

aquaris

Water-based coatings for interiors





PRINNYER
WOOD COATINGS

AQUARIS

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Aquaris, beautiful interiors

Renner Italia water-based products for interiors, naturally elegant

Furniture and accessories with a bio soul. Treating wooden objects with Aquaris coatings turns them into works of art. Renner Italia water-based products enhance the beauty of fine interiors.

A COMPLETE RANGE

The coatings of the Aquaris line have been created by Renner Italia's R&D laboratories to provide an elegant response to all aesthetic requirements. Renner Italia water-based stains, base coats and top coats make up a full range of products for coating furniture and accessories designed for every environment at home, in the office and in any interior.

A range of quality solutions that includes single-component, two-component and UV-drying coatings.

EASY TO APPLY

Aquaris coatings are easy to apply, facilitating the production of wooden products whether on an industrial scale or in a craftsman's workshop: maximum results with minimum effort.

VALUE FOR MONEY

Choosing Renner Italia products is economically convenient. The Aquaris line delivers concrete savings: 20% less than solvent-based products in terms of consumption. With an adequate recovery-oriented work programme, up to 40% of materials can be re-used.

ENVIRONMENT-FRIENDLY

With a minimum content of Volatile Organic Compounds, Aquaris is in the front line of protecting health and the environment. Complying with the strictest standards of environmental and workplace health becomes a straightforward matter.





LEGAL ASPECTS

European Directive no. 2004/42/CE and its subsequent update have been implemented in Italy by Legislative Decrees no. 161/2006 and 33/2008.

These provisions, aimed at preserving the environmental delicate balance set limit to the amount of Volatile Organic Compounds emitted into the atmosphere, one of the major causes of air pollution.

EC Regulation no. 1272, designed to improve the level of protection of humans and the environment, has come into force in 2008. Before that, EC Regulation 1907/06 – better known as REACH – promoted alternative methods of assessing the hazards posed by chemical substances, stimulating competitiveness and innovation in the wood coating sector.

Complying with all current regulations, the Aquaris range stands out as a strong commitment for sustainable development.

Free of toxic substances, Aquaris products represent the peak of safety for manufacturers and users alike.

Furnishing home with furniture coated with Aquaris products means caring for the health of the environment and of the people who live in it.

In addition to having a “bio” soul, Renner Italia water-based coatings for interiors bring beauty and prestige to any furnishing accessory.

One-component, two-component or UV-drying coatings?

THREE TECHNOLOGIES FOR IMPROVING FURNITURE

For the furniture sector, the R&D laboratories of Renner Italia have created a series of water-based coatings with different features and performances but producing the same outstanding results. The range of products for interiors includes **one-component**, **two-component** and **UV-drying** coatings.

The main technical differences are described in the following paragraphs.

SINGLE-COMPONENT WATER-BASED COATINGS

These are the most simple, practical and economic coatings. Their operating principle is based on the evaporation of water: a physical process that transforms

the “micelle” structure of the resins producing a continuous film that is strong and resistant to water since it is composed of structured polymers right from the start. Single-component water-based coatings are ready to use, easy to apply and money-saving because there is no waste. Any excess material can be reused, provided it is preserved in its original container and protected from prolonged exposure to air. Any overspray can be reused after filtering and adding tap water to restore its initial viscosity.

Small doses of reagent (“curing agent or crosslinker”) can be added to one-component top coats without affecting the product’s pot life. The crosslinker is not indispensable, however it is useful for accelerating hardening and stackability. Curing agents are particularly valued when high levels of chemical and mechanical resistance are required.



Given the features described above, single-component water-based coatings are recommended for craftwork on interior surfaces such as doors, wardrobes and profiles in general.

TWO-COMPONENT WATER-BASED COATINGS

These products need to be mixed with an isocyanate hardener. First the water evaporates and then a slow chemical reaction produces a radically transformed final polymer. The resulting surface is highly resistant to chemical agents.

Because of its structure, the hardener is stable and miscible with water-based coatings, providing a pot life of 3-4 hours, after which any remaining product is no longer usable.



Two-component water-based coatings are particularly sensitive to low temperatures. The lower the ambient temperature for preparation and drying, the more viscous and less reactive are aliphatic isocyanate resins used with water. This can make these products difficult to use in cold environments, as insufficient mixing and prolonged drying can cause defects in the appearance and hardness of the film's surface.

For these reasons, the second component should always be mixed using a mechanical mixer, with room temperature and substrate temperature no lower than 15°C.

These products are technically advanced; however they should be used in situations where they can provide their best performance, for example as insulating base coats for furniture for kitchens, bars and discothèques and for table tops.

