UVS-1000 Series UV Screen Phosphorescent Ink
Technical Data Sheet

1. Product Overview

Specialty functional UV screen printing phosphorescent (glow-in-the-dark) ink formulated with high-efficiency luminescent pigments. Absorbs visible and UV light and emits bright, long-lasting luminescence in the dark. Exhibits excellent dispersion stability, high film flexibility, and strong adhesion. Primarily applied to specialty cigarette packs, anti-counterfeiting markings, novelty gift cartons, and creative interactive packaging.

2. Product Features

- **Long Afterglow Luminescence:** Rapid light excitation with sustained, bright phosphorescent afterglow in darkness;
- **Good Dispersion Stability:** Anti-settling formulation ensuring uniform luminous pigment distribution;
- **Strong Substrate Adhesion:** Reliable bonding on card stock, coated papers, and plastic films;
- **Smooth Screen Transfer:** Formulated for passage through coarse mesh without clogging;
- **Safe & Eco-Friendly:** Non-radioactive, low VOCs, and safe for consumer packaging.

3. Suitable Substrates

Gold/silver card, SBS ivory board, coated paper, BOPP/PET films.

4. Technical Specifications

Property	Unit	Typical Value	Test Method / Notes
Appearance & Color	-	Light yellow-green liquid	Visual inspection
Viscosity	s	Pseudoplastic state	Suspension dispersion stability
Solid Content	%	≥90	GB/T 33374-2016
Gloss (60°)	GU	5–15	60° angle, GB/T 13217.2-2024

5. Application Guidelines

Ink Preparation	Stir thoroughly and slowly before use; avoid high-speed shearing.
Plate / Cylinder Specs	120–200 mesh count.
Dilution Ratio	Use dedicated UV thinner.
Press Viscosity	Ready-to-use.
Press Speed	1,500–2,500 sheets/hour.
Drying Method	High-pressure mercury UV lamp system.
Equipment Cleaning	Clean with ethyl acetate or screen wash.
Application Note	Thicker ink deposit enhances luminescent brightness; calibrate mesh and exposure before 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
UVS-1084D-6	Yellow-green glow, long afterglow retention, good flexibility	Paper & film substrates	Anti-counterfeit & specialty packaging

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.