



PU · WB · UV

SPECIAL COATINGS FOR WOOD

Professional woodcare solution.



MANUFACTURED BY CARPOLY CHEMICAL GROUP IN THE PRC

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WHO WE ARE?

Carpoly provides far more than products; but comprehensive wood coating solutions.

Founded in 1999, Carpoly is an integrated enterprise engaged in R&D, production, and marketing of coatings. In 2022, Carpoly achieved sales of nearly \$600 million, ranking 33rd on *Coatings World*. As one of the largest paint manufacturers in China, Carpoly runs 9 production bases with an annual production capacity exceeding 510,000 tons. With a team of over 3,200 employees and a network of more than 3,000 dealer partners, we are committed to delivering high-quality products and professional services to customers worldwide. Till now, Carpoly has established long-term partnerships in more than 30 countries and regions in Southeast Asia, Europe, America, Africa, Australia, Central Asia and the Middle East.

As a leading coating solution provider in China, Carpoly operates five R&D centers and a postdoctoral research base dedicated to coating technology. So far, Carpoly has taken the lead in drafting 96 national or industrial standards and holds 305 national patents. With such a team of skilled chemists and R&D professionals, Carpoly offers products that cater to the specific needs of customers, while also being tailored to local production levels, weather conditions, and aesthetic preferences.



Carpoly has always been committed to providing safe, healthy, and diverse coating solutions for every business, contributing to the sustainable development of the furniture coating industry. With our superior quality and exceptional service, we have become a trusted supplier and strategic partner for many renowned enterprises, and we are highly award-winning and have a good reputation in the industry. Our range of wood paint products includes Polyurethane (PU) coatings, Unsaturated Polyester (PE) coatings, Ultraviolet-cured (UV) coatings, and Water-based (WB) coatings. These products are widely used in indoor and outdoor furniture, including doors, windows, cabinets, bathroom furniture, instruments, engineered wood flooring, wooden toys, wooden crafts, etc.





THE DEVELOPMENT OF WOOD PAINT

AC, NC-PU-PE-UV, WB

Since the 1990s, China's furniture production value has reached nearly half of the world's total furniture value. Rooted in the largest furniture production base globally, Carpoly has undergone the entire wood paint development process. After almost a decade of export experience, we have found that China's wood paint development history represents the development and trends in many countries. This history includes AC, NC-PU, PE-UV, and WB. Initially, AC was widely used for its low cost, but its hazardous nature and unsatisfactory final paint film effect gradually became apparent. NC, known for its convenience and antique effect, gained popularity. As living standards improved, the demand for better furniture with improved paint film effects led to the emergence of PU paint. Subsequently, PE paint was introduced to tackle common issues with PU, such as sink-down. Nowadays, the demand for efficiency and environmental friendliness has given rise to UV and WB paint, both of which have seen increasing market share. Carpoly understands how to achieve the best final paint film effect on different wood textures using different types of wood paint and application methods. We recognize that high-quality product compatibility, perfect paint film effects, and optimal cost control are the aspirations of every customer. Therefore, we continuously explore, innovate, and develop wood paint to ensure that our customers receive the most reasonable and satisfactory overall furniture coating solutions.