UV-DRYING WATER-BASED COATINGS

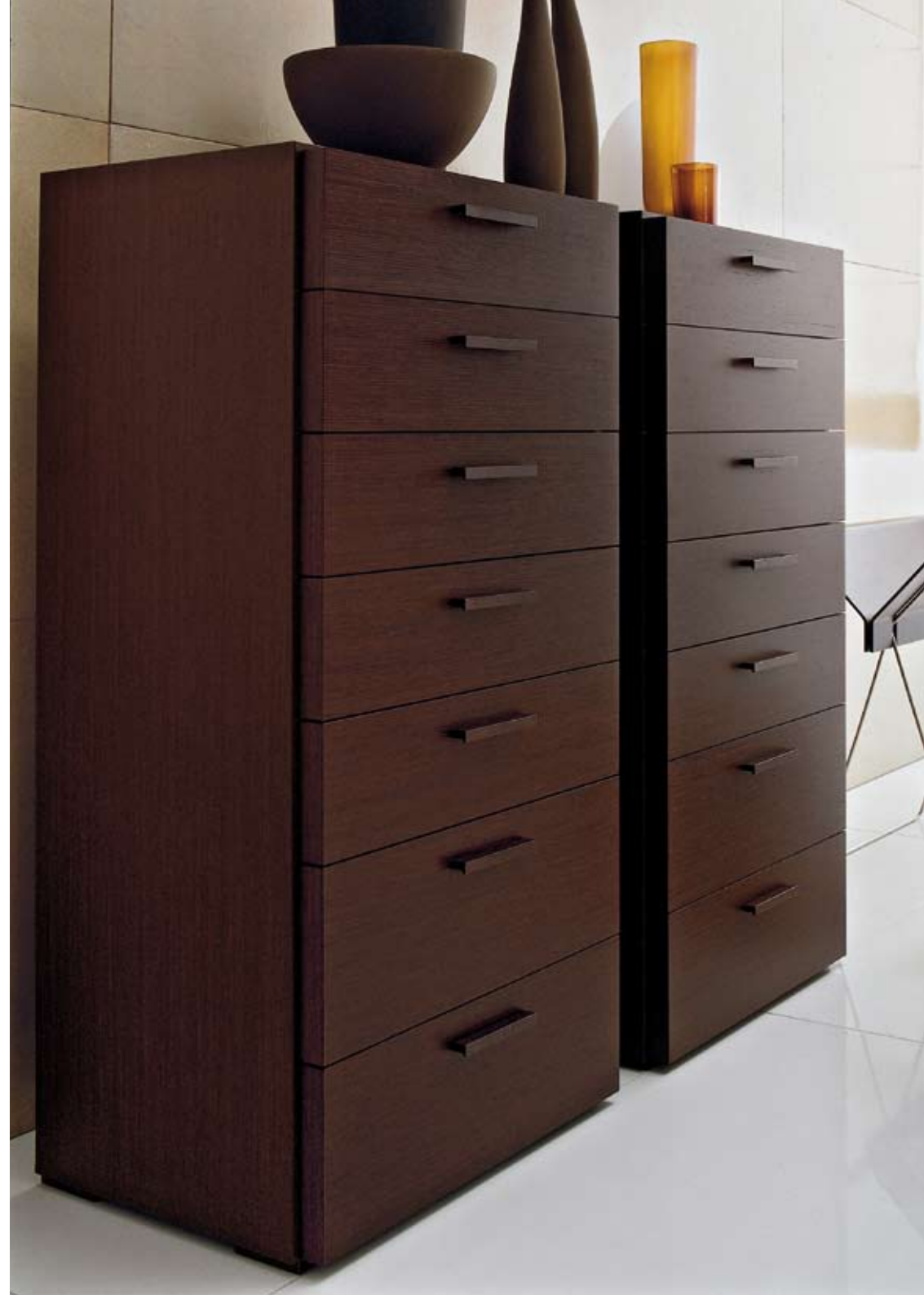
These are single-component coatings with a special feature. Once the water has evaporated, the application of UV radiation causes certain components in the products to start a rapid chain reaction in the resins that produces a hard, resistant film. UV radiation is provided by lamps installed inside special tunnels that allow high output rates; hence, this procedure is employed for industrial use in automated applications with fast drying speeds.

Features of the **AQUÁRIS** line for interiors

The AQUÁRIS line water-based coatings for interiors have been developed to protect articles of furniture and make them last longer. To provide these functions they are based on non-yellowing acrylic resins, characterized by extraordinary hardness and scratch-resistance, that effectively protect furniture from normal wear without modifying their features over time.

Additionally, all the colours used in the AQUÁRIS line top coats (including the water-based EY M460 pigment pastes) are compliant with standard EN 71.3 and can be used for toys.

Please consult the product data sheets for information regarding certifications, standards and performance details.





Preparing the substrate

SOLID WOOD

Solid wood gives better aesthetic results than veneered wood when using non-pigmented coatings because it absorbs humidity in a more uniform manner. Certain wood species contain high concentrations of soluble substances that can migrate to the surface of the varnish, producing coloured spots.

We recommend sanding the substrate crosswise to the fibres before the final smoothing with 180 grit paper to prevent “crushing” the wood fibres, which would otherwise be raised during staining.

