WOF22003 Water-Based Inline Offset Soft-Touch Coating
Technical Data Sheet

1. Product Overview

WOF22003 is a premium water-based soft-touch overprint coating formulated specifically for inline sheetfed offset coating towers. Engineered for luxury packaging, it delivers an ultra-smooth velvety touch with deep matte elegance and excellent anti-scuff durability. It cures rapidly under hot-air impingement, preventing blocking in high-speed stackers.

2. Product Features

- **Silky Velvety Touch:** Imparts a rich, sophisticated soft-touch tactile effect with a deeply uniform matte appearance.
- **Superior Scuff & Rub Resistance:** Effectively resists surface marring, scuffs, and abrasions during packaging and handling.
- **High-Speed Offset Compatibility:** Optimized rheology for inline coating towers, running smoothly at 6,000–10,000 sheets/hour.
- **Consistent Matte Uniformity:** Delivers even laydown across large solid areas without pinholing, misting, or mottling.
- **Low-VOC Eco-Friendly Chemistry:** Water-based, low-odor formulation compliant with environmental packaging standards.

3. Suitable Substrates

Suitable for coated art paper, matte paper, SBS/FBB white cardboard, metallized paper, and synthetic paper substrates.

4. Technical Specifications

Property	Unit	Typical Value	Test Method / Notes
Appearance & Color	-	Transparent to milky white viscous liquid	Visual inspection
Viscosity	s	35±5	Zahn #3 cup, 25±0.5°C
pH Value	-	8.0–9.0	Precision pH meter, 25°C
Solid Content	%	30±1	Oven method, 120°C × 2h
Gloss (60°)	GU		

5. Application Guidelines

Ink Preparation	Stir thoroughly for 5–10 minutes; filtration through 200-mesh screen is recommended. 1-pack system.
Plate / Cylinder Specs	Offset inline coating tower; anilox roll 200–400 LPI with moderate blade pressure.
Dilution Ratio	Ready to use. If viscosity adjustment is required, add 1%–5% deionized water.
Press Viscosity	30–40 s (Zahn #3 cup, 25°C).
Press Speed	6,000–10,000 sheets/hour (adjust based on press configuration and drying tunnel efficiency).
Drying Method	Hot air drying, air temperature 60–90°C; ensure coating is fully dry before high pile stacking.
Equipment Cleaning	Wash blanket, anilox roll, and coating circuit immediately with water after run to prevent dry-in.
Application Note	Conduct pre-production adhesion and anti-blocking tests over underlying offset inks.

6. Regulatory & Safety

Regulatory Compliance	Complies with EU RoHS 2.0 (2011/65/EU) and REACH (EC 1907/2006) SVHC candidate list.
Food Contact Statement	
Usage Note	
Safety Data Sheet (SDS)	Comprehensive Safety Data Sheets (SDS) are available upon request from HCOLOR technical support.
User Responsibility	Users must independently confirm process compatibility and compliance under actual commercial conditions.

7. Packaging & Storage

Standard Packaging	Standard packaging: 20 kg plastic drum; custom volumes (1 kg, 5 kg, 200 kg) available upon request.
Storage Conditions	Store tightly sealed in original drums at 5–35°C in a dry, ventilated warehouse; protect from freezing.
Shelf Life	12 months from manufacturing date in unopened original containers.
Post-Opening Care	Reseal containers tightly immediately after use; consume within 6 months to prevent surface skinning.

8. Typical Product Grades

Product Code	Key Features	Suitable Substrates	Target Applications
WOF22003	Deep matte / Velvety soft-touch / Superior scuff resistance	Coated paper, offset paper, synthetic paper, SBS board	Cigarette flip-top packs, liquor cartons, cosmetic boxes, luxury gift boxes

1. Baseline Platforms & Customization: The products listed above are core baseline platforms proven through extensive commercial mass production. To meet specific line speeds, substrate absorbency variations, or demanding rub resistance, HCOLOR provides tailored viscosity adjustments and custom functional performance development.

2. Specialty Process Integration: If integration with UV drip-off primer, specialty tactile effects, or barrier base coatings is required, please contact HCOLOR technical support for a comprehensive turnkey formulation solution.

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.