HI9600 Series
Water-Based Laminating Ink – User Manual

◆Product Features

This series of water-based inks is specially designed for printing on composite/laminated packaging films. It is suitable for substrates such as BOPP, PET, and NY, and offers models tailored for retort, boiling, and light packaging applications.



◆Key Advantages

- ◇ Brilliant color with high color density; excellent flowability, stability, and printability.
- ◇ Wide adaptability to various printing speeds; fast drying performance; prints are sharp, full, and have rich tonal depth (strong sense of layering).
- ◇ Compatible with alcohol, water, or any mixture thereof in any ratio without phase separation; stable under various dilution conditions.
- ◇ Applicable to dry lamination, solvent-free lamination, and water-based adhesive lamination processes.
- ◇ Complies with the national standard GB/T 38507-2020 *Water-Based Ink*.

◆Composition of the Water-Based Ink System

Base Colors (Red, Yellow, Blue, White, Black)	Primary color inks that can be mixed or adjusted with diluent to achieve the desired color shade.
Diluent (color-lightening agent)	Used to lighten ink color to the desired tone without reducing the ink' s viscosity.
Diluent Solution (thinner)	A mixture of 95% food-grade corn-fermented ethanol and water is recommended.

◆Instructions for Use

◇ **1.It is recommended to use shallow-plate printing (recommended to use shallow gravure cylinders). Parameters are as follows:**
- ► Electromechanical engraving: 90L/inch or above, depth 25–30μm
- ► Laser engraving: 235L/inch–280L/inch, depth 9–12μm

◇ **2.Diluent (color-lightening agent) Ratio:**
- ► Recommended: 80% ethanol + 20% water mixture
- ► Dilution range: 70%–100% (based on total ink volume, adjusted according to printing environment)

◇ **3.Printing Process Control:**
- ► Ink for application must undergo stirring, circulation, filtration, and viscosity control

◇ **4.Drying Parameters:**
- ► Set maximum air flow in drying tunnel
- ► Recommended drying temperature: 60–80 ° C (gradually increase with printing speed)

◇ **5.Shutdown Cleaning:**
- ► Immediately clean printing plates and rollers with ethanol after printing
- ► Reused ethanol for plate washing must be filtered with a ⩾150 mesh filter

◆Storage Guidelines

◇ **Unopened Ink:**
Storage temperature: -5℃ to 40℃, shelf life: 6–12 months from date of manufacture.
The series has good storage stability, but stirring before use is recommended.

◇ **Opened Ink:**
Seal tightly and store properly; recommended usage within 2 months.

◆Important Notice

◇ Due to variations in substrate properties and printing equipment processes, actual printing results may differ.It is strongly recommended that customers, before mass production:
1. Conduct trial printing tests on specific substrates;
2. Proceed to mass production only after confirming that the print quality meets the required standards.

◇ As printing conditions vary significantly among customers, the company cannot provide an absolute guarantee for all application scenarios.

◇ The operational methods described herein are provided for process reference only. Users should adjust and implement them flexibly according to their equipment parameters and environmental conditions.

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