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Technical Specification for Flexographic Water-based Ink

Flexographic water-based ink is an ink that uses water as a solvent, specifically designed for plastic film materials. It features low VOCs (Volatile Organic Compounds) emissions, thus offering significant advantages in environmental protection and safety. This ink delivers excellent printing results while minimizing environmental impact.

Key Characteristics

1. **Environmental Friendliness:**
   - Low VOCs emissions reduce environmental impact.
   - Complies with international environmental standards, such as the EU REACH Regulation.
2. **Safety:**
   - Non-toxic and harmless, suitable for food packaging.
   - Meets food safety standards, such as US FDA standards and EU regulations.
3. **Fast Drying:**
   - Rapid drying improves production efficiency.
   - Suitable for high-speed printing production lines.
4. **Good Adhesion:**
   - Strong adhesion to plastic materials, resistant to peeling.
   - Applicable to various plastic substrates, such as PET, PVC, PP, and other plastic film substrates.
5. **Durability:**
   - Abrasion and scratch-resistant, suitable for long-term use in packaging.
   - Resistant to water, oil, and chemicals.
6. **Color Stability:**
   - Vivid colors that remain stable over time.
7. **Printing Adaptability:**
   - Primarily suitable for flexographic printing.

- Fast drying enhances production efficiency.

Technical Parameters

1. **Solid Content:**
   - The proportion of non-volatile components in the ink, typically between 30% and 40%.
2. **Viscosity:**
   - Affects printing quality and speed, generally 20–30 seconds/25°C (DIN 4 Cup method).
3. **pH Value:**
   - Reflects the ink's acidity or alkalinity, typically between 7.5–9.0.
4. **Drying Time:**
   - Depends on printing conditions and substrate type, generally fully dry within 24 hours.
5. **Glossiness:**
   - A measure of ink quality after printing, typically 40%–60% at a 60° angle.
6. **Printing Speed:**
   - Suitable for high-speed printing, typically up to 150–200 meters per minute.

Additional Technical Parameters:

- **Viscosity:** 18"±8 (Rigosha4# cap). *Note: Subject to ink concentration; 详见报告 (see detailed report for specifics).*
- **pH Value:** 7.5–9.0 (@25°C).
- **Gloss:** 40°–60° (on black and white cardstock).
- **Dilution:** Can be diluted with the same series of diluents or adjusted with pH adjusting solution.
- **Cleaning:** Use high-strength cleaning agents for anilox rolls, printing

plates, and presses.

- **Storage:** Store in a cool place at room temperature, do not refrigerate, and keep sealed. Shelf life is one year from the production date.

Application Scope

1. **Food Packaging:**
   - Flexible packaging: E.g., candy wrappers, snack packaging.
   - Laminated films: Multi-layer film composite packaging materials.
2. **Medical Packaging:**
   - Pharmaceutical packaging bags: For small drug packaging.
   - Aluminum foil composite films: For moisture and light protection in pharmaceutical packaging.
3. **Personal Care Product Packaging:**
   - Shampoo bottles: Labels for shampoo and conditioner bottles.
   - Body wash bottles: Labels for body wash bottles.
4. **Cosmetic Packaging:**
   - Cosmetic bottles: Labels for cosmetic containers.
   - Cosmetic boxes: Printing on cosmetic packaging boxes.
5. **Industrial Packaging:**
   - Industrial product packaging: Bags for industrial goods.
   - Chemical packaging: Containers for chemical products.
6. **Logistics Labels:**
   - Shipping labels: For cargo transportation labeling.
   - Anti-counterfeit labels: For anti-counterfeiting purposes.

Precautions

- Ensure the plastic surface is clean before using the ink to achieve optimal printing results.
- Control workshop temperature and humidity during printing to maintain ink performance.

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

Standards and Certifications

- Production and use of flexographic water-based ink comply with relevant international and national standards, such as ISO 14001 (environmental management) and ISO 9001 (quality management).
- For food-contact materials, it also meets food safety regulations, such as US FDA standards and EU regulations.

Usage Instructions

- Stir thoroughly before use.

Disclaimer

The data herein is for reference only. Users should test according to their company's inspection and usage standards to confirm suitability for their specific applications. Due to the inability to control all individual use conditions, our company cannot guarantee the above characteristics under such unregulated circumstances.