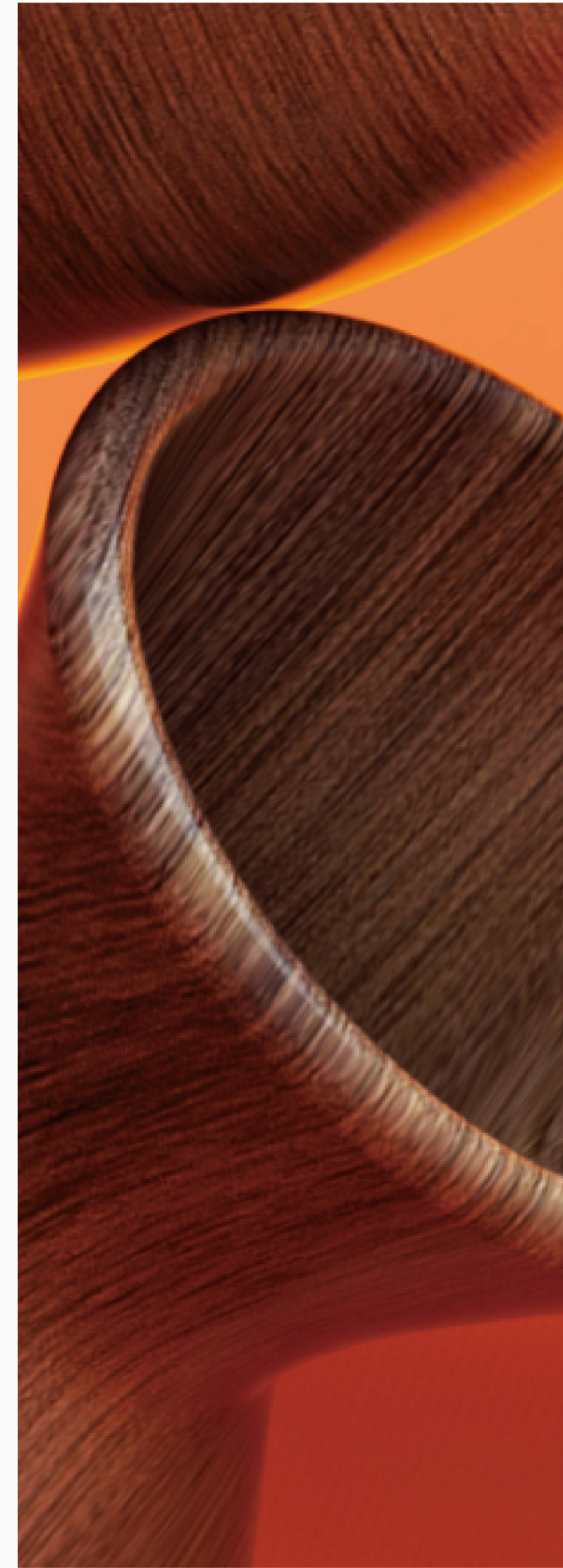


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Carpoly Polyurethane Wood Paint



Polyurethane wood paint (PU) is a two-component product: one base paint and one hardener, which is designed to be mixed in specific proportions before application. It cures through a chemical reaction.

Compared to other wood paint products, PU offers excellent durability and glossiness, and resistant to liquids and chemicals. It can form a long-lasting and aesthetically pleasing coating, protecting the wood surface and providing excellent decorative effects.



It is the most widely used wood paint in the market since it can be applied with a whole range of different coating systems: spray gun, curtain coating, airless, electrostatic and automatic systems.

Carpoly offers an extensive range of PU products which meets different coating needs, providing excellent aesthetic results, mechanical strength, etc. Our PU products are commonly used for coating chairs, frames, cabinet doors, and furniture in general.

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POLYURETHANE WOOD PAINT PRODUCTS INTRODUCTION



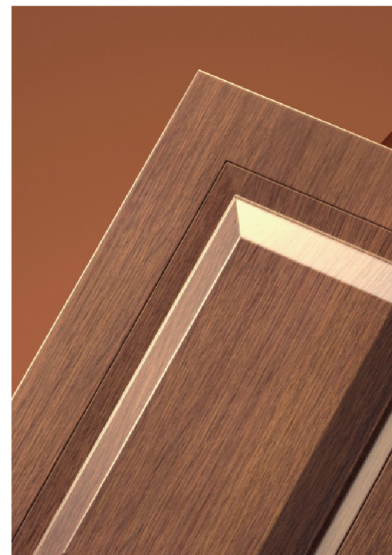
PU Sealer

Carpoly sealer offers fast-dry performance and delivers an exceptional transparent effect. It effectively prevents the permeation of water and oil from the substrate, which can lead to discoloration and peeling off.



PU Primer

We offer a diverse range of primers that cater to different needs, focusing on color (clear or solid color) and effects (open-pore or close-pore). Our open-pore primers create a natural and textured finish, allowing the wood's grain to breathe and showcase its unique character. On the other hand, our close-pore primers provide exceptional coverage and sealing performance, ensuring a refined and polished appearance. In terms of color options, besides clear and white primers, we also provide custom color primers based on our customers' specific requirements. To meet various needs, we also provide products are specially formulated to exhibit exceptional qualities, such as resistance to yellowing and low odor.



