener

**Test standards:**

- DIN EN 71-3 Safety for toys
- DIN 53160 parts 1 and 2
- Resistant to saliva and sweat

Product data

<table>
<thead>
<tr>
<th>Colour</th>
<th>clear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art. No.</td>
<td>3266</td>
</tr>
<tr>
<td>Size of containers</td>
<td>5 l, 20 l</td>
</tr>
<tr>
<td>Working time</td>
<td>4 hours when worked with Aqua H-480 Hardener</td>
</tr>
<tr>
<td>Application rate per coat</td>
<td>approx. 120 – 150 ml/m²</td>
</tr>
<tr>
<td>Application</td>
<td>spraying</td>
</tr>
<tr>
<td>Nozzle [mm]</td>
<td>1.8</td>
</tr>
<tr>
<td>Air pressure [bar]</td>
<td>2 – 3</td>
</tr>
<tr>
<td>Material pressure [bar]</td>
<td>–</td>
</tr>
</tbody>
</table>

Drying at 20°C, 65% relative humidity

- Dust dry after: approx. 30 min.
- Touch dry after: approx. 1.5 hours
- Can be sanded and re-coated after: approx. 2 – 3 hours
- Stacked after: drying overnight
**AQUA ANG-404 INTENSIFYING PRIMER**

Special Primer for Intensifying Emphasis of the Grain with Aqua Varnishes

**Properties**

- Because of their warm emphasis of the grain on certain species of wood, 2-component PUR varnishes were usually preferred instead of water based varnishes.
- Aqua ANG-404 Intensifying Primer now creates a look that comes very close to the look of 2-component PUR varnished surfaces using a water based system.
  - Because of the very fine constituents of the dispersion, it penetrates deeply into the wood
  - This intensifies emphasis of the grain – similar to solvent based varnishes
  - Adhesion of the varnish is improved on hardwood and exotic species of wood
  - It also improves resistance of the varnish system to water on porous species of wood
  - Efficient working: Aqua ANG-404 replaces the first step when applying a 3-layer system
  - Aqua ANG-404 does not need to be sanded
  - After application, work can be continued “wet-on-damp”

**Application**

- For universal use on all species of wood in indoor areas
- For stairs, parquet, furniture and interior finishing
- Used beneath Remmers Aqua varnishes
- Can also be used as a special primer for opaque Aqua varnish systems to strengthen/seal the substrate (minimises swelling behaviour)

**Product data**

<table>
<thead>
<tr>
<th>Colour</th>
<th>clear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art. No.</td>
<td>3825</td>
</tr>
<tr>
<td>Size of container</td>
<td>5 l</td>
</tr>
<tr>
<td>Application rate</td>
<td>approx. 80 – 120 ml/m²</td>
</tr>
<tr>
<td>Application</td>
<td>brush, roller, spraying</td>
</tr>
<tr>
<td>Cup gun</td>
<td></td>
</tr>
<tr>
<td>Airless</td>
<td></td>
</tr>
<tr>
<td>Airmix</td>
<td></td>
</tr>
<tr>
<td>Nozzle [mm]</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td>0.23 – 0.28</td>
</tr>
<tr>
<td></td>
<td>0.23 – 0.28</td>
</tr>
<tr>
<td>Air pressure</td>
<td>2 – 3 bar</td>
</tr>
<tr>
<td></td>
<td>0.23 – 2.0 bar</td>
</tr>
<tr>
<td>Material pressure</td>
<td>80 – 120 bar</td>
</tr>
<tr>
<td></td>
<td>80 – 100 bar</td>
</tr>
</tbody>
</table>
SUGGESTIONS FOR WORKING

Finishing with Intensifying Primer

Suitable species of wood

Steamed beech, oak, wenge, walnut..., various exotic types (test system in advance)

Sanding

Note: Subsequent finishing can be carried out “wet-on-damp” or after drying without intermediate sanding.

100 - 180 grit, remove dust afterward

Priming

Aqua ANG-404 Intensifying Primer

Application rate 80-120 ml/m², dry for approx. 5 minutes

Spray with a cup gun
1.8 mm nozzle, air pressure 2 - 3 bar

Spray with airless / airmix
0.23 - 0.28 mm nozzle, material pressure approx. 80 - 100 bar, air pressure 1.2 - 2 bar

Intermediate sanding

Aqua SL-410/414 Finish with the desired degree of gloss

Application rate: 80-120 ml/m², dry in 2 - 3 hours at room temperature

Spray with a cup gun
1.8 mm nozzle, air pressure 2 - 3 bar

Spray with airless / airmix
0.23 - 0.28 mm nozzle, material pressure approx. 80 - 100 bar, air pressure 1.2 - 2 bar

220 - 280 grit, remove dust thoroughly afterward (dust binding cloth)

Finishing

Aqua SL-410/414 Finish with the desired degree of gloss

Application rate: 80-120 ml/m², dry for 2 - 3 hours at room temperature

Spray with a cup gun
1.8 mm nozzle, air pressure 2 - 3 bar

Spray with airless / airmix
0.23 - 0.28 mm nozzle, material pressure approx. 80 - 100 bar, air pressure 1.2 - 2 bar

Optimum drying conditions

- 20°C room temperature, at least 50% rel. humidity and a sufficient air exchange rate
- Lower room temperatures may impair film formation on the surface.

- Relative humidity that is too low may cause initial drying of the varnish film that is too fast; an insufficient air exchange rate delays initial drying and full cure.

Suitable species of wood

Steamed beech, oak, wenge, walnut..., various exotic types (test system in advance)

Sanding

Note: Subsequent finishing can be carried out “wet-on-damp” or after drying without intermediate sanding.

100 - 180 grit, remove dust afterward

Priming

Aqua ANG-404 Intensifying Primer

Application rate 80-120 ml/m², dry for approx. 5 minutes

Spray with a cup gun
1.8 mm nozzle, air pressure 2 - 3 bar

Spray with airless / airmix
0.23 - 0.28 mm nozzle, material pressure approx. 80 - 100 bar, air pressure 1.2 - 2 bar

Intermediate sanding

Aqua SL-410/414 Finish with the desired degree of gloss

Application rate: 80-120 ml/m², dry in 2 - 3 hours at room temperature

Spray with a cup gun
1.8 mm nozzle, air pressure 2 - 3 bar

Spray with airless / airmix
0.23 - 0.28 mm nozzle, material pressure approx. 80 - 100 bar, air pressure 1.2 - 2 bar

220 - 280 grit, remove dust thoroughly afterward (dust binding cloth)

Finishing

Aqua SL-410/414 Finish with the desired degree of gloss

Application rate: 80-120 ml/m², dry for 2 - 3 hours at room temperature

Spray with a cup gun
1.8 mm nozzle, air pressure 2 - 3 bar

Spray with airless / airmix
0.23 - 0.28 mm nozzle, material pressure approx. 80 - 100 bar, air pressure 1.2 - 2 bar

Optimum drying conditions

- 20°C room temperature, at least 50% rel. humidity and a sufficient air exchange rate
- Lower room temperatures may impair film formation on the surface.

- Relative humidity that is too low may cause initial drying of the varnish film that is too fast; an insufficient air exchange rate delays initial drying and full cure.
AQUA SL-414 Finish
Clear, Single Component Finish That Dries Extremely Quickly

Properties
Water based, clear acrylic varnish for interior areas. Because of the attractive price per litre, this product is an interesting, environmentally correct alternative for (former) users of NC varnishes. As opposed to all of the other products in the Remmers Aqua series, Aqua SL-414 Finish is intended solely as a single component product. The use of Aqua H-480 Hardener is not possible.

- Low-odour
- Complies with the Deco Paint Directive
- Uniform build, good flow
- Good resistance
- Good sanding properties
- Extremely fast drying and can be quickly stacked

Application
- Primer and topcoat
- For wood elements made of pine, spruce, beech, maple, oak, alder, etc. subjected to normal loads
- For furniture, interior doors and cases, panels, moulding, shelves, trade fair fittings, etc.

