High-Temperature Resistant Water-Based Ink Technical Data Sheet

High-temperature resistant water-based ink is a type of ink that uses water as a solvent. It maintains good adhesion, abrasion resistance, and color stability in high-temperature environments. This type of ink is commonly used for packaging materials that require high-temperature processing, such as baking paper and food packaging paper.

Main Performance Characteristics

1.High-Temperature Resistance:

- Capable of withstanding high temperatures, typically tolerating temperatures above 150-220°C.
- Does not discolor, fade, or peel off under high-temperature conditions.

2.Safety:

- Non-toxic and harmless, suitable for food contact materials.

- Complies with food safety standards, such as US FDA standards and EU regulations.

3.Environmental Protection:

- Low VOCs (Volatile Organic Compounds) emissions, meeting environmental requirements.
- Recyclable or biodegradable.

4.Fast Drying:

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

5.Good Adhesion:

- Exhibits strong adhesion to substrates such as paper and film, not prone to peeling.
- Suitable for flexographic printing.

6.Durability:

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

7.Color Stability:

Bright colors that remain stable over time.

8.Printability:

- Suitable for flexographic printing.
- Fast drying, enhancing production efficiency.

Technical Specifications

1.Solid Content:

- The proportion of non-volatile components in the ink, typically ranging from 30% to 40%.

2.Viscosity:

- Viscosity affects printing quality and speed, generally between 20-30 seconds/25°C (DIN 4 cup method).
- Note: Determined based on ink concentration; specific details are provided in the report.

3.PH Value:

- Reflects the acidity or alkalinity of the ink, typically between 7.5-9.0 (@25°C).

4.Drying Time:

- Drying time depends on printing conditions and substrate type, typically fully dried within 24 hours.

5.Gloss:

- The glossiness after printing is an indicator of ink quality, typically ranging from 40%-60% at a 60° angle (on black and white cardboard).

6.Printing Speed:

- Suitable for high-speed printing, with typical printing speeds reaching 150-200 meters/minute.

Application Scope

1.Food Packaging:

- Baking paper: Paper used for baking food.
- Food packaging paper: Paper used for packaging hot food.

2.Catering Supplies:

- Paper cups: Cups for hot drinks.
- Tableware: Such as paper plates and bowls.

3.Personal Care Product Packaging:

- Shampoo bottles: Labels for shampoo and conditioner bottles.
- Shower gel bottles: Labels for shower gel bottles.

4.Cosmetic Packaging:

- Cosmetic bottles: Labels for cosmetic bottles.
- Cosmetic boxes: Printing on cosmetic boxes.

5.Pharmaceutical Packaging:

- Drug packaging bags: Small packaging for pharmaceuticals.
- Aluminum foil composite films: For moisture and light protection of pharmaceuticals.

6.Industrial Packaging:

- Industrial product packaging: Bags for industrial products.
- Chemical product packaging: Packaging for chemicals.

Precautions

Before using high-temperature resistant water-based ink, ensure that the substrate surface is clean to achieve optimal printing results.

During the printing process, control the temperature and humidity in

the workshop to ensure the ink's good performance.

Regularly inspect and maintain printing equipment to ensure smooth ink flow and printing quality.

Standards and Certifications

- The production and use of high-temperature resistant water-based ink must comply with relevant international and national standards, such as ISO 14001 Environmental Management System Standard and ISO 9001 Quality Management System Standard.

- For food contact materials, it must also comply with food safety-related regulatory requirements, such as US FDA standards and EU regulations.

By using high-temperature resistant water-based ink, environmentally friendly, safe, and high-performance printing effects can be achieved on packaging materials that require high-temperature resistance, meeting the packaging and labeling needs of different industries.

Technical Data:

- Viscosity: 18″ ±8 (Rigosha 4# cap). Note: Determined based on ink concentration; specific details are provided in the report.
- PH Value: 7.5-9.0 (@25°C).
- Gloss: 40°-60° (on black and white cardboard).
- Dilution: Can be diluted with the same series of thinning agents or pH adjustment fluid.
- Cleaning: Use high-strength cleaner for anilox rolls, printing resin plates, and printing machines.
- Storage: Store in a cool, dry place at room temperature. Do not refrigerate. Keep sealed. The shelf life is valid for one year from the date of production.

Usage:

Stir well before use.