VENEERED WOOD

Veneers are thin layers of wood that have been defibrated by slicing, therefore especially sensitive to water. The glue should be at least class B3 and must be abundantly applied in an absolutely uniform manner and thoroughly dried. Sanding with 180 – 220 grit paper is recommended.

MDF

Medium Density Fibreboard is the most commonly used substrate for pigmented coating systems. MDF is classified according to the density and the nature of wooden fibres that make it up. “Light” MDF should be avoided because it absorbs excessive amounts of water. Since MDF may contain traces of coloured substances, the first coat should

be applied using a two-component water-based product to provide insulation. The cutters used for the pantographing process must be carefully checked, since dull-edge cutters can cause significant swelling in the areas treated. Brushing or denibbing the cut sections before applying the coating is highly recommended in this case too.

MELAMINE PAPER

Melamine paper is increasingly used but can cause inadequate adhesion of water-based products if insufficiently sanded. When coating “finish” type paper we recommend using insulating products such as FI M194 catalyzed by FC M194 at 50% and overcoated 30 minutes-2 hours after application.

Binders

Binders are made with special components that modify the performance of stains, giving them particular characteristics that improve the final results depending on the method of application and the aesthetic requirements desired.

| Binder | Method of application | % used of ready-to-use stain | Effect |
|---------|-----------------------|------------------------------|--|
| RY M023 | Cloth / wiping | 0 - 100 | Improves workability |
| RY M021 | Dipping | 0 - 100 | Reduces absorption of water and swelling of fibres |
| RY M022 | Spray | 0 - 70 | Reduces swelling of fibres |
| RY M024 | Spray | 0 - 10 | Harmonising agent for water-based stains |
| RY M025 | Roller Coater | 0 - 50 | Allows application by rubber rollers |





Stains and Glazes

STAINS

Properly staining the substrate will prevent the arising of incorrigible defects. The use of water soluble stains can cause excessive bleeding and the formation of pale rings if the base coat applied in a single coat has been sanded too much. Conversely, if used with water-borne, thixotropic, transparent base coats applied in two coats, the first of which a light coating, the result is a brighter, livelier stain.

GLAZES & PATINAS

Glazes give an antiqued appearance and even out the coating, an effect that is highly sought after in Reproduction furniture and picture frames. A thin layer of glaze applied by spray will dry quickly, and can be easily removed once the water evaporates.

| | |
|---------|--|
| TY M001 | Soluble, concentrated dyes with brilliant colours, highly transparent. <i>Colours: T07 Yellow; T03 Red; T08 Orange; T02 White; T04 Blue; T60 Pale yellow; T52 Purple-red; T09 Green; T01 Black; T21 Brenner walnut; T19 Antique walnut; T15 Mahogany; T20 American walnut; T18 Medium walnut; T10 Cherry</i> |
| TY M003 | Water/solvent soluble, concentrated dyes with brilliant colours, highly transparent <i>Colours: T07 Yellow; T04 Blue; T01 Black; T03 Red; T20 American walnut; T08 Orange; T19 Antique walnut; T15 Mahogany; T09 Green; T21 Brenner walnut; T86 Wengè; T52 Purple-red</i> |
| TY M012 | Uniforming dyes for glaze-type cloth application. <i>Colours: NTR non-pigmented binder; T07 Yellow; T03 Red; T08 Orange; T01 Black; T22 Walnut; T23 Dark walnut; T10 Cherry</i> |

| | |
|---------------|---|
| GY M040 | Universal glaze for dry removal. <i>Colours: C07 Yellow; C70 Oxide red; C02 White; C04 Blue; C01 Black; C74 Chocolate brown; C77 Oxide yellow</i> |
| GY M045/--xxx | Glaze for semi-whitening. <i>Colours: C02; neutral.</i> Dye with YY M460/xxx or TY M003/Txx |

Base coats

The base coat fills the pores in the wood. The choice of this product, made on the basis of the substrate and application system, is fundamental for the good result of the coating system.

The methods of use that allow perfect atomisation of the base coat always express the maximum result in terms of transparency and covering.

| Code | Description | Colour |
|---------|---|-------------------------------|
| YL M602 | Two-components insulating base coat | Clear, C02 white, NTR neutral |
| YL M641 | One-two components for general use | Clear, C02 white, NTR neutral |
| YL M653 | Thixotropic, high build and excellent sanding | Clear |
| YL M660 | Thixotropic for general use | Clear |
| YL M663 | Semi thixotropic, excellent sanding | Clear |
| YL M683 | Top quality semi thixotropic | Clear |
| YL M686 | One-component semi thixotropic for open pore | Clear |





Top coats

They have the purpose of protecting pieces of furniture from external stress, giving them a pleasant aspect to the touch, extremely uniform and suitable for the aesthetic requests of the designer. The finishing defines the level of covering of the wood.