Test standards:
- DIN EN 71-3
  Safety for toys
- DIN 53160 parts 1 and 2
  Resistant to saliva and sweat
- DIN 68861 part 1, 1C
  Resistance to chemicals

Product data

<table>
<thead>
<tr>
<th>Colour</th>
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<tbody>
<tr>
<td>Art. No.</td>
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<tr>
<td>Size of containers</td>
<td>20 l, 120 l</td>
</tr>
<tr>
<td>Thinning</td>
<td>if necessary with water (2 - 5%)</td>
</tr>
<tr>
<td>Application rate per coat</td>
<td>approx. 80 - 130 ml/m²</td>
</tr>
<tr>
<td>Application</td>
<td>curtain coating, spraying</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nozzle [mm]</th>
<th>Cup gun</th>
<th>Airless</th>
<th>Airmix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air pressure</td>
<td>2 - 3 bar</td>
<td>0.23 - 0.28</td>
<td>1.2 - 2.0 bar</td>
</tr>
<tr>
<td>Material pressure</td>
<td>80 - 120 bar</td>
<td>80 - 100 bar</td>
<td></td>
</tr>
</tbody>
</table>

Drying at 20°C, 65% relative humidity
- Dust dry after approx. 20 min.
- Touch dry after approx. 30 min.
- Can be sanded and re-coated after approx. 60 min.
- Stacked after approx. 4 - 5 hours
**AQUA SL-410 FINISH**

Water Clear Acrylic Varnish for Varnishing in Interior Areas

**Properties**

- Water clear
- Low-odour
- Complies with the Deco Paint Directive
- Excellent resistance to many household chemicals
- Good resistance to mechanical loads
- Very good scratch resistance
- Easy to apply
- Good sanding behaviour
- Uniform build, good flow
- If required, a sealing effect against substances in the wood that bleed and resistance to PVC plasticizers can be achieved by adding 10% Aqua H-480 Hardener

**Application**

- For wood and wood working materials in interior areas
- As a primer and topcoat
- Can also be used as a finish over Color Varnishes
- For doors, furniture, mouldings

**Test standards:**
- DIN EN 71-3
  Safety for toys
- DIN 68861 part 1, 1B
  Resistance to chemicals (with restrictions)

**Product data**

<table>
<thead>
<tr>
<th>Colour</th>
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<tbody>
<tr>
<td>Art. No.</td>
<td>3800 (silk matt/30) 3801 (silk gloss/50) 3804 (mat/20)</td>
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<td>Size of containers</td>
<td>5 l, 20 l</td>
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<tr>
<td>Working time</td>
<td>3 hours when worked with Aqua H-480 Hardener</td>
</tr>
<tr>
<td>Application rate per coat</td>
<td>approx. 80 – 120 ml/m²</td>
</tr>
<tr>
<td>Application</td>
<td>spraying</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cup gun</th>
<th>Airless</th>
<th>Airmix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nozzle [mm]</td>
<td>1.8</td>
<td>0.23 – 0.28</td>
</tr>
<tr>
<td>Air pressure</td>
<td>2 – 3 bar</td>
<td>–</td>
</tr>
<tr>
<td>Material pressure</td>
<td>–</td>
<td>80 – 120 bar</td>
</tr>
</tbody>
</table>

- Drying at 20°C, 65% relative humidity
- Dust dry after approx. 1 hour
- Touch dry after 90 minutes
- Can be sanded and re-coated after approx. 2 – 3 hours
- Stacked after drying overnight
AQUA SL-415 FINISH
Clear Acrylic Varnish with Good Emphasis for Varnishing in Interior Areas

Properties
Aqua SL-415 Finish is a new generation water based, clear varnish from Remmers and is distinguished by the following properties:

- Low-odour
- Complies with the Deco Paint Directive
- High build
- Very good flow and emphasis of the grain
- Can be quickly sanded, good sanding properties
- Resistant to PVC plasticizers and many handcreams even when used as a single component product
- Extremely suitable for varnishing interior doors
- Also good for working on vertical surfaces

Application
- For furniture, interior finishing and particularly for doors
- As a primer and topcoat
- Can also be used as a topcoat over Color Varnishes

Test standards:
- DIN EN 71-3
- Safety for toys
- DIN 53160 parts 1 and 2
- Resistant to saliva and sweat
- DIN 68861 part 1, 1B
- Resistant to chemicals (with the exception of alcohol)

Drying at 20°C, 65% relative humidity

<table>
<thead>
<tr>
<th></th>
<th>Cup gun</th>
<th>Airless</th>
<th>Airmix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust dry after</td>
<td>1.8 – 2.0 bar</td>
<td>0.23 – 0.28 bar</td>
<td>0.23 – 0.28 bar</td>
</tr>
<tr>
<td>Touch dry after</td>
<td>2 – 3 bar</td>
<td>–</td>
<td>1.2 – 2.0 bar</td>
</tr>
<tr>
<td>Can be sanded and re-coated after</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Stacked after</td>
<td>drying overnight</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Air pressure</td>
<td>2 – 3 bar</td>
<td>–</td>
<td>1.2 – 2.0 bar</td>
</tr>
<tr>
<td>Material pressure</td>
<td>–</td>
<td>80 – 120 bar</td>
<td>80 – 100 bar</td>
</tr>
</tbody>
</table>

Test standards:
- DIN EN 71-3
- Safety for toys
- DIN 53160 parts 1 and 2
- Resistant to saliva and sweat
- DIN 68861 part 1, 1B
- Resistant to chemicals (with the exception of alcohol)

Product data

<table>
<thead>
<tr>
<th>Colour</th>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>clear</td>
<td>1856 (gloss/70)</td>
</tr>
<tr>
<td></td>
<td>1855 (silk gloss/50)</td>
</tr>
<tr>
<td></td>
<td>1854 (semi-matt/30)</td>
</tr>
<tr>
<td></td>
<td>1853 (matte/20)</td>
</tr>
<tr>
<td></td>
<td>1852 (dull matt/10)</td>
</tr>
<tr>
<td></td>
<td>3818 special colours</td>
</tr>
<tr>
<td></td>
<td>(semi-matt/30)</td>
</tr>
<tr>
<td>Size of containers</td>
<td>5 l, 20 l</td>
</tr>
<tr>
<td>Thinning</td>
<td>if necessary with 2 – 5% water</td>
</tr>
<tr>
<td>Working time</td>
<td>3 hours when worked with Aqua H-480 Hardener</td>
</tr>
<tr>
<td>Application rate per coat</td>
<td>approx. 80 – 120 ml/m²</td>
</tr>
<tr>
<td>Application</td>
<td>spraying</td>
</tr>
</tbody>
</table>

Drying at 20°C, 65% relative humidity

<table>
<thead>
<tr>
<th>Drying at 20°C, 65% relative humidity</th>
<th>Cup gun</th>
<th>Airless</th>
<th>Airmix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust dry after</td>
<td>1.8 – 2.0 bar</td>
<td>0.23 – 0.28 bar</td>
<td>0.23 – 0.28 bar</td>
</tr>
<tr>
<td>Touch dry after</td>
<td>2 – 3 bar</td>
<td>–</td>
<td>1.2 – 2.0 bar</td>
</tr>
<tr>
<td>Can be sanded and re-coated after</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Stacked after</td>
<td>drying overnight</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>
**SUGGESTIONS FOR WORKING**

## Finishing with Aqua Varnishes

### Suitable species of wood

- Beech, oak, maple..., various tropical species of wood (test system in advance)

### Sanding

- 120 - 180 grit, remove dust afterward

### Staining (if applicable)

**Note:** Trial varnishing in advance is recommended. Highly absorbent species of wood may need to be primed twice to achieve the desired build. Product properties can be improved by adding Aqua H-480 Hardener. To ensure that the hardener is thoroughly stirred and worked into the varnish, we recommend using the Remmers Patent Disperser (see page 93).

