# WFG50000 Series Water-Based Gravure Light Packaging Lamination Ink Technical Data Sheet

## 1. Product Overview

WFG50000 Series is a premium water-based gravure lamination ink tailored for flexible light packaging. It is primarily applied to tissue pouches, plastic shopping bags, and diverse flexible film and bag converting. Formulated for rotogravure reverse printing on BOPP, CPP, and PE films followed by solventless or dry lamination, maintaining superb stability during high-speed printing.

## 2. Product Features

- **High Color Density:** Brilliant shade and high tinting strength.
- **Outstanding Lamination Suitability:** Compatible with dry and solventless lamination processes.
- **High-Speed Press Stability:** Excellent anti-misting and ink transfer at high line speeds.
- **Fast Drying:** Rapid drying rate preventing ink blocking and cylinder buildup.
- **Precise Dot Sharpness:** Outstanding dot reproduction across highlight and shadow tones.
- **Eco-Friendly Formulation:** Low-odor, low-VOC aqueous formula fulfilling modern packaging environmental requirements.

## 3. Suitable Substrates

Suitable for flexible packaging films including BOPP, CPP, PE, and related light packaging substrates.

## 4. Technical Specifications

| Property | Unit | Typical Value | Test Method / Notes |
|---|---|---|---|
| Appearance & Color | - | Viscous liquid in various colors | Visual inspection |
| Viscosity | s | 35–55 | Zahn #2 cup, 25°C |
| pH Value | - | 8.0–9.0 | 25°C |
| Solid Content | % | - | Oven drying, 120°C × 2 h |
| Gloss (60°) | GU | - | 60° angle |

## 5. Application Guidelines

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| 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 / Lamination: cylinder screen 200–250 LPI, cell depth 32–40 μm, moderate doctor blade pressure. |
| Dilution Ratio | Standard diluent: Ethanol:Deionized Water = 9:1, dilution ratio 35%–60% (adjust based on press speed and target operating viscosity). |
| Press Viscosity | 17–25 s (Zahn #2 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 rewinding. |
| Equipment Cleaning | Clean printing plates and ink circulating systems promptly after printing with diluent 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

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| 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 China national standard GB 38507-2020. |
| 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

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| 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 |
|---|---|---|---|
| **WFG50000 Series** | High color density / Lamination compatibility / High-speed stability | BOPP, CPP, PE films | Tissue paper pouches / Plastic bags / Flexible packaging film products |

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.