

H92 Series — Heat Resistant & Weatherfast Metal Ink



TECHNICAL DATA SHEET

1. Product Description

H92 is a glossy, heat-curing screen printing ink specially developed for metal substrates requiring high temperature resistance and long-term outdoor durability.

After proper baking, it provides strong adhesion on metal surfaces, excellent heat resistance, salt spray resistance, weather durability, and stable color performance.

2. Recommended Substrates & Applications

Recommended for stainless steel, aluminum, tinplate, coated metal surfaces, appliance panels, metal nameplates, and automotive components.

Suitable for applications requiring high-temperature baking, weather durability, and resistance to harsh industrial environments.

3. Key Features

- High gloss finish with excellent color stability
- Heat resistance up to 260°C after proper baking
- Excellent weather durability for long-term outdoor applications
- Salt spray resistance for demanding metal environments
- Strong adhesion on stainless steel, aluminum, tinplate, and coated metal surfaces

4. Printing Instructions

1. Remove dust, oil, and other surface contaminants from the metal before printing.
2. Stir the ink thoroughly before use. Use 783 thinner and adjust viscosity according to ambient conditions and printing 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: 100–130T. Select the final mesh count according to ink deposit, artwork, and printing conditions.
5. Recommended baking condition: actual workpiece temperature of 180–250°C for at least 30 minutes. Final temperature and time must be validated according to metal type, oven design, workpiece size, and required performance.

5. Precautions & Storage

1. Always conduct a production trial before mass printing. Confirm adhesion, color stability, heat resistance, and weathering performance on the actual metal substrate.
2. Store tightly sealed in a cool, dry area away from heat and ignition sources. Recommended storage temperature: 15–25°C.
3. Use suitable personal protective equipment. Avoid skin and eye contact. If the product enters the eyes, rinse immediately with plenty of water and seek medical attention.
4. Shelf life is 12 months from the date of manufacture in unopened original packaging. Re-test suitability before using expired material.

6. Color Performance Data

Color	Heat Resistance	Lightfastness
9002 White	250°C	Grade 7–8
9021 Medium Yellow	260°C	Grade 7
9023 Primary Yellow	200°C	Grade 7–8
9032 Bright Red	220°C	Grade 7
9048 Cyan Blue	200°C	Grade 7–8
9035 Orange Red	220°C	Grade 7–8
9061 Green	200°C	Grade 7–8
9038 Pink	250°C	Grade 7–8

Note: Lightfastness is evaluated according to Blue Wool Scale. Actual performance may vary depending on color formulation, film thickness, substrate, and application conditions.

6A. General Performance Data

Test Item	Result	Test Method
Adhesion	100/100 squares retained	1mm cross-cut, 3M tape peel
Abrasion Resistance	No visible wear	Manual Rubbing Test
Heat Resistance	No visible change	260°C heat exposure after baking
Salt Spray Resistance	No visible corrosion	5% NaCl spray test
Weather Resistance	Grade 7 or above	Lightfastness / weathering evaluation
Water Resistance	No visible change	Water immersion test
Chemical Resistance	No visible change	Chemical rubbing test with alcohol and cleaning agents

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

Performance values vary by color because pigment heat stability differs. Confirm the selected color and required baking temperature before production. Additional compliance testing can be arranged for selected colors 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, surface treatments, printing conditions, film thickness, curing, and end-use requirements vary, users must verify suitability through their own trials before production.