### Priming

- **Aqua KB-004 Compact Stain**
  - Spray with a cup gun
  - 1.3-1.5 mm nozzle, air pressure 2-3 bar,
  - dry for 2-3 hours at room temperature

### Intermediate sanding

- 220 - 280 grit, remove dust afterward

### Finishing

- **Aqua SL-415 Finish with the desired degree of gloss**
  - Application rate approx. 80-120 ml/m², dry for 2-3 hours at room temperature
  - Spray with cup gun
  - 1.8 mm nozzle, air pressure 2 - 3 bar
  - Spray with airless / airmix
  - 0.23 - 0.28 mm nozzle, material pressure approx. 100 bar, air pressure 1.2 - 2 bar

- **Aqua SL-415 Finish in the desired degree of gloss**
  - Application rate approx. 80-120 ml/m², dry for 2-3 hours at room temperature
  - Spray with cup gun
  - 1.8 mm nozzle, air pressure 2 - 3 bar
  - Spray with airless / airmix
  - 0.23 - 0.28 mm nozzle, material pressure approx. 100 bar, air pressure 1.2 - 2 bar

### Optimum drying conditions

- 20°C room temperature, at least 50% rel. humidity and a sufficient air exchange rate
- Lower room temperatures may impair film formation on the surface.
- Relative humidity that is too low may cause initial drying of the varnish film that is too fast; an insufficient air exchange rate delays initial drying and full cure.
AQUA TL-412 STAIR VARNISH
Single Component, High Quality, Water Based Sealing Varnish

Properties

- Low-odour
- Complies with the Deco Paint Directive
- Very economical because of its high solid content
- Excellent build: Top surfaces after just two sprayed coats
- Dries quickly, good sanding properties
- Very good resistance to many handcreams, household chemicals and PVC plasticizers even when used as a single component varnish
- Extremely high abrasion resistance
- Good transparency and smooth surface

Application

- Stairs
- For all types of wood elements and furniture in living spaces

Test standards:

- DIN EN 71-3 Safety for toys
- DIN 53160 parts 1 and 2 Resistant to saliva and sweat
- DIN 68861 part 1, 1B Resistant to chemicals (with the exception of alcohol)
- The abrasion resistance of Aqua TL-412 and Aqua H-480 has been tested according to DIN ENV 13696 and meets the “ihd requirement profile for wood floor varnishes” in utilisation classes 1 - 6
- Resistant to handcreams (Remmers internal test)

Product daten

<table>
<thead>
<tr>
<th>Colour</th>
<th>Art-Nr.</th>
<th>Size of containers</th>
<th>Thinning</th>
<th>Working time</th>
<th>Application rate per coat</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>clear</td>
<td>2370 (matt/20)</td>
<td>5 l, 20 l</td>
<td>if necessary with water (2 - 5%)</td>
<td>4 hours when worked with Aqua H-480 Hardener</td>
<td>approx. 100 – 130 ml/m²</td>
<td>spraying, dipping</td>
</tr>
<tr>
<td></td>
<td>2372 (silk gloss/50)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2373 (silk matt/30)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3819 special colours (silk matt/30)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thinning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Application</td>
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<td></td>
<td></td>
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<tr>
<td>rate per coat</td>
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<td></td>
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</tr>
<tr>
<td>Application</td>
<td>Cup gun</td>
<td>Airless</td>
<td>Airmix</td>
<td>Cup gun</td>
<td>Airless</td>
<td>Airmix</td>
</tr>
<tr>
<td>cup gun</td>
<td>1.8</td>
<td>0.28 – 0.33</td>
<td>0.28 – 0.33</td>
<td>2 – 3 bar</td>
<td>1.2 – 2.0 bar</td>
<td>80 – 120 bar</td>
</tr>
<tr>
<td>Air pressure</td>
<td>2 – 3 bar</td>
<td>–</td>
<td>1.2 – 2.0 bar</td>
<td>80 – 120 bar</td>
<td>80 – 100 bar</td>
<td></td>
</tr>
<tr>
<td>Material pressure</td>
<td>–</td>
<td>80 – 120 bar</td>
<td>80 – 100 bar</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drying at 20°C, 65% relative humidity</td>
<td>approx. 1 hour</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Can be sanded and re-coated after</td>
<td>approx. 2 – 4 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stacked after</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>drying overnight</td>
</tr>
</tbody>
</table>
SUGGESTIONS FOR WORKING

Varnishing Stairs with Aqua Varnishes

Suitable species of wood

Beech, oak, maple..., various tropical species of wood (test system in advance)

Sanding

120 – 180 grit, remove dust afterward

Staining (if applicable)

Aqua KB-004 Compact Stain
1.3-1.5 mm nozzle, air pressure 2 - 3 bar, dry for 2-3 hours at room temperature

Note: Trial varnishing in advance is recommended. Highly absorbent species of wood may need to be primed twice to achieve the desired build. Product properties can be improved by adding Aqua H-480 Hardener. To ensure that the hardener is thoroughly stirred and worked into the varnish, we recommend using the Remmers Patent Disperser (see page 93).

Priming

Note: Prime twice if necessary.

Intermediate sanding

220 - 240 grit, remove dust afterward

Finishing

Aqua TL-412 Stair Varnish in the desired degree of gloss
Application rate approx. 100-130 ml/m², dry for 2-4 hours at room temperature

Spray with a cup gun
1.8 mm nozzle, air pressure 2 - 3 bar

Aqua TL-412 Stair Varnish in the desired degree of gloss
Application rate approx. 100-130 ml/m², dry for 2-4 hours at room temperature

Spray with airless / airmix
0.23 - 0.28 mm nozzle, material pressure approx. 100 bar, air pressure 1.2-2 bar

Optimum drying conditions

- 20°C room temperature, at least 50% rel. humidity and a sufficient air exchange rate
- Lower room temperatures may impair film formation on the surface.
- Relative humidity that is too low may cause initial drying of the varnish film that is too fast; an insufficient air exchange rate delays initial drying and full cure.
AQUA-UV SL-510 FINISH
Radiation Cured, Multiple-Layer Varnish for Indoor Areas

Properties
UV-curing varnish systems have been gaining ground in the wood working trade because of advantages such as efficient application and environmental friendliness. Aqua UV SL-510 Finish is a multi-layer varnish for universal use that cures within seconds after forced drying and UV-radiation.

- Good build
- High transparence
- Very good feel
- Highly resistant to water
- After UV-curing the coated elements can be immediately stacked

Application
- For wood elements in interior areas
- e.g. home furniture, doors, table tops, stair steps, etc. as a primer and a topcoat
- For operations equipped for the technology (forced drying, UV-lamp)

Test standards:
- DIN EN 71-3 Safety for toys
- DIN 53160 parts 1 and 2 Resistant to saliva and sweat
- DIN 68861 part 1, 1B Resistant to chemicals

Product data

<table>
<thead>
<tr>
<th>Colour</th>
<th>clear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art. No.</td>
<td>3786 (matt/20) 3787 (semi-matt/30)</td>
</tr>
<tr>
<td>Size of container</td>
<td>20 l</td>
</tr>
<tr>
<td>Thinning</td>
<td>if necessary with water (max. 5%)</td>
</tr>
<tr>
<td>Application rate per coat</td>
<td>approx. 80–120 ml/m²</td>
</tr>
<tr>
<td>Application</td>
<td>spraying</td>
</tr>
<tr>
<td>Nozzle [mm]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cup gun 1.8</td>
</tr>
<tr>
<td>Air pressure</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2–3 bar 2–3 bar</td>
</tr>
<tr>
<td>Material pressure</td>
<td>- 100–120 bar</td>
</tr>
</tbody>
</table>

Drying at 20°C, 65% relative humidity
- Forced drying at 40°C with jet drier for 15 min
- Curing 2 mercury lamps 80 watt, 5 m/min
- Can be sanded directly after curing
- Stacked directly after curing
AQUA 2DS-450-2K DIAMOND SEAL
2-Component Acrylic Varnish for Highest Quality Varnishing in Interior Areas

**Properties**

Aqua 2DS-450–2K Diamond Seal is a new development and was designed as a 100% replacement for solvent based, 2-component PUR varnishes. The material can be applied as a multiple-layer varnish or as a topcoat and is highly convincing because it is resistant to chemicals and scratches without any compromises.

- Uniform build, good flow
- Extremely resistant to scratches, household chemicals (without restrictions DIN 68861 part 1, 1B), PVC plasticizers and handcreams

**Application**

- For furniture surfaces that are subjected to extreme loads
- e.g. kitchen counters and table tops
- Can also be used as a topcoat on opaque varnished or clear varnished dark wood or dark stained wood

**Test standards:**
- DIN EN 71-3 Safety for toys
- DIN 53160 part 1 and 2 Resistant to saliva and sweat
- DIN 68861 part 1, 1B Resistant to chemicals

**Product data**

<table>
<thead>
<tr>
<th>Colour</th>
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<tbody>
<tr>
<td>Art. No.</td>
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<tr>
<td>Size of containers</td>
<td>5 l, 20 l</td>
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<tr>
<td>Mixing ratio with Aqua H-480 Hardener</td>
<td>10:1</td>
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<tr>
<td>Thinning</td>
<td>if necessary with water (2 – 5%)</td>
</tr>
<tr>
<td>Pot-life</td>
<td>approx. 3 hours</td>
</tr>
<tr>
<td>Application rate per coat</td>
<td>approx. 80 – 120 ml/m²</td>
</tr>
<tr>
<td>Application</td>
<td>spraying</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Cup gun</th>
<th>Airless</th>
<th>Airmix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nozzle [mm]</td>
<td>1.8</td>
<td>0.23 – 0.28</td>
<td>0.23 – 0.28</td>
</tr>
<tr>
<td>Air pressure</td>
<td>2 – 3 bar</td>
<td>-</td>
<td>1.2 – 2.0 bar</td>
</tr>
<tr>
<td>Material pressure</td>
<td>100 – 120 bar</td>
<td>80 – 100 bar</td>
<td></td>
</tr>
</tbody>
</table>

