UOP-2000 Series UV Gravure Drip-Off System
Technical Data Sheet

1. Product Overview

Two-component UV gravure drip-off finishing system designed for paper packaging. Utilizes differential surface tension repulsion between the spot primer and flood overprint varnish to achieve striking tactile contrasts between high-gloss mirror areas and fine matte textured grains in a single inline pass. Primarily engineered for cigarette packaging, premium liquor cartons, and rigid gift boxes.

2. Product Features

- **Striking Drip-Off Contrast:** Crystal-clear high gloss juxtaposed against uniform, fine matte grain for rich visual depth;
- **High Slip & Anti-Blocking:** Superior surface slip and scuff resistance, preventing blocking in high pallet stacks;
- **Accurate Contour Reproduction:** Precise gravure ink release; crisp delineation between glossy and textured zones;
- **High-Speed Runnability:** Fully compatible with modern high-speed inline gravure lines (100–140 m/min);
- **Eco-Friendly Compliance:** Low residual VOC emissions and low odor, conforming to strict packaging standards.

3. Suitable Substrates

Suitable for gold/silver foil board, metallized transfer board, and SBS ivory board.

4. Technical Specifications

Property	Unit	Typical Value	Test Method / Notes
Appearance & Color	-	Milky white liquid (Varnish) / Clear transparent liquid (Primer)	Visual inspection
Viscosity	s	18–28	Coating Cup #4, 25±0.5°C
Solid Content	%	≥90	GB/T 33374-2016
Gloss (60°)	GU	60–90	60° angle, GB/T 13217.2-2024

5. Application Guidelines

Ink Preparation	Varnish contains leveling aids and micro-wax powders; stir thoroughly before dispensing.
Plate / Cylinder Specs	18–25 μm cylinder cell depth.
Dilution Ratio	Use dedicated HCOLOR UV thinners as specified.
Press Viscosity	Ready-to-use as supplied.
Press Speed	100–140 m/min.
Drying Method	High-pressure mercury UV lamp system.
Equipment Cleaning	Clean with n-propyl acetate or dedicated solvent wash.
Application Note	Coating weight ratio between primer and varnish dictates texture grain size; calibrate under press speed prior to run.

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-2230A (Primer)	Uniform drip-off texture, excellent transfer	Paper substrates	Cigarette packaging, luxury cartons
UOP-2231 (Overprint Varnish)	High gloss clarity, excellent leveling and release	Paper substrates	Cigarette packaging, luxury cartons

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.