The use of water-based top coat over solvent-based base coats is often critical with reference to adhesion. It is for this reason that it is generally strongly not recommended.

| Code | Description | Gloss levels | Colour |
|---------------|---|------------------------------------|-------------------------------|
| YO xxM700 | Semi thixotropic, for general use | 05, 10, 20, 30, 40, 50, 70, 90 | Clear |
| YO xxM702 | Semi thixotropic one-two components top coat | 05, 10, 20, 40, 60, 90 | Clear |
| YO 05M755 | "Zero gloss" two-components top coat | | Clear |
| YO xxM750 | Two-component top coat for panels and kitchen doors | 00, 05, 10, 20, 30, 40, 50, 70, 90 | Clear |
| YO xxM750/xxx | Two-component converter for tintometric system | 15, 30, 50 | SBN white, NTR neutral |
| YO xxM753 | One-component top coat with wax effect | 05 | Clear |
| YO xxM756 | Thixotropic one-two components top coat | 20 | Clear, SBN white, NTR neutral |
| YO xxM760 | One-component converter for tintometric systems | 05, 15, 30, 50 | SBN white, NTR neutral |
| YO xxV824 | Topcoat for curtain coater | 20 | Clear |
| YO xxM829 | Thixotropic top coat | 05, 10, 20, 30, 40, 60 | Clear, T27 oak, T94 bleached |
| YO xxM863 | Semi thixotropic one-component top coat for general use | 10, 20, 30 | Clear |

UV products

Developed exclusively for industrial use, the water-based UV products are the best ecological answer for furniture with high technical and aesthetic performance.

| Code | Description | Gloss level | Colour |
|---------------|---|-------------|-------------------------------|
| YU M692 | High transparency UV base coat | | Clear; C02 white |
| YU xxM793 | UV top coat for general use | 10, 40 | Clear |
| YU xxM795 | High performance UV top coat | 05, 30 | Clear |
| YU xxV796 | UV top coat for curtain coater | 10, 20, 50 | Clear |
| YU xxM754/xxx | Pigmented UV converter for tintometric system | 20, 60 | SBN white, NTR neutral; Clear |





Parquet

Renner Italia dedicates particular attention to the parquet sector. The specific coatings for wooden floors are characterised by reduced viscosity and suitability for the application by brush roller.

| Code | Description | Gloss levels |
|-----------|---|--------------|
| YL M574 | Insulating one-two components base coat for roller and flow coating application | |
| YO xxM838 | One-two component top coat for parquet | 20, 50, 80 |
| YO xxM839 | Semi thixotropic one-two component finishing | 10, 20, 50 |

Tintometric tinting system

The Renner Italia tintometric systems propose a complete range of pigmented products. Making use of the traditional manual colorimetry (formulation by weight) and an advanced computerised

mixing program (formulation by volume), through an infinite range of shades, Renner satisfies all requirements for the modern use of colour. An unlimited range of colours obtained from the

| | | |
|---------------|---|--|
| YO xxM760/xxx | One-component converters 05 gloss: NTR and SBN 15 gloss: NTR and SBN 30 gloss: NTR and SBN 50 gloss: NTR and SBN | One-component converters for general use for furniture and furnishings that undergo moderate stress such as bookshelves, children's bedrooms, wardrobes and doors |
| YO xxM750/xxx | Two-components converters 15 gloss: NTR and SBN 30 gloss: NTR and SBN 50 gloss: NTR and SBN | Two-components converters for furniture and furnishings that undergo frequent and wearing stress such as bathroom furniture and kitchens |
| YO 20M756/xxx | Thixo two-components converter NTR and SBN | Two-components converter with high tixotropy for best results also in vertical application |



combination of **two converters**, white SBN and neutral NTR, with **17 pigmented pastes** with top quality and extraordinary resistance to light and bad weather conditions (RAL, NCS, etc).

CONVERTERS FOR INTERIORS

Two ranges of converters: one-component and two-components. The wettability and flow are characteristics of the application process of this family of products. They are based on acrylic and polyurethane resins which, as well as giving the furniture excellent protection, they give it a very good appearance. The Renner interior converters, characterised by very limited indoor emissions, are EN 71.3 certified.

THE PIGMENTED PASTES

Tested for their resistance to light, the pigmented pastes give shine and life to furniture. In the range of pastel or light colours, add up to 4% of paste to the white SBN converter.

The strong colour gradations combine a neutral converter NTR to 18% of paste.



| THE RANGE OF PASTES | |
|---------------------|----------------|
| EY--M460/--NRO | Black |
| EY--M460/--E02 | White |
| EY--M460/--E04 | Blue |
| EY--M460/--E08 | Orange |
| EY--M460/--E09 | Orange |
| EY--M460/--C31 | Purple |
| EY--M460/--E36 | Warm red |
| EY--M460/--E42 | Maize yellow |
| EY--M460/--E52 | Deep Red |
| EY--M460/--C54 | Amaranth Red |
| EY--M460/--C59 | Golden Yellow |
| EY--M460/--E62 | Ocean Blue |
| EY--M460/--E70 | Oxide Red |
| EY--M460/--C71 | Carmine Red |
| EY--M460/--E77 | Oxide Yellow |
| EY--M460/--C84 | Lobster Orange |
| EY--M460/--E85 | Lemon Yellow |



