UVS-1000 Series UV Screen High-build Varnish
Technical Data Sheet

1. Product Overview

High-build UV screen tactile varnish engineered for flat-bed and rotary screen printing. Creates generous ink deposits, pronounced three-dimensional tactile profiles, crisp edge contours, and outstanding scuff resistance. Primarily utilized for spot 3D tactile high-build, braille markings, and decorative effect on cigarette packaging, wine labels, and boutique gift boxes.

2. Product Features

- **Pronounced 3D Tactile Profile:** Heavy deposit build, delivering bold 3D touch and razor-sharp contour edges;
- **High Transparency & Clarity:** Crystal-clear formulation preserves underlying graphics without hazing;
- **Toughness & Scuff Resistance:** Balanced hardness preventing chipping or flattening during post-press processing;
- **Smooth Screen Printability:** Superior bubble release and flow through thick stencil mesh;
- **Eco-Friendly & Low Odor:** Rapid curing with low residual VOCs.

3. Suitable Substrates

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

4. Technical Specifications

Property	Unit	Typical Value	Test Method / Notes
Appearance & Color	-	Light yellow transparent liquid	Visual inspection
Viscosity	s	Pseudoplastic state	Good thixotropy
Solid Content	%	≥97	GB/T 33374-2016
Gloss (60°)	GU	10–90	60° angle, GB/T 13217.2-2024

5. Application Guidelines

Ink Preparation	Stir thoroughly; de-aerate before loading on press.
Plate / Cylinder Specs	80–180 mesh count (selected by target high-build thickness).
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 (ensure sufficient UV energy for deep through-cure).
Equipment Cleaning	Clean with ethyl acetate or screen wash.
Application Note	Thick ink deposits require calibrated UV exposure to ensure complete through-cure to the substrate.

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-1293	High build, sharp edge contour, excellent toughness	Paper & film substrates	Cigarette packaging, luxury wine cartons
UVS-1452K	High transparency, pronounced tactile profile, high slip	Paper & film substrates	Braille & 3D luxury 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 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.