**Drying at 20°C, 65% relative humidity**
- Dust dry after approx. 1 hour
- Touch dry after approx. 1.5 hours
- Can be sanded and re-coated after approx. 2 – 3 hours
- Stacked after drying overnight
AQUA 2HL-411/90 HIGH GLOSS
2-Component, Acrylic Finish for High Gloss Varnishing Subjected to Heavy Loads

Properties
- Uniform build, good flow
- Excellent emphasis of the grain and lightfast to a high degree
- Extremely resistant to scratches, household chemicals (unrestricted DIN 68861 part 1, 1B), PVC plasticizers and handcream

Application
- To achieve high gloss surfaces
- For furniture surfaces subjected to extreme loads: e.g. kitchen counters and table tops
- For stationary elements in interior areas - complies with the Deco Paint Directive without any restrictions
- Can also be used as a topcoat on opaque varnished surfaces

Test standards:
- DIN EN 71-3
  Safety for toys
- DIN 53160 parts 1 and 2
  Resistant to saliva and sweat
- DIN 68861 part 1, 1B
  Resistant to chemicals

Product data

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<thead>
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<tbody>
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<tr>
<td>Size of container</td>
<td>5 l</td>
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<tr>
<td>Mixing ratio with Aqua H-480 Hardener</td>
<td>5:1</td>
</tr>
<tr>
<td>Thinning</td>
<td>if necessary with water (2 – 5%)</td>
</tr>
<tr>
<td>Pot-life</td>
<td>approx. 60 min.</td>
</tr>
<tr>
<td>Application rate per coat</td>
<td>approx. 80 – 120 ml/m²</td>
</tr>
<tr>
<td>Application</td>
<td>spraying</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Cup gun</th>
<th>Airless</th>
<th>Airmix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nozzle [mm]</td>
<td>1.8</td>
<td>0.23 – 0.28</td>
<td>0.23 – 0.28</td>
</tr>
<tr>
<td>Air pressure</td>
<td>2 – 3 bar</td>
<td>–</td>
<td>1.2 – 2.0 bar</td>
</tr>
<tr>
<td>Material pressure</td>
<td>–</td>
<td>100 – 120 bar</td>
<td>80 – 100 bar</td>
</tr>
</tbody>
</table>

Drying at 20°C, 65% relative humidity
- Dust dry after | approx. 30 – 45 min. |
- Touch dry after | approx. 90 min. |
- Can be sanded and re-coated after | approx. 12 hours |
- Stacked after | approx. 14 – 16 hours |
- Polished after | approx. 3 days |

Drying at 20°C, 65% relative humidity
- Dust dry after | approx. 30 – 45 min. |
- Touch dry after | approx. 90 min. |
- Can be sanded and re-coated after | approx. 12 hours |
- Stacked after | approx. 14 – 16 hours |
- Polished after | approx. 3 days |
## SUGGESTIONS FOR WORKING
### High Gloss Varnishing with 2-Component Aqua Varnishes

<table>
<thead>
<tr>
<th><strong>Suitable species of wood</strong></th>
<th>Cherry, mahogany, walnut..., various species of tropical wood (test system in advance)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sanding</strong></td>
<td>120 - 180 grit, remove dust afterward</td>
</tr>
</tbody>
</table>
| **Staining (if applicable)**| **Aqua KB-004 Compact Stain**  
Spray with a cup gun  
1.3-1.5 mm nozzle, air pressure 2 - 3 bar,  
dry for 2-3 hours at room temperature |
| **Priming**                 | **PUR FG-401 Filling Primer, mixing ratio 10:1 with Aqua H-480 Hardener**  
Spray with a cup gun  
1.8 mm nozzle, air pressure 2-3 bar  
Application rate approx. 80-120 ml/m²,  
dry for 2-3 hours at room temperature |
| **Intermediate sanding**    | 400 - 600 grit, remove dust thoroughly (dust binding cloth)                      |
| **Finishing**               | **Aqua 2HL-411/90-2K High Gloss, mixing ratio 5:1 with Aqua H-480 Hardener**  
Spray with airless / airmix  
0.23 - 0.28 mm nozzle,  
material pressure approx. 100 bar,  
air pressure 1.2-2 bar  
Application rate approx. 120 ml/m²  
The surface can be polished after approx. 3 days |
| Note:                       | When varnishing some species of tropical wood such as mahogany, it has proved advantageous to prime several times with strongly diluted varnish to make sure that very fine pores are closed. Highly absorbent species of wood such as limba may need to be primed several times to make sure there is sufficient build. Please remember that when applying high gloss varnishes, the working areas must be dust-free. Thorough cleaning of the varnishing booth and varnishing equipment and, if necessary, wetting the floor is also beneficial. Trial varnishing in advance is generally advisable; if necessary, varnish with Aqua 2HL-411/90 after drying for 12 hours, without intermediate sanding, and repeat with fresh material. |
| Note:                       | To ensure that the hardener is stirred and worked into the varnish thoroughly, we recommend the use of the Remmers Patent Disperser (see page 93). If necessary, prime several times with Aqua-FG-401 Filling Primer. |
| Note:                       | When varnishing some species of tropical wood such as mahogany, it has proved advantageous to prime several times with strongly diluted varnish to make sure that very fine pores are closed. Highly absorbent species of wood such as limba may need to be primed several times to make sure there is sufficient build. Please remember that when applying high gloss varnishes, the working areas must be dust-free. Thorough cleaning of the varnishing booth and varnishing equipment and, if necessary, wetting the floor is also beneficial. Trial varnishing in advance is generally advisable; if necessary, varnish with Aqua 2HL-411/90 after drying for 12 hours, without intermediate sanding, and repeat with fresh material. |
| Note:                       | Relative humidity that is too low may cause initial drying of the varnish film that is too fast; an insufficient air exchange rate delays initial drying and full cure. |

### Optimum drying conditions
- 20°C room temperature, at least 50% rel. humidity and a sufficient air exchange rate
- Lower room temperatures may impair film formation on the surface.
Water Based Color Varnishes
AQUA PF-430 PIGMENT FILLER
Single Component Filler with Very Good Sanding Properties for Opaque Varnishing

Properties
Opaque, water based filler for interior varnishing work.

- Low-odour
- Complies with the Deco Paint Directive
- Good build and hiding power
- Can be sanded quickly, good sanding behaviour
- A single component, the product has excellent properties and does not need a hardener
- Seals off substances in the wood very well (e.g. oak)

Note: Aqua PF-430 Pigment Filler is also available in light shades of RAL colours. This is especially interesting for simple elements, e.g. the insides of cabinets (and for varnishing stairs). Since the product can be tinted, varnishing with a high quality coloured varnish (and clear finish to achieve resistance to metal rings) can often be dispensed with for such elements. In that case, the tinted filler is just sealed with a clear topcoat (e.g. Aqua SL-415 Finish).

Application
For preparing closed-pore surfaces. For priming and intermediate coating of all conventional substrates used in interior finishing.

- Solid wood
- Sealed MDF boards
- Priming films
- Hardboard
- High quality furniture
- Doors, etc.

Test standards:
- DIN EN 71-3
  Safety for toys

Colours*:

- RAL 9010 pure white
- RAL 9001 cream white
- RAL 1013 pearl white
- RAL 1015 light ivory
- RAL 9002 grey-white
- RAL 7047 tele grey 4
- RAL 7035 light grey
- RAL 9018 papyrus white

* Other shades of colour upon request. Printed colours may deviate from the actual colours.