Biaxial gyrosopic 5-speed automatic mixer



Computerised tintometric dosing system for solvent based coatings



Computerised tintometric dosing system for water-based coatings



Spectrophotometer

Clear Coating Systems

FOR THE ARTISAN, WITH SEMI-CLOSED PORE

Sector of use: furniture, doors

Wood species: walnut, tanganyika walnut, cherry, mahogany, oak

| Product | Code | Application | Drying | Quantity |
|---|-----------------------------|-------------|---------|----------------------------|
| Stain With Binder | TYM001 water RY M022 | Spray | 1 hour | 40 - 60 g/m ² |
| After 12 hours: manual sanding with 280 - 320 grit paper | | | | |
| Base coat | YL M663 | Spray | 1 hour | 80 - 100 g/m ² |
| Base coat | YL M663 | Spray | 4 hours | 100 - 140 g/m ² |
| After 12 hours: automatic or manual sanding with 280 - 320 grit paper | | | | |
| Top coat | YO xxM700 | Spray | 4 hours | 90 - 110 g/m ² |



FOR THE ARTISAN

Sector of use: chairs, turned items

Wood species: beech, ash, oak

| Product | Code | Application | Drying | Quantity |
|--|------------------------------|-------------|---------|----------------------------|
| Stain With Binder | TY M001 acqua RY M021 | Dipping | 1 hour | 40 - 60 g/m ² |
| Base coat | YL M663 | Spray | 4 hours | 100 - 140 g/m ² |
| After 12 hours: manual sanding with 280 grit paper | | | | |
| Top coat | YO xxM863 | Spray | 4 hours | 90 - 110 g/m ² |

FOR THE ARTISAN, WITH OPEN PORE

Sector of use: bathroom furniture, kitchens, tables

Wood species: beech, ash, walnut

| Product | Code | Application | Drying | Quantity |
|--|----------------------------------|-------------|---------|----------------------------|
| Stain With Binder | TY M001 water RY M021 | Dipping | 1 hour | 40 - 60 g/m ² |
| Base coat | YL M663 | Spray | 4 hours | 100 - 140 g/m ² |
| After 12 hours: manual sanding with 280 grit paper | | | | |
| Top coat | YO xxM863 | Spray | 4 hours | 90 - 110 g/m ² |

FOR THE ARTISAN, WITH OPEN PORE

Sector of use: furniture, doors, accessories

Wood species: beech, ash, oak, maple, walnut

| Product | Code | Application | Drying | Quantity |
|--|------------------|-------------|---------|----------------------------|
| Base coat | YO xxM829 | Spray | 4 hours | 100 - 140 g/m ² |
| After 4-6 hours: automatic or manual sanding with 280 – 320 grit paper | | | | |
| Top coat | YO xxM829 | Spray | 4 hours | 100 - 140 g/m ² |



Clear Coating Systems

FOR INDUSTRY, WITH CLOSED PORE

Sector of use: flat panels, smooth doors

Plant: in line system with rollers, stage oven for drying the top coat

Wood species: beech, ash, oak, maple, walnut

| Product | Code | Application | Drying | Quantity |
|--|----------------------------|----------------|--------|---------------------------|
| Stain With Binder | TY M003 RY M025 | Roller coater | 60 sec | 10 - 20 g/m ² |
| Base coat | UV acrylic* | Roller coater | UV | 70 - 100 g/m ² |
| Immediately after automatic sanding up to 320 – 400 grit paper | | | | |
| Top coat | YO xxV824 | Curtain coater | 1 hour | 90 - 110 g/m ² |

* such as ULM500 or ULM131



WITH NATURAL WAXED EFFECT

Sector of use: furniture

Plant: in line system with rollers, stage oven for drying the top coat

Wood species: beech, ash, oak, maple, national walnut

| Product | Code | Application | Drying | Quantity |
|---|------------------|-------------|---------|---------------------------|
| Positive-Negative Stain | TY M013 | Spray | 20 min | 30 - 50 g/m ² |
| Base coat | YO 05M753 | Spray | 2 hours | 90 - 100 g/m ² |
| After 4 hours: manual sanding with 280 – 320 grit paper | | | | |
| Top coat | YO 05M753 | Spray | 4 hours | 90 - 110 g/m ² |



UV coating systems

CLEAR UV, WITH OPEN PORE

Sector of use: panels, doors, kitchen doors, profiles
 Plant: carousel coating machine; spraying machine with oscillating guns, linear tunnel with laminar air flow at 35°C + percussion (jet air) at 40°C;
 high pressure UV lamps 80W/cm
 Wood species: walnut, tanganyika walnut, cherry, mahogany, oak

| Product | Code | Application | Drying | Quantity |
|--|----------------------------|-------------|----------------|---------------------------|
| Stain With Binder | TY M003 RY M022 | Spray | 3 minutes | 40/60 g/m ² |
| Base coat | YU M692 | Spray | 4 minutes + UV | 50 - 120 g/m ² |
| Immediately after automatic or manual sanding up to 320 - 400 grit paper | | | | |
| Top coat | YU xxM793 | Spray | 4 minutes + UV | 90 - 110 g/m ² |