PU Topcoat

Carpoly wood paint offers a wide range of gloss levels for customers to choose from. The high gloss products are renowned for their exceptional gloss, while the matt products can achieve a dead matt finish. Over the years, Carpoly wood paint has been highly acclaimed by customers for its exceptional transparency and long-lasting gloss retention. Moreover, Carpoly PU topcoat exhibits strong adhesion and impact resistance, making it resistant to peeling off after being subjected to external forces. It also demonstrates stable performance and high compatibility, allowing it to be used in combination with other product series.

APPLICABLE SCENE

Wooden Door Solution

- Solid Wood Door
- Wooden Composite Door
- Molded Wooden Door

Carpoly PU coating is the ideal paint system for solid wooden doors, creating a visually appealing finish. Its excellent formula enhances the doors with a distinct and layered effect. Moreover, Carpoly wood paint exhibits remarkable weather resistance, catering to the diverse requirements of customers across various regions.



Bathroom Cabinet

In recent years, the range of materials utilized for bathroom cabinets has expanded significantly. Popular choices now encompass solid wood and veneer, MDF, PVC board, and melamine board. Carpoly wood paint effectively caters to the requirements of bathroom furnishings by offering distinct advantages such as exceptional coverage, realistic texture, minimal odor, and eco-friendliness.



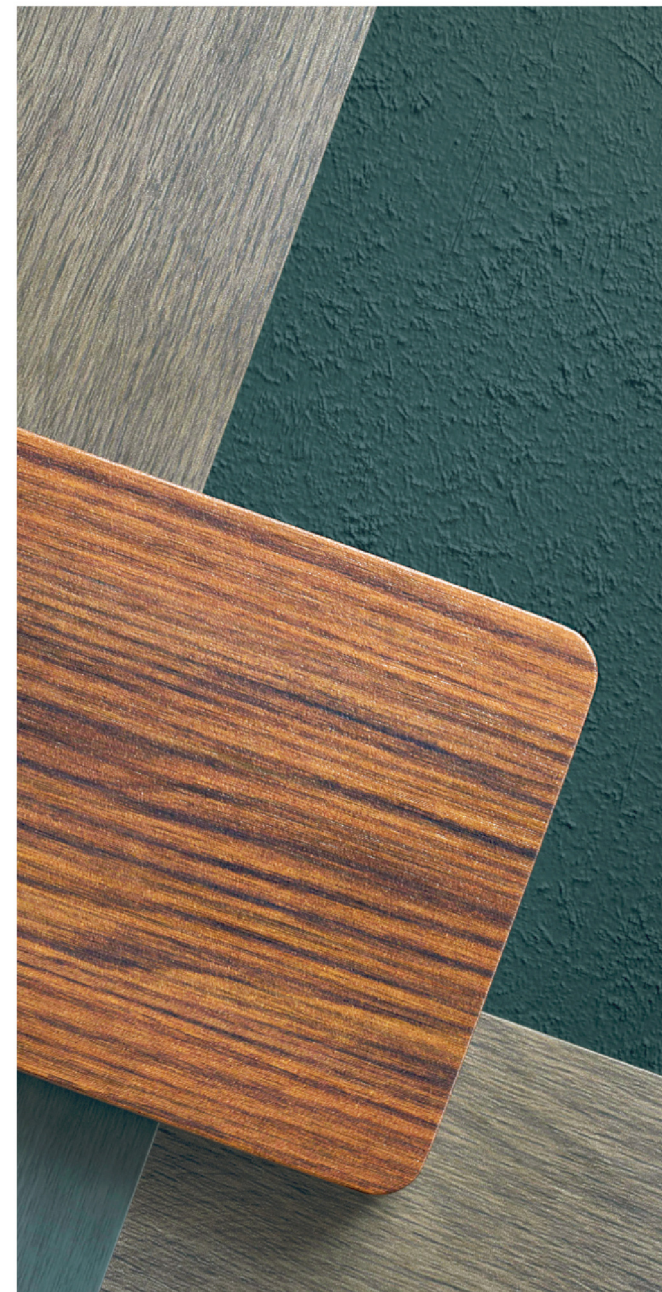
Cupboard

The kitchen is exposed to various dirty substances, The kitchen is prone to coming into contact with dirty substances, and due to its nature, it is essential to consider the paint's resistance to scratches, impacts, and heat. It is crucial for the paint film to meet these requirements while maintaining a certain level of hardness. Carpoly PU wood paint possesses these capabilities without compromising aesthetics.

