WPG-D20000 Series Water-Based Gravure Furniture Decorative PVC Heat-Lamination Ink
Technical Data Sheet

1. Product Overview

WPG-D20000 Series Furniture Decorative PVC Heat-Lamination Ink is a specialized water-based gravure printing ink tailored for furniture decorative PVC foil. Engineered to withstand high-temperature vacuum pressing and hot lamination, it delivers crisp woodgrain definition and outstanding inter-layer bond strength without delamination.

2. Product Features

- **High Thermal Lamination Resistance:** Resists blister formation and color shift during 120–160°C hot vacuum pressing.
- **Crisp Woodgrain Graphic Fidelity:** Micro-pigment dispersion reproduces authentic, razor-sharp natural wood textures.
- **Superior Delamination-Free Bonding:** Chemically compatible with hot-melt and vacuum membrane adhesives for permanent adhesion.
- **Excellent Lightfastness & Anti-Aging:** Preserves furniture surface color vibrancy under indoor lighting over years.
- **Eco-Friendly Interior Living:** Non-toxic water-based formulation supporting zero-formaldehyde green home environments.

3. Suitable Substrates

Suitable for decorative PVC foil, furniture overlay films, and rigid/semi-rigid vinyl 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±0.5°C
pH Value	-	8.0–9.0	Precision pH meter, 25°C
Solid Content	%		
Gloss (60°)	GU		

5. Application Guidelines

Ink Preparation	Stir thoroughly for 5–10 minutes; filter through 200-mesh screen before use. 1-pack system.
Plate / Cylinder Specs	Gravure cylinder 150–250 LPI, moderate cell depth, uniform blade pressure.
Dilution Ratio	Ethanol:deionized water = 9:1 or specialized reducer, addition ratio 5%–20%.
Press Viscosity	25–35 s (Zahn #2 cup, 25°C).
Press Speed	35–80 m/min (adjust per machine drying tunnel capacity).
Drying Method	Hot air drying, air temperature 40–55°C; ensure complete drying before rewinding.
Equipment Cleaning	Wash cylinder and ink fountains immediately with water or specialized cleaner.
Application Note	Conduct hot lamination and adhesive peel testing on decorative foil before production.

6. Regulatory & Safety

Regulatory Compliance	Complies with EU RoHS 2.0 and REACH (SVHC) directives for environmental plastic compliance.
Food Contact Statement	
Usage Note	
Safety Data Sheet (SDS)	Full Safety Data Sheets (SDS) are available upon request from HCOLOR technical support.
User Responsibility	Users must independently confirm process compatibility and compliance under actual operating conditions.

7. Packaging & Storage

Standard Packaging	Standard packaging: 20 kg plastic drum; custom volumes (1 kg, 5 kg, 200 kg) available upon request.
Storage Conditions	Store tightly sealed in original drums at 5–35°C in a dry, ventilated warehouse; protect from freezing.
Shelf Life	12 months from manufacturing date in unopened original containers.
Post-Opening Care	Reseal containers tightly immediately after use; consume within 6 months to prevent surface skinning.

8. Typical Product Grades

Product Code	Key Features	Suitable Substrates	Target Applications
WPG-D20000-Furniture Lamination	Heat-lamination resistant / Crisp woodgrain textures / Delamination-free	Decorative PVC foil, furniture overlay films	Furniture desktops, cabinet doors, wall panels, interior doors, and commercial fixture surface laminates

1. Baseline Platforms & Customization: The products listed above are core baseline platforms proven through extensive commercial mass production. To meet specific line speeds, substrate surface tension variations, or demanding lamination temperatures, HCOLOR provides tailored viscosity adjustments and custom PMS color matching.

2. Specialty Process Integration: If integration with functional tie-layer primers, specialty barrier coatings, or steam-resistant overprint varnishes is required, please contact HCOLOR technical support for a comprehensive turnkey formulation solution.

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.