



UV Vacuum Plating Resin

Basic Information

- Place of Origin: Wuhan, Hubei, China
- Brand Name: Meilun Materials
- Model Number: SNK
- Minimum Order Quantity: 20kg
- Packaging Details: 20kg/barrel, 200kg/barrel
- Payment Terms: L/C, T/T
- Supply Ability: 50T/month



Product Specification

- Highlight: UV Vacuum Plating Resin,
UV strong adhesion resin, UV high gloss resin



Product Description

Product Description:

UV vacuum plating resin is a high-performance photocurable material specifically designed for premium surface treatment processes. It is widely used in automotive components, consumer electronics, cosmetic packaging, home décor, and other industries. The core components are based on aliphatic polyurethane acrylate and polyurethane acrylate, combined with advanced UV curing technology. This formulation imparts excellent metallic texture, high gloss, and eco-friendly properties, making it a perfect fit for vacuum plating processes.

Core Materials and Technology

Aliphatic Polyurethane Acrylate

This component offers outstanding yellowing resistance and weatherability, ensuring long-term color stability even under prolonged UV exposure or outdoor conditions, making it ideal for high-end plating applications.

Polyurethane Acrylate

As the main film-forming substance in the system, it provides excellent flexibility, adhesion, and wear resistance. It also forms a dense bond with metal-plated layers (such as aluminum and chrome), enhancing the durability of the overall coating.

Product Features & Advantages

UV High-Gloss Resin: Forms a smooth, mirror-like metallic surface after curing, significantly enhancing product appearance.

UV High-Definition Resin: High light transmittance and detailed expression of plated layers, suitable for intricate textures and precision decorative patterns.

UV Fast-Curing Resin: Achieves second-level curing under UV light, significantly improving production efficiency while reducing energy consumption and costs.

UV Strong Adhesion Resin: Demonstrates excellent adhesion to metals and plastics (e.g., ABS, PC, PET), minimizing the risk of coating detachment.

UV High-Durability Resin: Resistant to chemicals, scratches, and fingerprints, maintaining stable performance over long-term use.

UV High-Strength Resin: Features high mechanical strength and impact resistance, making it suitable for industrial components with stringent structural requirements.

Applications

Automotive Industry: Chrome interior trims, emblems, buttons—balancing aesthetics and durability.

Consumer Electronics: Smartphone frames, wearable device casings—achieving metallic texture with lightweight design.

Cosmetic Packaging: Caps, lipstick tubes—enhancing brand image with a high-gloss finish.

Home Décor: Lighting fixtures, bathroom hardware—combining decorative appeal with functionality.

Working Principle

The UV vacuum plating process involves multiple steps to achieve a high-quality coating:

Preparation: The substrate is thoroughly cleaned and prepped to ensure optimal resin adhesion.

Coating: The UV resin is evenly applied to the substrate using spraying or dipping techniques.

Vacuum Plating: The coated substrate is placed in a vacuum chamber, where a thin metal layer (e.g., aluminum or chrome) is deposited via Physical Vapor Deposition (PVD).

UV Curing: After plating, the substrate is exposed to UV light, curing the resin layer and securing the metal coating, resulting in a hard, high-gloss surface.

Post-Treatment: The final product may undergo additional steps such as polishing or protective top-coating to enhance durability and aesthetics.

Advantages & Challenges

Advantages:

- Rapid curing
- High-gloss finish
- Excellent adhesion and durability
- Environmentally friendly alternative to traditional coatings

Challenges:

- Requires specialized equipment and processes
- Higher initial setup costs
- Ensuring consistent quality across different substrates and applications

Environmental & Process Compatibility

UV vacuum plating resin features a solvent-free formulation that complies with RoHS and REACH environmental regulations. Its low shrinkage rate minimizes microcracks in the plating layer, ensuring uniform and dense metal coatings, significantly improving yield rates.

Conclusion

As a core material for UV vacuum plating technology, this product leverages the synergy between aliphatic polyurethane acrylate and polyurethane acrylate, incorporating multifunctional properties such as high gloss, strong adhesion, and rapid curing. It provides a highly efficient, eco-friendly, and high-performance surface treatment solution, helping clients stand out in competitive markets.

For more details on technical specifications or customization needs, feel free to contact our technical support team!

Recommended product models(please search on the site):

SNK-2202,SNK-2203,SNK-2205,SNK-2117,SNK-2216,SNK-8204A

Storage and validity period:

- 1: This product should be stored in a cool, well-ventilated room, and strictly protected from light exposure for stable storage.
- 2: Keep the resin away from heat sources and store it in a dark place to prevent potential hazards or affecting the stability of resin storage.
- 3: When stored at room temperature, it remains stable for six months. After use, please tightly seal the container to avoid exposure to light sources and gelation.

Package:

200 kilograms/iron drum
20 kilograms/iron drum
200 kilograms/plastic drum
20 kilograms/plastic drum



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