

H103 Series — EVA/RP/TPR Ink



TECHNICAL DATA SHEET

1. Product Description

H103 is a single-component, low-odor aromatic solvent-based ink specially developed for elastic EVA, RP, and TPR materials. It provides excellent flexibility, folding resistance, and strong adhesion on soft and flexible plastic substrates.

The ink film maintains good integrity after repeated bending and deformation, offering durable printing performance for footwear, sporting goods, and flexible molded products.

2. Recommended Substrates & Applications

Recommended for EVA, RP, TPR, and other elastic plastic materials requiring flexibility, folding resistance, and reliable adhesion.

Typical applications include EVA footwear, tool cases, yoga mats, protective pads, sports accessories, and flexible molded plastic products.

3. Key Features

- Excellent flexibility on EVA, RP, and TPR flexible substrates
- Strong adhesion with excellent folding resistance
- Crack resistant after repeated bending and deformation
- Suitable for screen printing and pad printing
- Smooth printing performance with good leveling properties

4. Printing Instructions

1. Remove dust, oil, mold-release residue, and other contaminants from the substrate before printing.
2. Stir the ink thoroughly before use. Select S-8 Fast-Drying Thinner, S-6 Medium-Drying Thinner, or S-9 Slow-Drying Thinner according to ambient temperature, printing speed, and image requirements.
3. Adjust viscosity properly to achieve optimal printing performance on flexible substrates.
4. Recommended screen mesh: 100–150T. Select the final mesh count based on ink deposit, artwork, and printing conditions.
5. Allow the printed ink film to fully cure before final performance evaluation. Air dry for 24 hours at room temperature, or oven cure at 80°C for 30 minutes.

5. Precautions & Storage

1. Always conduct a production trial before mass printing. Adhesion, drying, appearance, and resistance may vary with substrate grade, surface treatment, additives, and molding conditions.
2. Typical thinner addition is 20–30%. Adjust viscosity according to actual printing conditions and the working environment.
3. Drying time varies with substrate, ink-film thickness, temperature, and ventilation. Confirm the appropriate drying conditions before production.
4. Flammable product. Keep the container tightly closed and store in a cool, well-ventilated area away from heat, sparks, and open flames.
5. Use appropriate personal protective equipment. Avoid skin and eye contact. If the product enters the eyes, rinse immediately with plenty of water and seek medical attention.
6. Shelf life is 12 months from the date of manufacture in unopened original packaging. Re-test suitability before using expired material.

6. Technical Reference Data

Test Item	Result	Test Method / Condition
Ink Fineness	$\leq 12 \mu\text{m}$	Grind gauge
Dry-Film Gloss	$\geq 65 \text{ GU}$	60° gloss meter
Surface Drying	Hot air: 40–60°C (Recommended: 50°C)	Reference drying condition
Full Drying	Air dry for 24 hours, or oven cure at 80°C for 30 minutes	Reference drying condition
Adhesion	100/100 squares retained	1 mm × 1 mm, 100-grid cross-cut; 3M tape peel
Flexibility	No cracking or peeling	Folding test
Folding Resistance	No visible damage	Repeated bending test
Abrasion Resistance	No ink removal	Manual rubbing test
Alcohol Resistance	No visible change	Alcohol rubbing test
Water Resistance	No visible change	Tap-water immersion at 20°C for
Heat Resistance	No visible change	80°C for 12 h

Note: Performance data is based on internal laboratory tests and may vary depending on substrate and application conditions. Please conduct a trial test before mass production.

7. Compliance Information

Standard colors in this series can be supplied to meet applicable RoHS, REACH, PAHs, and EN 71-3 requirements. Confirm the required regulation, test method, color, and market before ordering; supporting test reports are available for selected products upon request.

8. Important Notice

The information in this document is based on internal reference testing and is provided as technical guidance only. Because substrate grades, printing conditions, film thickness, drying, and end-use requirements vary, users must verify suitability through their own trials before production.