Product data

| Art.Nr./colour | 3265/white  
| 3267/special colours |
| Size of containers | 5 l, 20 l |
| Thinning | not necessary, ready to use |
| Application per working operation | approx. 120 - 150 ml/m² |
| Application | spraying |

| Cup gun | Airless | Airmix |
| Nozzle [mm] | 2.0 - 2.5 | 0.33 - 0.38 | 0.33 - 0.38 |
| Air pressure | 2 - 3 bar | - | 1.2 - 2.0 bar |
| Material pressure | - | 80 - 120 bar | 80 - 100 bar |

- Drying at 20°C, 65% relative humidity: approx. 1 hour
- Can be sanded and re-coated after: approx. 2 hours
- Stacked after: drying overnight

Application per spraying:
Drying at 20°C, 65% relative humidity after approx. 1 hour.
Can be sanded and re-coated after approx. 2 hours.
Stacked after drying overnight.

| Air pressure | Material pressure |
| 2 – 3 bar | approx. 80 – 120 bar |
| 1.2 – 2.0 bar | approx. 80 – 100 bar |

Material pressure:
- Airless: 80 – 120 bar
- Airmix: 80 – 100 bar
- Cup gun: 2 – 3 bar

Test standards:
- DIN EN 71-3
  Safety for toys

Colours*:
- RAL 9010 pure white
- RAL 9001 cream white
- RAL 1013 pearl white
- RAL 1015 light ivory
- RAL 9002 grey-white
- RAL 7047 tele grey 4
- RAL 7035 light grey
- RAL 9018 papyrus white

* Other shades of colour upon request. Printed colours may deviate from the actual colours.
AQUA CL-440/30 COLOR VARNISH
Single Component Acrylic Varnish with Very Good Hiding Power for Coloured Varnishing

Properties
- Environmentally correct, opaque, water based acrylic varnish for varnishing in interior areas.
- Low-odour
- Complies with the Deco Paint Directive
- Very good hiding power
- Can be quickly sanded
- Easy to apply
- Good resistance to metal rings
- Can be tinted in RAL and NCS shades of colour
- Good adhesion on glass (after cleaning the surface thoroughly with V-890 Thinner)
- If required, 10% Aqua H-480 Hardener can be added to improve resistance to metal rings and resistance to chemicals.

Application
- For the production of coloured, closed-pore surface on all conventional substrates used in interior finishing. Particularly for subsequent coating of surfaces treated with Aqua-PF-430.
- Solid wood
- Filled MDF boards
- Priming films
- Hardboard
- High quality furniture
- Doors, etc.

Test standards:
- DIN EN 71-3
- Safety for toys
- DIN 68861 part 1, 1B
- Resistant to chemicals

Product data

<table>
<thead>
<tr>
<th>Art. Nr./colour</th>
<th>The degree of gloss is semi-matt/30 for all shades of colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>3802/white</td>
<td></td>
</tr>
<tr>
<td>3803/RAL 9010</td>
<td></td>
</tr>
<tr>
<td>3805/special colours</td>
<td></td>
</tr>
</tbody>
</table>

| Size of containers | 5 l, 20 l for special colours: 0.75 l, 2.5 l, 5 l, 20 l |
| Thinning           | if necessary with water (2 - 5%)                           |
| Working time       | 4 hours when worked with Aqua H-480 Hardener               |

| Application rate per coat | approx. 120 – 150 ml/m² |
| Application              | spraying               |

<table>
<thead>
<tr>
<th>Nozzle [mm]</th>
<th>Cup gun</th>
<th>Airless</th>
<th>Airmix</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.8</td>
<td>0.28 – 0.33</td>
<td>0.28 – 0.33</td>
<td></td>
</tr>
</tbody>
</table>

| Air pressure | 2 – 3 bar | – | 1.2 – 2.0 bar |

| Material pressure | 80 – 120 bar | 80 – 100 bar |

| Drying at 20°C, 65% relative humidity | Dust dry after approx. 1 hour |
| Can be sanded and re-coated after approx. 3 – 4 hours |
| Stacked after drying overnight |
# OPAQUE SYSTEMS WITH AQUA VARNISHES

## Step for Step to Perfectly Varnished Surfaces

The opaque varnishing of MDF board and certain problematical woods with water based varnishes differs in several ways (swelling behaviour, drying, sealing) from varnishing with solvent based varnishes. If the systems and instructions given in the following overview are taken into account, many problems can be eliminated right from the beginning.

<table>
<thead>
<tr>
<th>Work step</th>
<th>MDF / HDF in damp rooms</th>
<th>MDF / HDF in living spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cleaning</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| **Application of the product** | Aqua ANG-404 Intensifying Primer  
Application rate 80–120 ml/m²,  
dry for 1 hour  
20°C, 50% relative humidity | Aqua PF-430 Pigment Filler**  
Application rate 120–150 ml/m²,  
dry for 1-2 hours  
20°C, 50% relative humidity* |
| **Sanding**                    | 240 grit                |                             |
| **Application of the product** | Aqua PF-430 Pigment Filler  
Application rate 120–150 ml/m²,  
dry for 4 hours  
20°C, 50% relative humidity* | Aqua PF-430 Pigment Filler  
Application rate 120–150 ml/m²,  
dry for 4 hours  
20°C, 50% relative humidity* |
| **Sanding**                    | 240 grit                |                             |
| **Application of the product** | Aqua CL-440/30-Colorlack  
Application rate 120–150 ml/m²,  
can be coated over after 3 hours,  
stacked after 16 hours,  
dry overnight  
20°C, 50% relative humidity  | Aqua CL-440/30-Colorlack  
Application rate 120–150 ml/m²,  
can be coated over after 3 hours,  
stacked after 16 hours,  
dry overnight  
20°C, 50% relative humidity |

*Note: Drying times and conditions may vary depending on the specific varnish and environmental conditions.
**Soft wood***

V-890 Thinner

Aqua SL-415 Finish or Aqua FG-401 Filling Primer
   each with 10% Aqua H-480 Hardener,
   application rate 80–120 ml/m²,
   dry for 4 hours (better overnight)

if necessary, very light sanding, 240 grit

240 grit

Aqua PF-430 Pigment Filler
   application rate 120–150 ml/m²,
   dry for 1–2 hours
   20°C, 50% relative humidity

Aqua CL-440/30 Color Varnish
   application rate 120–150 ml/m²,
   can be coated over after 3 hours,
   stacked after 16 hours,
   dry overnight
   20°C, 50% relative humidity

 Oak, ash, limba

-  

Aqua SL-415 Finish or Aqua FG-401 Filling Primer
   each with 10% Aqua H-480 Hardener,
   application rate 80–120 ml/m²,
   dry for 4 hours (better overnight)

-  

Aqua PF-430-Pigmentfüller
   application rate 120–150 ml/m²,
   dry for 1–2 hours
   20°C, 50% relative humidity

Aqua PF-430-Pigmentfüller
   application rate 120–150 ml/m²,
   dry overnight / 16 hours
   20°C, 50% relative humidity*

Aqua CL-440/30-Colorlack
   application rate 120–150 ml/m²,
   can be coated over after 3 hours,
   stacked after 16 hours,
   dry overnight
   20°C, 50% relative humidity

**Note:**

Remove resin galls

Aqua-ANG-404 is used to strengthen MDF boards and minimise swelling behaviour:
   additional protection for use in damp rooms; may not be varnished “wet-on-wet” in this application.

Reduces standing coarse fibres

A good air exchange rate accelerates drying and reduces swelling.

Do not sand through.

Drying overnight minimises re-dissolving from the substrate which improves the sealing effect.

Do not sand through.

By working with Aqua H-480 (mixing ratio 10:1), resistance to metal rings can be increased.
   If necessary, surfaces can be finished with one of the clear Aqua SL Finishes to increase resistance to metal rings and to adjust the degree of gloss.

---

* For especially problematical qualities of MDF board, we recommend drying overnight/16 hours at 20°C, 50% relative humidity

** Optional work step, not necessary in many cases

*** In the case of soft wood, bleeding of resin can never be prevented completely.
Hardener & Thinners for Water Based Varnishes
# COMBINATION OPTIONS FOR AQUA VARNISHES

with Hardeners, Thinners and Additives

<table>
<thead>
<tr>
<th>Hardener/Thinner</th>
<th>Varnishes</th>
<th>Additive/Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aqua H-480 Hardener</td>
<td>Aqua FG-401 Filling Primer</td>
<td><strong>SM-820</strong> Texturing Agent</td>
</tr>
<tr>
<td>Aqua V-490 Retarder</td>
<td>Aqua SL-414 Finish</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aqua SL-415 Finish</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aqua TL-412 Stair Varnish</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aqua PL-413 Paquet Varnish</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aqua PF-430 Pigment Filler</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aqua CL-440/30 Color Varnish</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aqua 2DS-450-2K Diamond Seal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aqua 2HL-411-2K High Gloss</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aqua MSV-403 Parquet Primer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aqua FKL-402 Joint Filler Liquid</td>
<td></td>
</tr>
</tbody>
</table>

* The use of the hardener component is essential.
AQUA H-480 HARDENER

Hardener Component for Remmers Aqua Varnishes

Properties

Lightfast hardener component which, if required, can be added to Remmers Aqua varnishes to improve the properties of the varnish and the resistance of the varnish.

