

**NIPPON PAINT 1K ETCHING PRIMER**
*Updated July'25*

**NIPPON PAINT 1K ETCHING PRIMER** is a single-pack epoxy modified polyvinyl butyral, acid-catalysed etching primer developed to deliver faster drying, stronger adhesion, and superior protection performance. It provides excellent adhesion to blast-cleaned steel, galvanised steel, and light alloys, forming a reliable foundation for both single-pack and two-pack coating systems. Formulated with anti-rust pigments, it offers effective short-term corrosion inhibition in mild environments and performs exceptionally well as a tie coat with barrier primers and topcoats in highly corrosive conditions — ensuring enhanced durability, better coating integrity, and long-term protection.

**Product Features:**

- Single-pack and quick dry
- Excellent substrate adhesion

Paint Type	Product Type	Finishing	Recommended Substrate	Pack Size
Solvent based	Interior & Exterior	Matt Dark Green	Blast cleaned steel, galvanized steel and light alloys	5L

**Composition**

Pigment	: Anti rust and extender pigment
Binder	: Polyvinyl butyral based resin
Thinner	: Mixture of hydrocarbon solvents

**Technical Data**

Drying Time (25-30°C)	: Touch Dry	: Approximately 5 minutes (Temperature & humidity dependent)
	: Hard Dry	: Approximately 45 minutes (Temperature & humidity dependent)
Overcoating Time (25-30°C)	: Minimum 4 hours (Temperature & humidity dependent)	
Typical Thickness	: 10 - 15 µm dry film per coat 67 - 100 µm wet film per coat	
No. of Coats	: 1 coat	
Theoretical Coverage	: 10.0 m <sup>2</sup> /litre (for dry film thickness of 15 microns)	
Practical Coverage (40% Loss Factor, as a guideline)	: 6.0 m <sup>2</sup> /litre (for dry film thickness of 15 microns)	
Volume Solid	: 15 ± 2% by volume	
Specific Gravity	: 0.95 - 1.05	
Shelf Life	: Up to 12 months in tight sealed container <b>(Subjected to reinspection after exceeding shelf-life period)</b>	

**Application Method**

Thinner	: Nippon Paint 2K Thinner 01	
Brush/ Roller	: If necessary, add about 5% thinner by volume.	
Compressed Air Spray	: If necessary, add about 10% thinner by volume.	
Airless Spray	: Delivery pressure	: 140 – 170 kg/cm <sup>2</sup>
	: Tip size	: 0.015” – 0.017”
	: Spray angle	: 60° - 70°
	: Dilution	: Up to 5% thinner by volume

**Recommended Coating System**
**Iron and Galvanised Steel**

Primer	: <b>Nippon Paint 1K Etching Primer</b>	: 1 Coat
Top Coat	: Nippon Paint Protective Finish FD	: 2 Coat
Primer	: <b>Nippon Paint 1K Etching Primer</b>	: 1 Coat
Top Coat	: Nippon Paint Micaceous Iron Oxide	: 2 Coat
Primer	: <b>Nippon Paint 1K Etching Primer</b>	: 1 coat
Intermediate	: Nippon Paint Micaceous Iron Oxide	: 1 coat
Top Coat	: Nippon Paint Protective Finish FD	: 1 coat
Primer	: <b>Nippon Paint 1K Etching Primer</b>	: 1 coat
Intermediate	: Nippon Paint 8048	: 1 coat
Top Coat	: Nippon Paint PU Recoatable Finish	: 1 coat
Primer	: <b>Nippon Paint 1K Etching Primer</b>	: 1 coat
Topcoat	: Nippon Paint PU Recoatable Finish	: 2 coats
Primer	: <b>Nippon Paint 1K Etching Primer</b>	: 1 coat
Topcoat	: Nippon Paint Protective AR Finish	: 2 coats
Primer	: <b>Nippon Paint 1K Etching Primer</b>	: 1 coat
Topcoat	: Nippon Paint Protective Acrylic Finish	: 2 coats
Primer	: <b>Nippon Paint 1K Etching Primer</b>	: 1 coat
Intermediate	: Nippon Paint EA9 Finish HB	: 1 coat
Topcoat	: Nippon Paint PU Recoatable Finish	: 1 coat

**Surface Preparation**

For galvanised surfaces and light alloys, thorough solvent degreasing to **SSPC-SP1** is necessary. For steel, abrasive blast to **Sa 2½ ISO 8501-1:2007** is required. All surfaces must be dry and free from dirt, grease, oil and other contaminants before application of the following paint.

**Cleaning**

Cleaning Solvent : Nippon Paint 2K Thinner 01.

All equipment should be cleaned IMMEDIATELY with thinner after use. For thinning, substitute thinners other than those approved or supplied by Nippon Paint may adversely affect the product performance and void product warranty whether expressed or implied.

**Tests**

1. **ASTM D3359** on Adhesion of Paint by Tape Test
2. **ISO 3251** on Non-Volatile Matter
3. **ISO 9227** on Salt Spray Test

**Environmental Conditions During Application**

- Do not apply when the relative humidity exceeds 85% or when the surface to be coated is less than 3°C above the dew point.

- Do not apply at temperature below 7°C. If not, drying and overcoating times will be considerably extended.
- During application of the paint, naked flame, welding operations and smoking should not be allowed and good ventilation is necessary.

**Safety Precautions**

- In a wet state, this product is highly flammable. In case of fire, blanket flames with foam, carbon dioxide or dry chemicals.
- Keep container tightly closed and keep out of reach children or away from food and drink.
- Ensure good ventilation during application and drying.
- During application of paint, naked flames, welding operation, and smoking should not be allowed.
- When applying paint, it is advisable to wear eye protection.
- In case of contact with eye, rinse with plenty of water immediately and seek medical advice.
- Remove splashes from skin by using soap or water.
- Paint must always be stored in a cool place.
- When transporting paint, care must be taken. Always keep container in a secure upright position.
- Dispose of any paint waste in accordance with the appropriate Environment Quality Regulations.

**Note**

\* Theoretical Coverage is based on a mathematical formula and does not consider Loss Factor.

$$\left[ \frac{\text{Volume Solid } \% \times 10}{\text{Dry Film Thickness } (\mu)} \right] = \text{m}^2/\text{lit}/\text{coat}$$

This theoretical coverage rate has been calculated from the volume solids of the material and is related to the amount of coating applied onto a perfectly smooth surface without wastage. For a practical coverage rate, due allowance should be made for atmospheric conditions, surface roughness, geometry of the article being coated, the skill of applicator, method of application etc. when estimating quantities required for a particular job.

The above information is given to the best of our knowledge based on laboratory tests and practical experience. However, since we cannot anticipate or control the many conditions under which our products may be used, we can only guarantee the quality of the product itself. We reserve the right to alter the given without prior notice.

**Disclaimer**

The information contained in this document is provided to the best of Nippon Paint's knowledge, based on laboratory testing and practical experience. As our products are considered semi-finished goods, their performance may be influenced by conditions beyond Nippon Paint's control. As such, we can only guarantee the quality of the product itself. Minor variations may be introduced to comply with local regulations. Nippon Paint reserves the right to modify the information in this document without prior notice.

Users are encouraged to consult Nippon Paint for specific guidance on the suitability of this product for their intended use and application method.

In case of discrepancies between language versions, the English (United Kingdom) version shall prevail.