Carpoly Water-based Wood Paint



Carpoly has been engaged in research and development of water-based paint since 1999. By 2006, we had established the largest automated water-based paint production facility in Asia. In 2011, we obtained certification as a supplier of water-based wood paint to renowned companies such as IKEA (Sweden), Melissa & Doug (USA), and BRIO (Sweden).



Carpoly's water-based wood paint utilizes water as the medium, ensuring a lack of pungent odor. Moreover, it effectively enhances the construction environment by reducing fire hazards and air pollution.

Carpoly's water-based products offer several significant advantages. They demonstrate stable performance, high water resistance, and are resistant to combustion and yellowing. The outdoor series exhibits optimal resistance to acid and alkali, while also showcasing excellent color retention performance.

Carpoly's water-based wood paint is categorized into two series: the interior series and the exterior series, which includes water-based UV variants.

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WATER-BASED WOOD PAINT PRODUCTS INTRODUCTION

Carpoly's single-component water-based wood paint, stands out for its exceptional environmental performance and ease of application. It effectively tackles problems like swelling and shrinkage with its anti-tannic acid function, resulting in a durable paint film that lasts longer. This makes it the top choice for furniture companies and consumers.



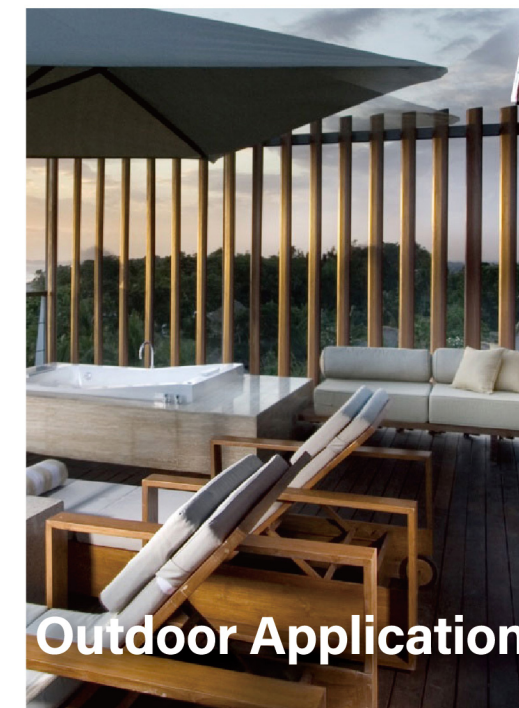
Carpoly's two-component series of water-based wood paint offers superior benefits, such as high hardness, anti-adhesion, anti-fouling, and waterproofing. It provides improved coating and environmental performance, meeting the demands for eco-friendly production and extensive utilization in the furniture market.



APPLICABLE SCENE



Indoor Application



Outdoor Application



IKEA Supplier System

- Antique
- Children's Furniture Paint
- Wooden Doors
- Cabinets

Indoor furniture, especially kitchen cabinets, require an attractive and smooth tactile sensation while also demanding resistance to stains, chemicals, scratches, and high temperatures. This poses a significant challenge for coatings. However, Carpoly's water-based wood paint, with its excellent durability and exceptional touch perception, effectively meets these requirements.

- Outdoor Anticorrosive Wood
- Carbonized Wood
- Outdoor Doors
- Exterior Millwork

To ensure better outdoor durability of furniture, Carpoly water-based wood paint has been enhanced with improved resistance to acid and alkali as well as enhanced color retention performance.

When selecting suppliers worldwide, IKEA establishes clear requirements regarding the working environment and conditions. We strictly conduct risk assessments and safety inspections on our products according to international standards. After undergoing thousands of tests and risk assessments, Carpoly has been chosen as one of IKEA's designated paint suppliers in China.