- Easily worked into the varnish, foam-free (best done with the Remmers Patent Disperser)
- High degree of cross-linking just after drying overnight (very early resistance to chemical and mechanical loads)
- Resistant to bleaches

Important note:
The products Aqua 2DS-450-2K Diamond Seal and Aqua 2HL-411-2K High Gloss must always be worked with Aqua H-480 Hardener.

Application

Remmers Aqua varnishes have outstanding properties and resistance even when worked as a classic, single component varnish. But sometimes a bit more is needed. To ensure that the hardener component is worked into the varnish with as little foam and gel as possible, we recommend the use of the Remmers Patent Disperser. It is also advisable to pre-mix the required quantity of Aqua H-480 Hardener 1:1 with water first and to then immediately work this mixture into the varnish.

Mode of action:
Remmers Aqua varnishes consist of self-cross-linking polyurethane and acrylate dispersions. Through careful selection and coordination of the dispersions, cross-linking mechanisms take place during drying that later lead to a film of varnish that can be subjected to heavy loads. If Aqua H-480 Hardener is added to the varnish in addition, further cross-linking mechanisms take place that enhance the quality of the film of varnish even further.

Product data

<table>
<thead>
<tr>
<th>Colour</th>
<th>clear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art. No.</td>
<td>3806</td>
</tr>
<tr>
<td>Size of container</td>
<td>0.5 l, 2l</td>
</tr>
<tr>
<td>Mixing ratio with Aqua varnishes</td>
<td>See information for varnish components</td>
</tr>
<tr>
<td>Aid for working into the product</td>
<td>Remmers-Patent Disperser</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Varnish version</th>
<th>Resistance to metal rings</th>
<th>Sealing effect</th>
<th>Adhesion</th>
<th>Abasion resistance</th>
<th>Resistance to handcream</th>
<th>Resistance to chemicals</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% Aqua H-480 Hardener</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>worked in with the Remmers Patent Disperser:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aqua CL-440/30 Color Varnish</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aqua FG-401 Filling Primer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Aqua PL-413 Parque Varnish</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Aqua SL-415 Finish</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Aqua TL-412 Stair Varnish</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

Improves certain properties of the varnish up to 30%
AQUA V-490 RETARDER

Special Thinner for Aqua Stains

**Product data**
- Art. No.: 1939
- Size of container: 0.75 l
- Quantity required:
  - approx. 5 – 10% is added to Aqua stains
  - approx. 1 – 3% is added to Remmers Aqua varnishes

**Properties**
- Achieves a longer open time of the stain or Aqua varnish

**Application**
- To improve the brushing quality of stains particularly on absorbent species of wood.
- For better brushing behaviour on larger surfaces (doors, tables, etc.)
- To improve the flow properties of Aqua varnishes in low humidity
- Pre-mix the retarder 1:1 with water and then stir into the varnish.

AQUA RK-898 CLEANING CONCENTRATE

Highly Effective Cleaning Agent

**Product data**
- Colour: clear
- Art. No.: 3868
- Size of container: 5 l
- Quantity required:
  - according to needs, depending on degree of soiling, the concentrate is diluted up to 1:5 with water

**Properties**
- High yielding concentrate
- Easily removes fresh water based varnish systems
- The cleaner is not particularly aggressive to anodised elements: does not attack the surface of flow cup guns

**Application**
- For cleaning spray equipment, flow cup guns, spraying booths, overhead conveyors, etc.
UV-Curing Varnishes

For especially efficient coating of two-dimensional elements in the wood working trade, Remmers offers an assortment of UV varnishes that are applied by roller and then cured with UV-lamps. The following products can be used practically universally and are distinguished by a solid content of nearly 100%, uncomplicated application and stability.
**UV WG-607 ROLL COAT PRIMER LV**  
Radiation Curing Primer for Roll Coating with a Highly Viscous Formulation

<table>
<thead>
<tr>
<th>Product data</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>clear</td>
</tr>
<tr>
<td>Art. No.</td>
<td>3859</td>
</tr>
<tr>
<td>Size of container</td>
<td>10 kg</td>
</tr>
<tr>
<td>Application rate</td>
<td>7 - 20 g/m²</td>
</tr>
</tbody>
</table>

**Application**  
- Roll coating  
- Depending on application rate in g/m²  
- 10 m feed per radiation unit (e.g. high pressure mercury vapour lamp 80 watt/cm).

**Properties**  
- Highly viscous formulation: 130 sec. DIN 6 mm  
- Good build, highly transparent  
- Good sanding behaviour  
- Can be mixed with UV WG-608 Roll Coat Primer LV

**UV WG-608 ROLL COAT PRIMER NV**  
Radiation Curing Primer for Roll Coating, Low Viscosity Formulation

<table>
<thead>
<tr>
<th>Product data</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>clear</td>
</tr>
<tr>
<td>Art. No.</td>
<td>3860</td>
</tr>
<tr>
<td>Size of container</td>
<td>10 kg</td>
</tr>
<tr>
<td>Application rate</td>
<td>7 - 20 g/m²</td>
</tr>
</tbody>
</table>

**Application**  
- For use in roll coating facilities equipped for UV curing  
- Suitable for closed-pore varnishing  
- For priming flat elements  
- For all conventional substrates such as veneer and solid wood  
- Suitable for kitchen cabinets, bathroom furnishings, office and home furniture, stairs and doors  
- Suitable for light filler machines

**Test standards:**  
- DIN EN 71-3  
- Safety for toys  
- DIN 53160 parts 1 and 2  
- Resistant to saliva and sweat
**UV UL-650/25 ROLL TOPCOAT**

**UV Finish Especially for Furniture**

**Properties**
- High reactivity
- Excellent flow stability
- Positive feel
- Good resistance to chemicals and scratches

**Application**
- For surfaces primed with UV WG-607 or UV WG-608 Roll Coat Primer
- Suitable for kitchen cabinets, bathroom furnishings, office and home furniture and interior doors

**Test standards:**
- DIN EN 71-3
  - Safety for toys
- DIN 53160 parts 1 and 2
  - Resistant to saliva and sweat
- DIN 68861 part 1, 1B
  - Resistant to chemicals

**Product data**

<table>
<thead>
<tr>
<th>Colour</th>
<th>clear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art. No.</td>
<td>3873 (semi-matt/25)</td>
</tr>
<tr>
<td>Size of container</td>
<td>10 kg</td>
</tr>
<tr>
<td>Application rate</td>
<td>4 – 8 g/m²</td>
</tr>
<tr>
<td>Application</td>
<td>Roll coating</td>
</tr>
<tr>
<td></td>
<td>At least 1 mercury lamp 80 watt per 5 m/min feed</td>
</tr>
</tbody>
</table>

**UV UL-652/25 ROLL TOPCOAT**

**UV Finish Especially for Elements Subjected to Heavy Loads**

**Properties**
- High reactivity
- Excellent flow stability as well as a positive feel
- Very good resistance to chemicals, scratches and abrasion

**Application**
- For surfaces primed with UV WG-607 or UV WG-608 Roll Coat Primer
- Suitable for surfaces subjected to heavy loads, e.g. stairs and parquet

**Test standards:**
- DIN EN 71-3
  - Safety for toys
- DIN 53160 parts 1 and 2
  - Resistant to saliva and sweat
- DIN 68861 part 1, 1B
  - Resistant to chemicals

**Product data**

<table>
<thead>
<tr>
<th>Colour</th>
<th>clear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art. No.</td>
<td>3874 (semi-matt/25)</td>
</tr>
<tr>
<td>Size of container</td>
<td>10 kg</td>
</tr>
<tr>
<td>Application rate</td>
<td>4 – 10 g/m²</td>
</tr>
<tr>
<td>Application</td>
<td>Roll coating</td>
</tr>
<tr>
<td></td>
<td>At least 1 mercury lamp 80 watt per 5 m/min feed</td>
</tr>
</tbody>
</table>
**UV SL-610/25 FINISH**

Multiple Layer UV Varnish Especially for Table Tops and Interior Doors

### Properties
- Simple roller technique (Proficoater)
- High reactivity
- Good resistance
- No switch of varnishes necessary between individual layers

