WOF1017 Water-Based Gravure Gloss Varnish
Technical Data Sheet

1. Product Overview

WOF1017 is a specialized high-gloss water-based gravure overprint varnish developed for premium tobacco packaging. Highly suitable for cigarette outer cartons, inner frame liners, tipping paper, and holographic transfer paperboards. It exhibits intense gloss, excellent chemical and heat resistance, and strict compliance with tobacco VOC regulations.

2. Product Features

- **High Specular Gloss:** Crystal-clear brilliance and optical depth.
- **Strict Tobacco Industry Compliance:** Ultra-low VOC content fully compliant with domestic cigarette packaging regulations.
- **Excellent Intercoat Adhesion:** Superior anchoring over metallic inks, foils, and heavy ink layers.
- **High-Speed Web Stability:** Smooth runnability up to 250 m/min with fast solvent release.
- **Heat & Scuff Durability:** High anti-scratch resilience resisting high-speed cigarette packing machinery.

3. Suitable Substrates

Suitable for woodfree paper, coated art paper, holographic/metallized transfer paper, and aluminum foil boards.

4. Technical Specifications

Property	Unit	Typical Value	Test Method / Notes
Appearance & Color	-	Translucent viscous liquid	Visual inspection
Viscosity	s	60±5	Zahn #2 cup, 25°C
pH Value	-	8.0–9.5	25°C
Solid Content	%	40±2	Oven drying, 105°C × 2 h
Gloss (60°)	GU	50–70	60° angle

5. Application Guidelines

Ink Preparation	Stir thoroughly for 5–10 minutes prior to use. Filtration through ≥200 mesh screen is recommended before loading onto press. 1-pack system; consume promptly after opening.
Plate / Cylinder Specs	Gravure / Surface: cylinder screen 150–250 LPI, moderate cell depth, moderate doctor blade pressure.
Dilution Ratio	Anhydrous ethanol: Deionized water = 1:1, dilution ratio 40%–50% (adjust based on press speed and target operating viscosity).
Press Viscosity	18–21 s (Zahn #2 cup, 25°C).
Press Speed	80–250 m/min (suitable for high-speed printing; optimize based on press model and drying capacity).
Drying Method	Hot air drying, air temperature 60–90°C; ensure complete drying before rewinding.
Equipment Cleaning	Clean printing plates and ink circulating systems promptly after printing with water or dedicated aqueous cleaning agents to prevent ink drying and clogging.
Application Note	Prior to initial commercial production, thorough trials must be conducted under actual operating conditions to verify intercoat adhesion between base ink and varnish, as well as anti-blocking and drying performance.

6. Regulatory & Safety

Regulatory Compliance	Complies with RoHS and REACH (SVHC) directives.
Food Contact Statement	Formulated for external non-food-contact secondary packaging. If specialized food contact compliance or low-migration performance is required, project-specific technical evaluation and formulation confirmation by HCOLOR are required.
Usage Note	VOC content complies with domestic cigarette packaging regulations; suitable for domestic cigarette packaging printing.
Safety Data Sheet (SDS)	Safety Data Sheets (SDS) are available upon request.
User Responsibility	Users must independently verify product suitability, regulatory compliance, and processing performance under actual commercial production conditions prior to full-scale adoption.

7. Packaging & Storage

Standard Packaging	20 kg / 25 kg plastic pails; 1,000 kg IBC containers (custom packaging available upon request).
Storage Conditions	Store tightly sealed in original containers. Keep in a dry, cool, and well-ventilated warehouse at 5–35°C, away from direct sunlight and rain. Strictly protect from freezing; prevent winter frost damage or high-temperature degradation.
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
WOF1017	High gloss / Wear resistance / High-speed stability	Woodfree paper, coated paper, holographic/metallized transfer paper	Cigarette outer packaging / Inner frame liners / Tipping paper

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.