Carpoly Ultraviolet Curing Paint

Carpoly Ultraviolet curing coatings have the advantages of low volatile organic compounds (VOC) emission, little pollution to the environment, high curing speed, energy saving, good performance of cured products, suitable for high-speed automatic production and so on.



Environmental Friendly



Efficient



Energy Saving



Enabling



Economical



White Painting Process Recommendation



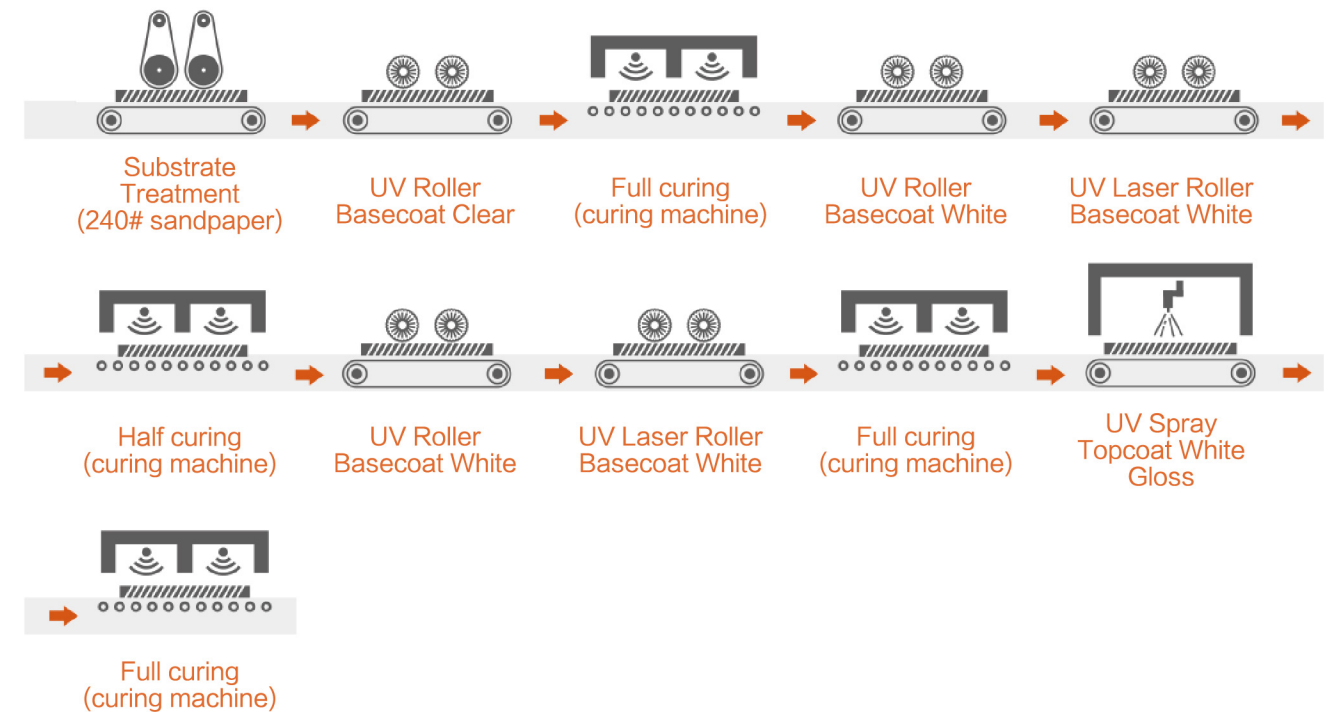
Good Leveling



High Fullness



Multiple Color Effect Can Be Adjusted



Transparent Painting Process Recommendation



Good Transparency



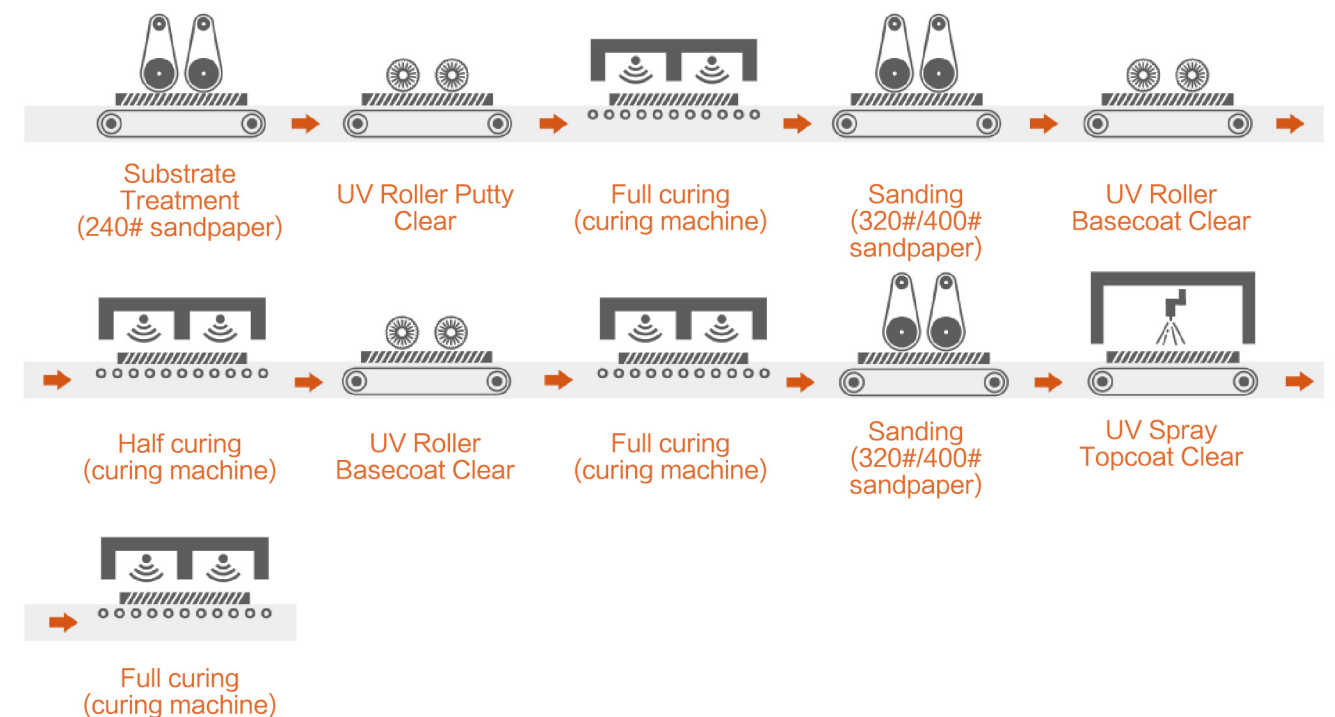
Low Overall Cost



Stable Gloss



Good Resistance To Yellowing



PRODUCT RECOMMENDATION

UV Roller Adhesive Products

| Product Series | Product Performance | Coating Amount (g/m²) | Curing Energy (mj /cm²) | Precautions For Use |
|---------------------------------|--|-----------------------|-------------------------|---|
| UV roller adhesive putty | Mainly used for adhesion of birch and density board, with good filling and sanding properties | 30-40 | UVA: 120-180 | Mainly used in birch and density board, other substrates need to be tested. |
| | | | | Excessive curing energy will affect subsequent coating adhesion; light sanding is recommended. |
| UV roller transparent putty | Transparent series coatings such as large panels and wooden doors , and good sanding properties. | 30-40 | UVA: 120-180 | It is necessary to pay attention to the change in coating amount caused by temperature change, thus affecting the filling property. |
| UV roller adhesive primer | It has good adhesion to birch and general veneer substrates, and has certain sanding properties. | 30-40 | UVA: 120-180 | Mainly used in birch and density board, other substrates need to be tested; |
| | | | | Too high curing energy will affect subsequent coating adhesion; |
| | | | | Light sanding is recommended. |
| UV roller adhesive white primer | High whiteness value, good hiding power, good adhesion between birch and density board. | 25-35 | UVA: 200-300 | The coating amount should not exceed 35g/m²; |
| UV roller adhesive white primer | High whiteness value, good hiding power, good adhesion between birch and density board. | 25-35 | UVA: 200-300 | It should be noted that insufficient curing energy results in slightly poor adhesion; |
| | | | | No sanding or light sanding is recommended. |



