

H631 Series — General-Purpose Plastic Ink



TECHNICAL DATA SHEET

1. Product Description

H631 is a glossy single-component, low-odor aromatic solvent-based ink designed for general-purpose plastic printing applications. It provides stable printability, smooth leveling, and reliable adhesion on a wide range of plastic substrates.

With good overall performance and balanced resistance properties, H631 is suitable for screen printing and pad printing of various plastic products.

2. Recommended Substrates & Applications

Recommended for rigid and flexible PVC, PMMA, ABS, PC, and PS.

Typical applications include plastic nameplates, decorative panels, toys, electronic housings, and other molded plastic parts.

3. Key Features

- Good printability and smooth leveling
- Reliable adhesion on compatible plastics
- Good abrasion and alcohol resistance
- Suitable for both fine-detail and solid-area screen printing

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. If fine lines or text show spreading, feathering, or blurred edges, add the recommended retarder paste in a controlled amount.
4. Recommended screen mesh: 100–200T. 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	≤ 12 μm	Grind gauge
Dry-Film Gloss	≥ 65 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
Alcohol Resistance	No visible change	500 g load; 100 double rubs with an alcohol-saturated cotton pad
Adhesion	100/100 squares retained	1 mm × 1 mm, 100-grid cross-cut; 3M tape peel
Acid Resistance	No visible change	5% HCl immersion for 24 h
Alkali Resistance	No visible change	5% NaOH immersion for 24 h
Salt-Water Resistance	No visible change	5% NaCl immersion for 24 h
Water Resistance	No visible change	Tap-water immersion at 20°C for 96 h
Abrasion Resistance	No substrate exposure	500 g load; 200 double rubs with an abrasive eraser

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.