PIGMENTED UV, WITH CLOSED PORE

Sector of use: furniture
 Plant: ventilated oven at 30° C
 Wood species: smoothed melamminic laminate

| Product | Code | Application | Drying | Quantity |
|-----------------|----------------------|-------------|----------------|---------------------------|
| Top coat | YU 20M754/SBN | Spray | 30minutes + UV | 90 - 110 g/m ² |

Pigmented coating systems

FOR THE ARTISAN, WITH ANTIQUE LOOKING OPEN PORE

Sector of use: furniture
Wood species: ash, oak

| Product | Code | Application | Drying | Quantity |
|---|---------------------------------|-------------|----------|----------------------------|
| Insulating base coat | YL M602/ C02 YC M402 al 15% | Spray | 4 hours | 140 - 180 g/m ² |
| After 2 hours: light manual sanding with 220 – 240 grit paper | | | | |
| Pigmented top coat | YO xxM750/ SBN YC M402 at 8% | Spray | 8 hours | 80 - 120 g/m ² |
| Glaze / Antique stain | GY M040/ xxx | Spray | 1 hour | 100 - 140 g/m ² |
| After 1 hour: light manual sanding with 280 – 320 grit paper | | | | |
| Clear top coat | YO xxM750 YC M402 at 8% | Spray | 12 hours | 90 - 110 g/m ² |



FOR THE ARTISAN

Sector of use: furniture, doors
Wood species: MDF

| Product | Code | Application | Drying | Quantity |
|---|--------------------------------|-------------|----------|----------------------------|
| Insulating base coat | YL M602/ C02 YC M400 at 10% | Spray | 8 hours | 140 - 180 g/m ² |
| After 8 hours: manual sanding with 180 – 220 grit paper | | | | |
| Base coat | YL M641/ C02 YC M400 at 2% | Spray | 8 hours | 200 - 240 g/m ² |
| After 8 hours: manual smoothing with 280 – 320 grit paper | | | | |
| Pigmented top coat | YO xxM760/ SBN | Spray | 12 hours | 90 - 110 g/m ² |

FOR INDUSTRY

Sector of use: components for bathrooms

Plant: automatic spraying machine with oscillating guns followed by multi-stage oven at 45°C

Wood species: MDF

| Product | Code | Application | Drying | Quantity |
|--|--|-------------|-----------|----------------------------|
| Insulating base coat | YL M602/ C02 YC M402 at 10% | Spray | 1,5 hours | 120 - 160 g/m ² |
| After one hour: light manual sanding in line with 180 – 220 grit paper | | | | |
| Base coat | YL M654/ C02 | Spray | 1,5 hours | 130 - 160 g/m ² |
| Base coat | YL M654/ C02 | Spray | 1,5 hours | 130 - 160 g/m ² |
| After 8 hours: manual sending with 280 – 320 grit paper | | | | |
| Top coat Pigmented | YO xxM750/ SBN YC M402 at 10% | Spray | 1,5 hours | 100 - 120 g/m ² |

FOR INDUSTRY

Sector of use: components for children's bedrooms with textured effect

Plant: automatic spraying machine with oscillating guns followed by multi-stage oven at 40°C

Wood species: sanded melamminic laminate

| Product | Code | Application | Drying | Quantity |
|---------------------------|---|-------------|--------|----------------------------|
| Top coat Pigmented | YO xxM760/ SBN YC M407 at 1% AY M467 at 8% | Spray | 1 hour | 100 - 120 g/m ² |



Coating systems for parquet

FOR THE ARTISAN, WITH SEMI-CLOSED PORE

Sector of use: floors

Wood species: ash, oak, iroko, doussié, afrormosia, teak

| Product | Code | Application | Drying | Quantity |
|--|-------------------------------------|-------------|---------|---------------------------|
| Fill the cracks by mixing the sanding dust with YL M574 | | | | |
| Base coat | YL M574 | Brush | 4 hours | 80 - 100 g/m ² |
| After 12 hours: manual sanding with 220 - 240 grit paper | | | | |
| Top coat | YO xxM838 | Brush | 4 hours | 80 - 100 g/m ² |
| Top coat | YO xxM838 YC M403 at 10% | Brush | 8 hours | 80 - 100 g/m ² |