PRODUCT RECOMMENDATION

UV Roller Transparent Products

| Product Series | Product Performance | Coating Amount (g/m²) | Curing Energy (mj /cm²) | Precautions For Use |
|---|--|-----------------------|-------------------------|--|
| UV roller transparent primer | It has good sanding and filling properties and can be used in edge banding, furniture, and cabinet panels. | 25-35 | UVA: 150-220 | If the curing energy is too low, it will affect the sanding performance; |
| | | | | If the dryness is not good during solid color coloring, UV roller solid color enhancer IJXQ001 can be added, the enhancer should not exceed 50%; |
| | | | | If the dryness is not good during color correction, UV roller color correction enhancer IJXQ002 can be added; |
| | | | | It is recommended that the added amount of Carpoly stain should not exceed 5%. |
| UV roller transparent topcoat (X% Gloss) | Mainly used for furniture, large cabinet boards, wardrobe boards, etc., with good leveling and touching. | 6-8 | UVA: 300-400 | The curing energy must be sufficient, otherwise the scratch resistance will be affected ; |
| | | | | Gloss can be finely adjusted by coating amount; |
| | | | | If the dryness is not good in solid color coloring, UV roller solid color enhancer IJXQ001 can be added, the enhancer should not exceed 20%; |
| | | | | If the dryness is not good during color correction, UV roller color correction enhancer IJXQ002 can be added; |
| | | | | It is recommended that the added amount of Carpoly stain should not exceed 5%. |
| UV roller transparent topcoat | Single-roller gloss adjustment for furniture, large cabinet boards, and wardrobe boards. | / | UVA: 300-400 | The curing energy must be sufficient, otherwise the scratch resistance will be affected. |
| (Designed for high gloss adjustment) | | | | |



PRODUCT RECOMMENDATION

UV Roller White Products

| Product Series | Product Performance | Coating Amount (g/m²) | Curing Energy (mj /cm²) | Precautions For Use |
|--|--|-----------------------|-------------------------|---|
| UV roller white primer | Normal white primer, normal hiding power, good sanding and leveling properties, suitable for large furniture panels coating. | 15-30 | UVA: 200-300 | Pay attention to the coating amount. Too thick or insufficient deep curing energy will lead to poor adhesion; |
| | | | UVV: 400-600 | If coloring is involved, the coating amount should not be too thick; |
| | | | / | If light-toned coloring has poor drying properties, it is recommended to add UV roller solid color enhancer IJXQ001. |
| UV roller ultra-white primer | High white value, low yellow value , high hiding power; good adhesion; suitable for large panel coating, export cabinets, blinds, etc. | 20-35 | UVA: 120-180 | Lab value is affected by coating amount and curing energy; |
| | | | UVA: 120-180 | If the curing energy is high, the L value is low, and the b value is high; |
| | | | / | If the curing energy is low, the paint film will have a strong smell, and the subsequent paint film is prone to yellowing. |
| UV roller white topcoat (X% Gloss) | Mainly used for large panel coating, with good hiding power, low odor, good leveling and touching. | 8-10 | UVA: 300-400 | The deep and surface dry curing energy must be sufficient, otherwise it will affect the yellowing of the paint film in the later stage. |
| | | | UVV: 350-500 | |
| UV roller ultra-white topcoat (X% Gloss) | Mainly used for cabinets for exportation, with good resistance to yellowing, high hiding power, high whiteness and low yellowing, low odor, high fineness, good leveling and touching. | 8-10 | UVA: 350-500 | Lab value is affected by coating amount and curing energy; |
| | | | UVV: 350-500 | If the curing energy is high, the L value will be low, and the b value will be high; |
| | | | / | If the curing energy is low, the paint film will have a strong smell, and the subsequent paint film is prone to yellowing. |
| UV roller coated glossy white topcoat | Mainly used for glossy adjustment of matte white topcoat. | / | UVA: 300-400 | The deep and surface dry curing energy must be sufficient, otherwise it will affect the yellowing of the paint film in the later stage. |
| | | | UVV: 350-500 | |