### Application
- Can be used as a primer and a finish
- For all conventional substrates such as veneer and solid wood
- Suitable for kitchen cabinets, bathroom furnishings, office and home furniture and especially table tops and interior doors

### Test standards:
- DIN EN 71-3 Safety for toys
- DIN 53160 parts 1 and 2 Resistant to saliva and sweat
- DIN 68861 part 1, 1B Resistant to chemicals

---

**Product data**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>clear</td>
</tr>
<tr>
<td>Art. No.</td>
<td>3785 (semi-matt/25)</td>
</tr>
<tr>
<td>Size of container</td>
<td>10 kg</td>
</tr>
<tr>
<td>Application rate</td>
<td>7 - 20 g/m²</td>
</tr>
<tr>
<td>Application</td>
<td>Roll coating</td>
</tr>
<tr>
<td></td>
<td>UV-gelling 15 m/min feed</td>
</tr>
<tr>
<td></td>
<td>UV curing 5 m/min feed</td>
</tr>
<tr>
<td></td>
<td>per lamp unit</td>
</tr>
<tr>
<td></td>
<td>(e.g. high pressure</td>
</tr>
<tr>
<td></td>
<td>mercury vapour lamp</td>
</tr>
<tr>
<td></td>
<td>80 watt/cm</td>
</tr>
</tbody>
</table>

---

![Diagram showing the general principle of how a simple roller coater functions (SLC)]
UV EM-870 DE-AIRING AGENT FOR UV VARNISHES
To Improve De-Foaming on Surfaces

Properties
- Liquid de-foamer

Important note:
- The use of too much de-airing agent leads to disturbances on the surface (formation of craters!)

Application
- De-airing agent for all conventional UV varnish systems

Product data

<table>
<thead>
<tr>
<th>Art. No.</th>
<th>3788</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size of container</td>
<td>1 kg</td>
</tr>
<tr>
<td>Quantity required</td>
<td>0.1 - 0.5% is added to the UV varnish</td>
</tr>
</tbody>
</table>

UV PI-871 PHOTOSTARTER
To Increase the Reactivity of Conventional UV Varnishes

Properties
- Increases the reactivity of UV varnishes

Application
- Photoinitiator for all conventional non-white, UV varnishes

Product data

<table>
<thead>
<tr>
<th>Art. No.</th>
<th>3822</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size of container</td>
<td>1 kg</td>
</tr>
<tr>
<td>Quantity required</td>
<td>max. 2% is added to the UV varnish</td>
</tr>
</tbody>
</table>

UV RV-872 REACTIVE THINNER
To Adjust the Viscosity of Conventional UV Varnishes

Properties
- Thin-liquid reactive thinner
- Since reactive thinners are bound into the varnish film through chemical reaction, there is no emission of solvents

Application
- For adjusting the viscosity of conventional UV varnishes

Product data

<table>
<thead>
<tr>
<th>Art. No.</th>
<th>3823</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size of container</td>
<td>10 kg</td>
</tr>
<tr>
<td>Quantity required</td>
<td>max. 5% is added to the UV varnish</td>
</tr>
</tbody>
</table>
Oils & Waxes
**Aidol HARD WAX OIL**

*For Natural Looking Wood Surfaces*

**Properties**

Aidol Hard Wax Oil is based on natural oils with lead-free dry substances. It protects the wood, leaving a natural look.

- Complies with the Deco Paint Directive
- Time saving and effective application
- Open pore, breathing active and mild odour
- Durable, soil repelling and hard wearing
- Can be subsequently re-treated, even in partial areas without any preparation

**Tips & Interesting Facts:**

Textiles soiled with Aidol Hard Wax Oil (e.g. cloths, working clothes) may have a tendency to self-ignite so these should be stored in fire-proof waste containers and disposed of as soon as possible. As an alternative, the textiles can be moistened with water and hung up outdoors to dry.

**Application**

- For solid wood furniture
- Parquet
- Stairs
- Cork floors
- Interior doors

**Test standards:**

- DIN EN 71-3 Safety for toys
- DIN 53160 parts 1 and 2 Resistant to saliva and sweat
- DIN 68861 part 1, 1C Resistant to chemicals

---

**Product data**

<table>
<thead>
<tr>
<th>Art. No./colour</th>
<th>0695/clear 0668/special colours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size of containers</strong></td>
<td>0.75 l, 2.5 l, 20 l</td>
</tr>
<tr>
<td><strong>Application rate per working operation</strong></td>
<td>approx. 10 - 50 ml/m², depending on absorbency</td>
</tr>
<tr>
<td><strong>Application</strong></td>
<td>Wide brush, non-fraying cloth</td>
</tr>
</tbody>
</table>

**Application**

- For solid wood furniture
- Parquet
- Stairs
- Cork floors
- Interior doors

**Test standards:**

- DIN EN 71-3 Safety for toys
- DIN 53160 parts 1 and 2 Resistant to saliva and sweat
- DIN 68861 part 1, 1C Resistant to chemicals
NOTES ON APPLICATION

Aidol Hard Wax Oil on Different Substrates

Laid Wood and Cork Floors

These floors are sanded with a sanding machine (last sanding operation not finer than 100–120 grit). Aidol Hard Wax Oil is then massaged into the wood with a wide brush. A single disc machine with a white polishing pad is a great time saver for large areas. After drying overnight, a second coat is applied.

Intermediate sanding is not necessary; if desired, the surface can be lightly worked over with a single disc machine (beige pad).

Wood Stair Steps, Counter Tops, etc.

These elements are sanded for the last time with 120 grit sandpaper. Aidol Hard Wax Oil is applied with a wide brush and massaged in thoroughly. A white pad can also be used for application but no excess material should remain on the surface.

Furniture Surfaces, Smaller Wood Objects

These are sanded with 180 grit sandpaper. Aidol Hard Wax Oil is applied with a brush or non-fraying cloth.
For All Surfaces

No excess material should remain on the surface – particularly not on non-absorbent areas; otherwise drying may be delayed. It is generally recommended to apply a second coat of Aidol Hard Wax Oil after drying overnight. The absorbency of the substrate is influenced by sanding. The finer the surface is sanded the less Aidol Hard Wax Oil is absorbed by the wood and less protection is achieved. Test compatibility and colour effect on a trial area.

Coloured Versions

When oiling floors and furniture with a coloured Hard Wax Oil there are several things that you should take into consideration. Please ask for our information guide for coloured Aidol Hard Wax Oil!

Notes on Safety

Textiles soiled with Aidol Hard Wax Oil (e.g. cloths, working clothes) may have a tendency to self-ignite so should be collected in fire-proof waste containers and disposed of. As an alternative, these textiles can be moistened with water and hung up outside to dry.

Reinigung & Pflege

For regular mopping, we recommend our Aidol Hard Wax Polish which keeps stairs and floors in optimum condition.
**HWS-112 HARD WAX SEAL**

Single Component, Solvent Based Sealant for an Especially Natural Look

**Properties**

HWS-112 Hard Wax Seal is an especially natural looking alternative for refining surfaces. The cloth-matt surfaces have good resistance to mechanical and chemical loads. This sealant was especially developed for professional treatment of stair steps in a spraying application.

- Single component, solvent based: complies with the Deco Paint Directive
- Little tendency to form shiny areas
- Cloth matt with an especially natural look and feel
- Very good resistance to chemicals: DIN 68861, part 1, 1B
- Resistant to handcream
- High yielding

**Application**

- For especially natural looking refinement of wood stairs
- Also suitable for other elements in interior areas
- Not suitable for treating bleached wood
- Applied by spraying

**Test standards:**

- DIN EN 71-3 Safety for toys
- DIN 53160 parts 1 and 2
- Resistant to saliva and sweat
- DIN 68861 part 1, 1B
- Resistant to chemicals

**Product data**

<table>
<thead>
<tr>
<th>Art. No./colour</th>
<th>1826/clear (cloth matt) 1829/special colours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size of containers</td>
<td>5 l, 20 l</td>
</tr>
<tr>
<td>Thinning</td>
<td>Product is formulated ready to use</td>
</tr>
<tr>
<td>Application rate per coat</td>
<td>Approx. 2 x 60–80 ml/m²</td>
</tr>
<tr>
<td>Application</td>
<td>Sprayed or rolled with a short-pile roller (3–5 mm), solvent resistant pile in two layers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nozzles [mm]</th>
<th>Cup gun</th>
<th>Airless</th>
<th>Airmix</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5 – 1.8</td>
<td>0.23 – 0.28</td>
<td>0.23 – 0.28</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Air pressure</th>
<th>Material pressure</th>
<th>Cup gun</th>
<th>Airless</th>
<th>Airmix</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 – 3 bar</td>
<td>60 – 80 bar</td>
<td>0.23 – 0.28</td>
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<td></td>
</tr>
<tr>
<td>0.5 – 1.5 bar</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Drying at 20°C, 65% relative humidity</th>
<th>Cup gun</th>
<th>Airless</th>
<th>Airmix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust dry after</td>
<td>Approx. 60 min.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Can be sanded and re-coated after</td>
<td>Approx. 6 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stacked after</td>
<td>Drying overnight</td>
<td></td>
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</tbody>
</table>
### Suggestion for Working