Other products

ADDITIVES AND AUXILIARES

| Code | Dose for use (%) | Description |
|---------|------------------|--|
| AY M420 | 0,2 – 0,5 | Anti-foaming agent for flow coating |
| AY M425 | -- | Base for transparent craquelet |
| AY M430 | 1 - 4 | Matting paste |
| AY M435 | 0,1 – 0,4 | Bactericide |
| AY M438 | 0,2 – 1 | UV absorber for indoors |
| AY M439 | -- | Missione (glue for gold leaf application on frames) |
| AY M444 | 0,5 - 2 | Slow drying additive |
| AY M450 | 1 – 10 | Slow drying agent for flow coating and brush application |
| AY M453 | 0,5 - 4 | Thickener for water-based products |
| AY M454 | 0,2 – 1 | Thickener for water-based products |
| AY M457 | 0,2 – 1 | Anti-cissing, stabiliser for curtain coater |

| Code | Dose for use (%) | Description |
|---------|------------------|---------------------------------------|
| AY M460 | -- | Cleaning thinner fo application tools |
| AY M465 | 1 – 8 | Very fine texturing paste |
| AY M466 | 1 – 8 | Fine texturing paste |
| AY M467 | 1 – 8 | Medium texturing paste |
| AY M468 | 1 – 8 | Coarse texturing paste |

CROSS-LINKERS AND CATALYSTS

| Code | Description | Code | Description |
|---------|-------------|---------|----------------|
| YC M400 | Isocyanic | YC M407 | Polyaziridinic |
| YC M402 | Isocyanic | YC M408 | Polyaziridinic |
| YC M403 | Isocyanic | YC M419 | Epoxidic |

Certifications

The production cycles of the Aquaris range respond to the requisites requested by the main product certification bodies. In order to maintain the certifications, the water-based coatings for interior use are constantly monitored by Renner Italia and by the certifying bodies.

EN 71.3 – 2002 CERTIFICATION

Issued by **Biolab**, it certifies that there are no heavy metals in the coatings for toys, i.e. for the wooden elements in close contact with children.

The products given in the table at the side are in compliance with the EN 71.3-2002 European Standard.

| Product code | Description |
|---------------|----------------------------------|
| YL M641 | Clear base coat |
| YL M683 | Clear base coat |
| EY M492/ C02 | White paste |
| YO XXM829 | Clear self-priming top coat |
| YO XXM700 | Clear top coat |
| YO XXM750 | Clear top coat |
| YO XXM760/NTR | Converter for tintometric system |



CERTIFICATION OF RESISTANCE TO ABRASION (TABER TEST)

Issued by **Catas**, it certifies the resistance of products for parquet (single and dual component) to abrasion at the taber test according to the UNI 9115/87 Standard.

During the tests performed by Catas, the coatings were applied by brush, thus reproducing the real conditions.

| Product code | Description | RA | GA | LEVEL |
|---|--|-----|-----|-------|
| YO 50M838 | 3-coat system of single component clear top coat | 230 | 109 | 4 |
| YO 50M838 catalysed at 10% with YC M403 | 3-coat system of catalysed clear top coat | 309 | 89 | 5 |

CERTIFICATION REGARDING CONTACT WITH FOODSTUFFS

Issued by **TUV** and the **Istituto di Ricerche Agroindustria**, certifying compliance of the coating systems with the German LMBG B 82-10-1- 1985 Standard (resistance to saliva and sweat) and

Italian regulation implemented by Ministerial Decree 21/03/1973 and successive updates (suitability for contact with dry foodstuffs).

Suitable for contact with dry foodstuffs - 1st coating system

| Product code | Description | Laboratory |
|--------------|--|--|
| TY M001/ Txx | Water-based stain | Istituto di Ricerche Agroindustria Srl |
| YL M660 | Clear base coat | Istituto di Ricerche Agroindustria Srl |
| YO XXM750 | Clear top coat catalysed at 10% with YC M401 | Istituto di Ricerche Agroindustria Srl |

Suitable for contact with dry foodstuffs - 2nd coating system

| Product code | Description | Laboratory |
|--------------|-----------------------------|--|
| TY M003/ Txx | Water-based stain | Istituto di Ricerche Agroindustria Srl |
| YO XXM829 | Clear self priming top coat | Istituto di Ricerche Agroindustria Srl |



