WLF900000 Series Water-Based Flexo Corrugated Board Ink Technology Data Sheet

1. Product Overview

WLF900000 Series is a heavy-duty water-based flexographic ink specifically formulated for corrugated boxes and heavy carton printing. Highly suitable for shipping cartons, corrugated fiberboard, kraft paper packaging, and folding boxboard. Formulated with high-grade aqueous acrylic polymers to provide intense color strength, rapid absorption, and superior scuff resistance on porous kraft and coated board.

2. Product Features

- **High Opacity & Vibrant Shades:** Excellent hiding power and bold graphics reproduction on kraft and greyback liners.
- **Superior Scuff & Rub Resistance:** Resists transport abrasion and stacking friction.
- **Fast Penetration & Drying:** Rapid set on absorbent paperboards, eliminating set-off and tracking.
- **Stable Press Performance:** Low foaming tendency and easy washability on wide-web flexo folder-gluers.
- **Eco-Friendly Aqueous System:** Low VOCs, heavy metal-free, and fully recyclable with paperboard.

3. Suitable Substrates

Suitable for uncoated woodfree paper, coated paper, white cardboard (SBS/FBB), and kraft liners.

4. Technical Specifications

Property	Unit	Typical Value	Test Method / Notes
Appearance & Color	-	Viscous liquid in various colors	Visual inspection
Viscosity	s	25±5	Ford #4 cup, 25°C
pH Value	-	8.0–9.5	25°C
Solid Content	%	35±5	Oven drying, 105°C × 2 h
Gloss (60°)	GU	-	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	Flexo: anilox roll screen 300–600 LPI, cell volume 6–12 BCM, moderate doctor blade pressure.
Dilution Ratio	Deionized water or dedicated aqueous diluent, dilution ratio 5%–20% (adjust based on press speed and target operating viscosity).
Press Viscosity	20–40 s (Ford #4 cup, 25°C).
Press Speed	80–160 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 stacking.
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 ink adhesion, drying profile, and post-finishing compatibility on target substrates.

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 does not meet domestic cigarette packaging standards. For domestic cigarette applications, please select dedicated compliant models.
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
WLF90000	High opacity / High color density / High-speed stability	Woodfree paper, coated paper, white board, kraft paper	Packaging cartons / Kraft paper packaging / Corrugated board

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.