**Remmers HWS-112 Hard Wax Seal (cloth matt)**

<table>
<thead>
<tr>
<th>Suitable species of wood</th>
<th>Solid wood, thick veneer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sanding</strong></td>
<td></td>
</tr>
<tr>
<td><strong>1st coat</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Attention:</strong> Risk of ignition! Do not varnish in filter mats with varnish dust! Textiles soiled with Aidol HWS-112 Hard Wax Seal (e.g. cloths, working clothes) may have a tendency to self-ignite so collect in fire-proof waste containers and disposed of. As an alternative, these textiles can be moistened with water and hung up outdoors to dry.</td>
<td></td>
</tr>
<tr>
<td><strong>Intermediate sanding</strong></td>
<td></td>
</tr>
<tr>
<td><strong>2nd coat</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Note:</strong> Please remember the risk of self-ignition! By using Remmers Hard Wax Polish for maintenance, these high quality surfaces will remain in good condition and be protected from premature wear for a long time.</td>
<td></td>
</tr>
</tbody>
</table>

### HWS-112 Hard Wax Seal cloth matt

- **Application rate approx. 60-80 ml/m²**, **dry overnight**

<table>
<thead>
<tr>
<th>Spray with a cup gun</th>
<th>1.5 - 1.8 mm nozzle, air pressure 2 - 3 bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spray with airless / airmix</td>
<td>0.23 - 0.28 mm nozzle, material pressure approx. 100 bar, air pressure 1.2 bar</td>
</tr>
</tbody>
</table>

- **80-220 grit, remove dust afterward**

### Optimum drying conditions

- 20°C room temperature, at least 50% rel. humidity and a sufficient air exchange rate
- Lower room temperatures may impair film formation on the surface.
- Relative humidity that is too low may cause initial drying of the varnish film that is too fast; an insufficient air exchange rate delays initial drying and full cure.
With the completely new and highly flexible Remmers Stain Concept there are now no limits to the shades of stains you can create – thanks to the individual kit principle for solvent based stains, Aqua Compact Stains as well as Positive and Wax Stains which functions as follows:

With just 3 – 4 different coloured base stains that you can intermix as you please and can also lighten if required, you have the possibility of creating the most different nuances in the colour of wood stains, especially coordinated to your species of wood.

For those who prefer a more colourful look, nuance concentrates can also be used which are exactly coordinated to your wood surface. These coloured shades of stains can put your wood into an entirely new, different light.

The objective of this kit is to allow individual shades of colours to be quickly and flexibly selected which can also be produced in small and medium size quantities and be reproduced at a later date as well – with little effort but the greatest precision.

And, of course, all of the stains* can be varnished with Remmers NC, 2-component PUR and Aqua varnishes as well as treated with Aidol Hard Wax Oil.

---

* With the exception of wax stains
THE REMMERS STAIN KIT
Solvent Based, Aqua Compact as Well as Positive and Wax Stains

Solvent Based Stains NC HB-005 Wood Stain on Oak

Concentrated base shades of colour

Aqua KB-004 Compact Stain on Beech

Concentrated base shades of colour

Aqua PB-006 Positive Stain and Aqua WB-002 Wax Stain on Spruce

Concentrated base shades of colour

* This base colour stain is only available for Positive Stain
All details on the subject of solvent based stains, Aqua Compact Stains as well as Positive and Wax Stains are found in our new brochure, “THE REMMERS STAIN CONCEPT – a Highly Flexible System on a Kit Principle”.

On 34 pages in total, we present our stain products and the concept of the kit principle behind it. You will find helpful suggestions for application and working as well as detailed product information and specifications. Real wood scans of different stain collections and colour worlds will give you a brief overview of the possibilities offered with this kit from Remmers.

General rules for applying stains, tips and tricks in practice as well as a table for your stain formulas round off the brochure and provide support for selecting products, application and maintenance.

Along with the brochure, a collection with real wood is also available.

Interested? Upon request, we would be glad to send you a copy of the brochure on the subject of stain mixing systems. A PDF version can also be downloaded from our website at www.remmers.de.
**MIXING CUP SYSTEM FOR 2-COMPONENT VARNISHES**

*Simply Clever – the Cup in a Cup*

**Properties**

- A clever system for mixing, pouring and storing 2-component varnishes.
- User-friendly handling
- No cleaning necessary
- No complicated calculations
- Practice-oriented use
- No leftover solvents
- No mixing errors

**Application**

- For all 2-component varnish systems
- For Remmers 2-component PUR & Aqua Varnishes/Stains

**Product data**

<table>
<thead>
<tr>
<th>Art. No. for cup with 920 ml content</th>
<th>427001 exterior cup</th>
<th>427101 interior cup (á 75 cups)</th>
<th>427301 lid</th>
</tr>
</thead>
</table>

---

**PATENT DISPERSER**

*For Working Aqua H-480 Hardener into Aqua Varnishes*

**Properties**

- Optimum distribution in the varnish leads to better resistance of the varnish. This can be achieved by using the Remmers Patent Disperser. The disperser ensures effortless but intensive and very fine distribution of Aqua H-480 Hardener in the varnish. This allows the hardener to reach every linking point in the dispersion, forming an additional, dense network in the varnish film.
- Aqua H-480 Hardener is reliably worked into the varnish, foam-free
- The properties of the varnish are improved by finer distribution of the hardener

**Application**

- The Patent Disperser sucks the varnish up from the bottom so no air is drawn into the varnish. This prevents unnecessary foam.

**Product data**

| Art. No./Size of container | 474701 large (for containers >5l) | 474702 small (for containers ≤5l) |
Aidol STAIR & PARQUET FRESH
Self-Shining Floor Care Product for Varnished Surfaces

Properties
- Self-shining, water based, floor care product for varnished surfaces.
- Self-shining, i.e. it does not need to be polished
- Just one product for first time care and maintenance care
- Repells dust and dirt, making surfaces easy to maintain
- Slip resistant
- Protects the surface from premature wear

Application
- For sealed wood floors
- For closed-pore varnished cork
- For PVC & linoleum
- For laminat & ready made parquet
- For natural & synthetic stone floors

Artikeldaten

<table>
<thead>
<tr>
<th>Colour</th>
<th>clear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art. No.</td>
<td>2393</td>
</tr>
<tr>
<td>Size of container</td>
<td>1 l</td>
</tr>
<tr>
<td>Quantity required for 1st time care</td>
<td>1 l is sufficient for approx. 25 - 30 m²</td>
</tr>
<tr>
<td>Quantity required for maintenance care</td>
<td>250 ml/10 l mop water</td>
</tr>
</tbody>
</table>

Aidol HARD WAX POLISH
Milky, Water Based Care Product on a Wax Emulsion Base

Product data

<table>
<thead>
<tr>
<th>Art. No.</th>
<th>0687</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size of container</td>
<td>1 l</td>
</tr>
<tr>
<td>Quantity required for 1st time care</td>
<td>1 l is sufficient for approx. 10 - 20 m²</td>
</tr>
<tr>
<td>Quantity required for maintenance care</td>
<td>250 ml/10 l mop water</td>
</tr>
</tbody>
</table>

Properties
- Water based maintenance concentrate with high quality wax emulsions for oiled and waxed wood floors and wood stairs.
- Just one product for first time and maintenance care
- Forms a thin, protective film made of high quality waxes
- Protects surfaces from premature wear
- Can be polished after drying

Application
- Optimum results on surfaces treated with Aidol Hard Wax Oil.
- Parquet
- Stairs
- Batten floors

Tips & Interesting Facts:
Just one product for first time and maintenance care: Apply undiluted the first time it is used on oiled surfaces. The product even closes fine cracks. For regular maintenance the product is simply added to the mopping water. Surfaces are cleaned and maintained at the same time. When maintaining varnished surfaces in interior areas, we recommend the use of Aidol Stair & Parquet Fresh.