Resistance to saliva and sweat

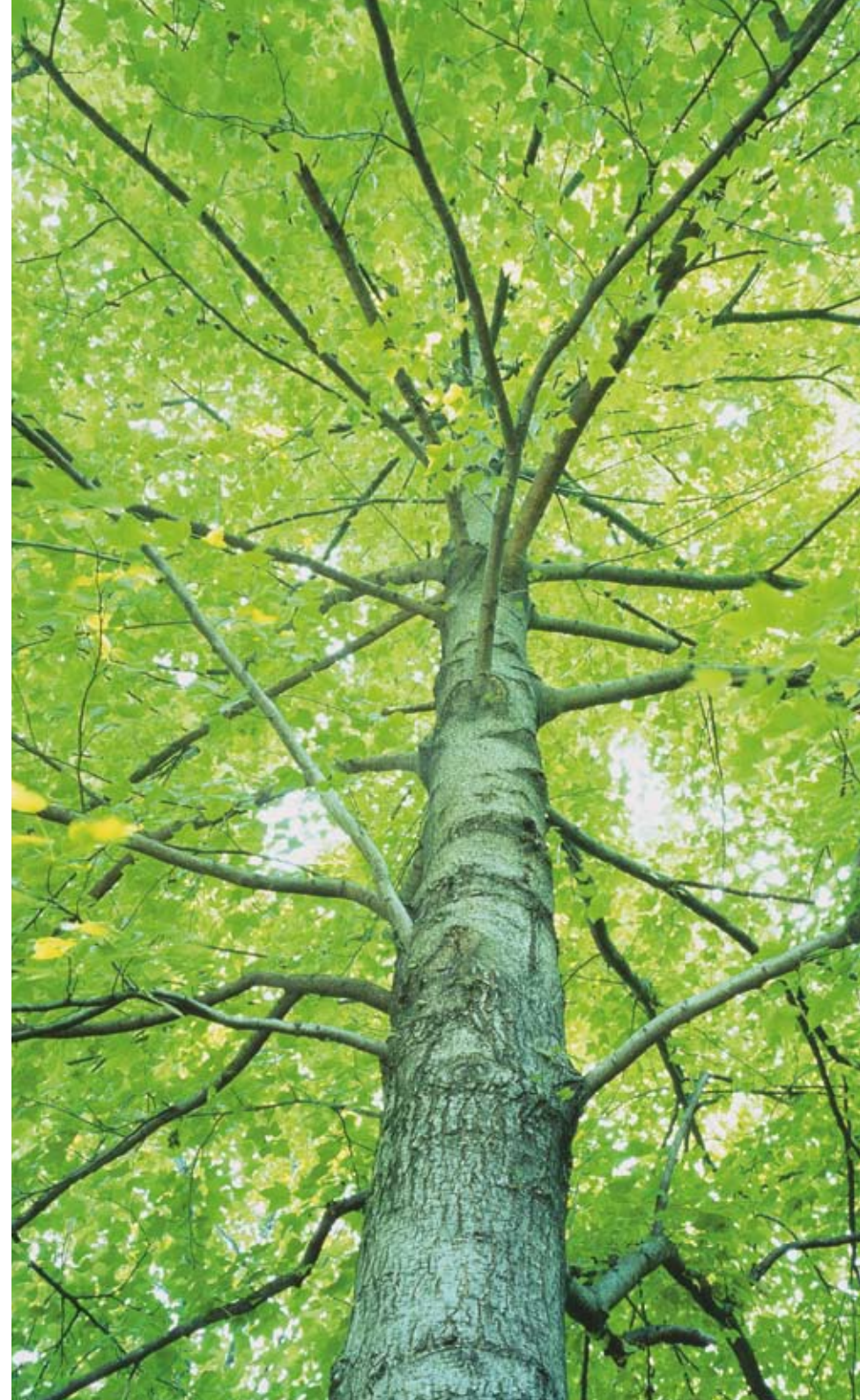
| Product code | Description | Laboratory |
|--------------|-----------------|------------|
| YL M686 | Clear base coat | TUV |
| YO XXM700 | Clear top coat | TUV |

General recommendations

Storage The water-based products must be kept in rooms with temperatures between 5 and 35°C.

Application In the application area the temperature must be at least 15°C both for the substrate and environment.
The water-based coatings can be used with normal coating equipment, provided they are suitable for contact with water.

| | Dilution (%) | Nozzle (mm) | Air pressure (bar) | Coating Pressure (bar) |
|----------------|---------------|---------------|--------------------|------------------------|
| Flow coating | Ready to use | 1-2 | - | 1-2 |
| Tank (dipping) | Ready to use | - | - | - |
| Cup spray gun | 0-6 | From 2 to 2.5 | About 4 | - |
| Airmix | Ready for use | 11-13 | From 0,5 to 1 | From 80 to 120 |
| Airless | Ready for use | 11-13 | - | From 80 to 120 |





Drying

It must take place in well-ventilated rooms with a temperature of **at least 15°C**. The relative humidity of the air is also very important, which must be between 40 and 70%

The following solutions can be adopted to reduce drying times of the water-based products:

- › **the use of forced circulation air**
- › the use of air heated to between 35 and 40°C
- › microwave, IR or catalytic ovens
- › the use of a pre-heater on the top coat with thermostat at maximum at 40°C.

Packaging materials

Do not use expanded polystyrene, bubble wrap, undulated cardboard and plastic material film containing plasticizing substances. The most suitable materials are polyethylene and low density polypropylene. A preventive test is always recommended.

Coating residues

The application equipments must be washed with water immediately after use. If dry film of coating must be removed, use AY--M460 special thinner for cleaning leaving it to act for one night and then rinse it off several times using water.

The coating residues (washing water, booth water, waste coating) must be disposed of according to the local regulations in force. Do not throw residues into the drain system.

Cleaning

Do not use aggressive chemical detergents i.e. containing ammonia or alcohol to clean items coated with water-based products.

Gaskets and silicones

It is recommended to use PVC-based gaskets and silicones with acetic reticulation. A preventive test is always recommended.

RENNER
WOOD COATINGS







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