PRODUCT RECOMMENDATION

UV Spray Transparent Products

| Product Series | Product Performance | Viscosity for application | Coating Amount (g/m²) | Leveling Time /Temperature | Curing Energy (mj /cm²) |
|---|---|---------------------------|-----------------------|----------------------------|-------------------------|
| UV spray Transparent Primer | Good leveling, easy to sanding, good adhesion, dry film odorless | 11-13 seconds /#2 cups | 100-120 | 6-8 minutes /40-50 ℃ | UVA: 450-550 |
| UV spray Transparent Topcoat (X% Gloss) | Easy to apply, smooth touching, uniform gloss, good transparency, dry film odorless | 11-13 seconds /#2 cups | 100-120 | 8-10 minutes /40-50 ℃ | UVA: 450-550 |
| UV spray high gloss transparent topcoat | High fullness, good leveling, dry film odorless | 11-13 seconds /#2 cups | 100-120 | 8-10 minutes /40-50 ℃ | UVA: 450-550 |

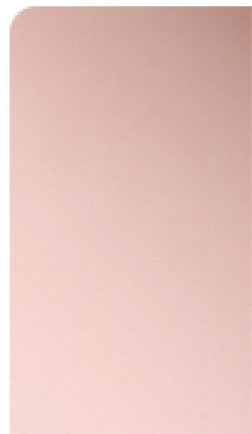
UV Spray White Type

| Product Series | Product Performance | Viscosity for application | Coating Amount (g/m²) | Leveling Time /Temperature | Curing Energy (mj /cm²) |
|-----------------------------------|--|---------------------------|-----------------------|----------------------------|-------------------------|
| UV spray white primer | Easy to sanding, high white value, good hiding power | 11-13 seconds/#2 cups | 100-120 | 6-8 minutes /40-50 ℃ | UVA: 450-550 |
| | | | | | UVV: 550-750 |
| UV spray white topcoat (X% Gloss) | Smooth touching, uniform gloss , high fullness, good leveling, high white value, good yellowing resistance | 11-13 seconds /#2 cups | 100-120 | 8-10 minutes /40-50 ℃ | UVA: 450-550 |
| | | | | | UVV: 550-750 |
| UV spray high gloss white topcoat | High fullness and good leveling properties | 11-13 seconds /#2 cups | 100-120 | 8-10 minutes /40-50 ℃ | UVA: 450-550 |
| | | | | | UVV: 550-750 |



CARPOLY

AUXILIARY MATERIALS



ROSE GOLD
PU PAINT

- Charming color: Silver powder sparkles in the surface, vibrant and highlighting personality.
- Lasting color retention: not easy to fade. Easily handles daily wear and tear, whether in the living room, bedroom or kitchen.
- Easy to clean: resistant to dirt and easy to clean.



GOLD-EFFECT PAINT

- Gold luster: The gold-painting effect is as dazzling as gold, bringing a noble and gorgeous atmosphere to your furniture.
- Aristocratic style: The gold-painting effect is a representative of aristocratic style, which gives the space a sense of nobility.
- Long-lasting brightness: Not easy to fade.



NANO SEMI-TRANSPARENT
PIGMENT

- Suitable for a variety of substrates: suitable for deep conduit and shallow conduit wood, providing good coloring ability and highlighting the wood texture effect.
- Rich layers effect: Applying 1 layer can show different effects of 2 layers, solving the problem of layering and efficiency of the conduit substrate.
- Convenient application: easy to use, can be sprayed and wiped. It can be used as base color and surface color correction.
- Both solvent-based and water-based semi-transparent pigments are available.

CARPOLY

AUXILIARY MATERIALS



STAIN

- High concentration: cost saving.
- High transparency: high transparency effect, suitable for high-end solid wood.
- Good coloring ability: bring vivid color.



SOLVENT-BASED PIGMENT
FOR SOLID COLOR MIXING

- Personalized color selection: the color can be customized.
- High-quality painting effect: wide range of use.



GLAZE

Widely used, mainly for American Antique effect. It is mainly used to imitate wormholes, traces, spray spots, and friction to create the effect of historical continuation.

Remark:

