UVF & UOP-1000 Series UV Offset Drip-Off System
Technology Data Sheet

1. Product Overview

Turnkey UV offset drip-off system pairing a sheet-fed offset primer with an inline flood overprint varnish. Creates striking textural contrasts between spot matte grains and high-gloss relief in a single inline offset pass. Primarily designed for cigarette packaging, luxury liquor boxes, and high-end gift packaging.

2. Product Features

- **Dramatic Drip-Off Contrast:** Spot high-gloss mirror clarity juxtaposed against delicate matte texture;
- **High Definition & Dot Reproduction:** Exploits high-resolution offset plates for intricate detail;
- **Durable Slip & Scuff Resistance:** Protective varnish protects against scuffing and stacking adhesion;
- **Single-Pass Inline Efficiency:** Seamless application on modern multi-unit offset presses;
- **Low Odor & Food Packaging Compliance:** Very low residual odor, conforming to green packaging norms.

3. Suitable Substrates

Gold/silver card, SBS ivory board, coated art paper.

4. Technical Specifications

Property	Unit	Typical Value	Test Method / Notes
Appearance & Color	-	Clear transparent liquid (Varnish) / Light yellow viscous paste (Primer)	Visual inspection
Viscosity	s	40–120 (Varnish)	Coating Cup #4 (Varnish), 25±0.5°C
Solid Content	%	≥97	GB/T 33374-2016
Gloss (60°)	GU	40–90	60° angle, GB/T 13217.2-2024

5. Application Guidelines

Ink Preparation	Varnish contains leveling agents and micro-wax; stir thoroughly before use.
Plate / Cylinder Specs	Primer: Offset ink duct; Varnish: 80–120 LPI anilox coater.
Dilution Ratio	Use dedicated UV thinner.
Press Viscosity	Ready-to-use as supplied.
Press Speed	7,000–12,000 sheets/hour.
Drying Method	High-pressure mercury UV lamp system.
Equipment Cleaning	Clean with alcohol or dedicated UV blanket wash.
Application Note	Primer ink feed volume directly controls matte grain coarseness; run test proofs prior to full 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
UVF-110C (Primer)	Uniform drip-off effect, excellent transfer	Paper substrates	Liquor boxes, luxury gift packaging
UVF-2007C (Primer)	Uniform drip-off effect, excellent transfer	Paper substrates	Liquor boxes, luxury gift packaging
UOP-1101 (Varnish)	High gloss, superior leveling	Paper substrates	Liquor boxes, luxury gift packaging
UOP-1101C (Varnish)	High gloss, superior leveling, hot stampable	Paper substrates	Liquor boxes, foil-stamped boxes
UOP-1102HC3 (Varnish)	Superior leveling, hot stampable, high slip	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.