



HUIZHOU ZHONGZHIXING COLOR TECHNOLOGY CO., LTD.

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Address: 1/F, Building D, Hongtaiyuan Industrial Park, Xinhui Industrial Zone,

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Technical Specification of Gravure Water-based Ink

Gravure water-based ink is an ink that uses water as a solvent and is specially designed for gravure printing technology. Gravure printing is a printing method that transfers ink to a recessed printing plate and then to the substrate. Gravure water-based ink is widely used in the packaging industry due to its environmental protection characteristics.

Main Characteristics

1. Environmental Protection:

- Low VOCs (Volatile Organic Compounds) emissions, reducing the impact on the environment.
- Complies with international environmental protection standards, such as the EU REACH regulation.

2. Safety:

- Non-toxic and harmless, suitable for food packaging.
- Meets food safety standards, such as the US FDA standards and EU regulations.

3. Quick Drying:

- Dries quickly, improving production efficiency.
- Suitable for high-speed printing production lines.

4. Good Adhesion:

- Has good adhesion on various substrates and is not easy to peel off.
- Suitable for a variety of film materials, such as PET, BOPP, PE, etc.

5. Durability:

- Abrasion-resistant and scratch-resistant, suitable for long-term use in packaging.
- Resistant to water, grease, and chemicals.

6. Color Stability:

- The color is bright and remains stable for a long time.

7. Printing Adaptability:

- Suitable for the gravure printing method.
- Suitable for a variety of printing speeds and conditions.

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Technical Parameters

1. Solid Content:

- The solid content refers to the proportion of non-volatile components in the ink, usually between 30% and 40%.

2. Viscosity:

- The viscosity affects the printing quality and speed, generally 8-10 seconds at 25°C (DIN 4 cup method).

3. pH Value:

- The pH value reflects the acidity and alkalinity of the ink, usually between 7.5 and 9.0.

4. Drying Time:

- The drying time depends on the printing conditions and the type of film, generally completed within a few minutes.

5. Glossiness:

- The glossiness after printing is an indicator of the ink quality. The glossiness value at a 60° angle is usually 40%-60%.

6. Printing Speed:

- Suitable for high-speed printing, and the general printing speed can reach 150-200 meters per minute.

Application Scope

1. Food Packaging:

- Flexible packaging: such as candy packaging, snack packaging, etc.
- Composite film: packaging materials composed of multiple layers of film.

2. Medical Packaging:

- Drug packaging bags: used for small packaging of drugs.
- Aluminum foil composite film: used for moisture-proof and light-proof packaging of drugs.

3. Personal Care Product Packaging:

- Shampoo bottle: labels on shampoo and hair conditioner bottles.
- Body wash bottle: labels on body wash bottles.

4. Cosmetic Packaging:

- Cosmetic bottles: labels on cosmetic bottles.
- Cosmetic boxes: printing on cosmetic boxes.

5. Industrial Packaging:

- Industrial product packaging: packaging bags for industrial products.
- Chemical product packaging: packaging for chemicals.

6. Logistics Labels:

- Transportation labels: labels for goods transportation.

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- Anti-counterfeiting labels: labels for anti-counterfeiting.

Precautions

Before using gravure water-based ink, ensure that the surface of the film is clean to obtain the best printing effect.

During the printing process, pay attention to controlling the temperature and humidity of the workshop to ensure the good performance of the ink.

Regularly check and maintain the printing equipment to ensure the smooth flow of the ink and the printing quality.

Standards and Certifications

The production and use of gravure water-based ink need to comply with relevant international and national standards, such as the ISO 14001 environmental management system standard, ISO 9001 quality management system standard, etc.

For food contact materials, it also needs to meet the requirements of food safety-related regulations, such as the US FDA standards, EU regulations, etc.

By using gravure water-based ink, it is possible to achieve environmentally friendly, safe, and high-performance printing effects on packaging materials to meet the packaging and labeling needs of different industries.

Technical Parameters

1. **Viscosity:** 8-10" (Rigisha4# cap). Note: It needs to be determined according to the ink concentration, and for details, please refer to the report.
2. **PH Value:** 7.5-9.0 (@25°C).
3. **Gloss:** 40°- 60° (black and white cardboard).
4. **Dilution:** The same type of diluent can be added, or the PH adjustment solution can be added for adjustment.
5. **Cleaning:** High-strength cleaning agents can be used for anilox rollers, printing resin plates, and printing presses.
6. **Storage:** Please store in a cool place at room temperature, do not refrigerate, and keep it sealed. The storage period is valid for one year from the production date.

Usage Method

Stir thoroughly before use.

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Declaration

The data provided is for reference only for different enterprises. The using enterprises should conduct inspections according to their own company's inspection and usage standards to confirm whether it is suitable for the best usage state of their own enterprises or for special purposes. Since individual usage conditions cannot be effectively controlled, our company cannot guarantee that the above characteristics will be affected by individual usage conditions.

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