UOP-2000 Series UV Gravure Overprint Varnish
Technology Data Sheet

1. Product Overview

Premium UV gravure overprint varnish formulated for sheet-fed and web rotogravure presses. Delivers rapid cure speed, crystal-clear film clarity, high gloss, and superior slip and scuff resistance. Primarily designed for protective over-varnishing and high-gloss enhancement on cigarette packaging, liquor cartons, and luxury gift boxes.

2. Product Features

- **High Specular Gloss:** Brilliant gloss and excellent transparency, enhancing graphic color depth;
- **Superior Film Toughness:** Excellent scratch resistance and high slip, preventing scuffing during high-speed folding;
- **Smooth Gravure Transfer:** Exceptional cell release and rapid leveling with low misting at press speeds up to 100–180 m/min;
- **Post-Press Adaptability:** Outstanding die-cutting and creasing flexibility; select grades are hot foil stampable;
- **Eco-Friendly & Low Odor:** Fast photochemical curing response with minimal residual odor.

3. Suitable Substrates

Applicable to gold/silver foil board, SBS ivory board, and coated paper.

4. Technical Specifications

Property	Unit	Typical Value	Test Method / Notes
Appearance & Color	-	Light yellow transparent liquid	Visual inspection
Viscosity	s	20–35	Coating Cup #4, 25±0.5°C
Solid Content	%	≥97	GB/T 33374-2016
Gloss (60°)	GU	80–90	60° angle, GB/T 13217.2-2024

5. Application Guidelines

Ink Preparation	Stir thoroughly prior to use.
Plate / Cylinder Specs	18–25 μm cell depth.
Dilution Ratio	Use dedicated UV thinner or ethyl acetate.
Press Viscosity	18–25 s (Coating Cup #4, 25°C).
Press Speed	100–180 m/min.
Drying Method	High-pressure mercury UV lamp system.
Equipment Cleaning	Clean with ethyl acetate or dedicated press wash.
Application Note	Verify interlayer adhesion with underlying gravure inks before mass production.

6. Regulatory & Safety

Regulatory Compliance	Complies with RoHS and REACH (SVHC) directives.
Food Contact Statement	Formulated for non-direct food contact outer packaging only. For specific food-contact migration compliance, please contact HCOLOR technical department for dedicated project evaluation.
Usage Note	
Safety Data Sheet (SDS)	Available upon customer request.
User Responsibility	Users must independently verify regulatory compliance, performance, and fitness for intended purpose under actual operational conditions.

7. Packaging & Storage

Standard Packaging	20 kg / 25 kg plastic pails; 1,000 kg IBC containers (custom packaging available upon request).
Storage Conditions	Store strictly protected from light in tightly sealed containers. Keep in a dry, cool, and well-ventilated warehouse at 5–25°C, away from fire, heat sources, and strong oxidizers. Strictly avoid direct exposure to sunlight and workshop fluorescent lighting to prevent dark polymerization.
Shelf Life	12 months from production date in unopened original containers.
Post-Opening Care	Reseal immediately and tightly after dispensing; recommended to use within 6 months.

8. Typical Product Grades

Product Code	Key Features	Suitable Substrates	Target Applications
UOP-2436A	High gloss, superior leveling, excellent scratch resistance	Paper substrates	Cigarette packaging, liquor cartons
UOP-2165C10A	Silky touch, high scuff resistance, hot stampable	Paper substrates	Cigarette packaging, foil-stamped boxes
UOP-2298	Rapid curing, high surface slip	Paper substrates	High-speed packaging lines

1. Baseline Platforms & Customization: The products listed above are core baseline platforms proven through extensive commercial mass production. To meet specific press speeds (e.g., ultra-high-speed inline coating), substrate absorbency variations, or demanding rub/crease-crack resistance requirements, HCOLOR provides tailored viscosity adjustments, customized additive packages, and bespoke functional performance development.

2. Specialty Process Integration: If specialized finishes such as drip-off / drip-relief combination effects or tactile matte finishes are required, please contact HCOLOR technical support for a comprehensive turnkey printing formulation.

9. Disclaimer

1. The data are typical values intended for product selection and technical reference only. Unless otherwise agreed in writing, they do not constitute guaranteed specifications.

2. The information contained herein is based on our current knowledge and experience and is provided in good faith for general application guidance only. It does not constitute a legal warranty, guarantee, or binding technical specification. Users are strictly responsible for evaluating and confirming product suitability, process compatibility, and commercial usability under their actual operating conditions and production equipment prior to commercial use.