

NIPPON PAINT ZINC PHOSPHATE PRIMER (HR)
Updated July'25

NIPPON PAINT ZINC PHOSPHATE PRIMER (HR) is an alkyd-based rust inhibitive primer for priming on iron and steel. It is used on iron and steel surfaces under non-immersion condition. It is specially formulated to be used on surface having intermittent temperature not exceeding 200°C or continuous temperature exposure not exceeding 150°C.

Product Features:

- Intermittent temperature up to 200 °C and continuous temperature up to 150°C
- Excellent corrosion resistance
- Lead and chromate free

Paint Type	Product Type	Finishing	Recommended Substrate	Pack Size
Solvent	Interior & Exterior	Low Gloss Grey	Iron and Steel	1 L & 5 L

Composition

Pigment	: Inorganic pigments and extender
Binder	: Alkyd-based
Thinner	: Aromatic

Technical Data

Drying Time (25-30°C)	: Touch Dry : Approx 1 hour (Dependent on temperature and humidity) : Hard Dry : 6 hours (Dependent on temperature and humidity)
Overcoating Time (25-30°C)	: Minimum 16 hours (Dependent on temperature and humidity)
Typical Thickness	: 30 - 45 µm dry film per coat 55 - 85 µm wet film per coat
No. of Coats	: 1 - 2 coats
Theoretical Coverage	: 18.3 m ² per litre per coat (for dry film thickness of 30 microns) : 12.2 m ² per litre per coat (for dry film thickness of 45 microns)
Practical Coverage (40% Loss Factor, as a guideline)	: 11.0 m ² /litre (for dry film thickness of 30 microns) 7.3 m ² /litre (for dry film thickness of 45 microns)
Volume Solid	: 55 ± 2% by volume
Specific Gravity	: 0.97 – 1.07
Shelf Life	: Up to 48 months in tight sealed container (Subjected to reinspection after exceeding shelf-life period)

Application Method

Brush, roller, compressed air spray and airless spray. Preferably use airless spray if a thicker coat is required in one application. Brush, roller, and compressed air spray generally lead to lower film thickness, so more applications may be required to obtain the recommended thickness per coat.

In order to ensure maximum adhesion between coats, it is important to observe that, before recoating, the applied coat is dry and free from any form of contamination. In case it rains or raining is expected, it is advisable not to do any painting. Painting under relative humidity above 85% will adversely affect the subsequent performance of the coating. Condensation occurs during or soon after application and premature early exposure to rain or ponding water could result in color and gloss change.

The optimum resistance of the coating is only attained after completion of the curing of the paint. Under average atmospheric conditions, it takes about 6 ~ 7 days. Exposure of the applied coating to severe abrasion or chemical and water spillage should therefore be avoided before completion of the curing period, the first two or three days being particularly critical.

Thinner	: Nippon Paint General Purpose Thinner
Brush / Roller	: If necessary, add up to 5% thinner by volume.
Compressed Air Spray	: If necessary, add about 10% to 15% thinner by volume
Airless Spray	: Delivery pressure : 140 -170 kg/cm ²
	: Tip size : 0.015" – 0.019"
	: Spray angle : 60° -70°
	: Dilution : Up to 5% thinner by volume

Recommended Coating System
Iron and Steel

Primer	: Nippon Paint Zinc Phosphate Primer (HR)	: 1 Coat
Intermediate	: Nippon Paint Aluminium Paint (HR)	: 1 Coat
Top Coat	: Nippon Paint Aluminium Paint (HR)	: 1 Coat

Surface Preparation
STEEL

The surface to be painted shall be power tool cleaned to minimum **SSPC-SP3 or St 3 ISO 8501- 1:2007**, free from mill scale. It must be dry and free from dirt, grease, oil and other contaminants before application of the paint.

Cleaning

Cleaning Solvent : Nippon Paint General Purpose Thinner.

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 3233-1** on Non-Volatile Matter
3. **ISO 9227** on Salt Spray Test
4. **ASTM D2485-91** on Heat Resistance Properties at High Temperature Service

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

- Keep container tightly closed and keep out of reach children or away from food and drink.
- In the wet state, this product is highly inflammable. In case of fire, blanket flames with foam, carbon dioxide or dry chemicals.
- Keep away from sources of ignition. No smoking.
- Keep container tightly closed and keep out of reach from children.
- Ensure good ventilation during application and drying.
- Do not breathe vapour/spray. Applying paint to large surface areas under closed environment should use air supplied breathing equipment. For small areas or short periods, a suitable cartridge mask should be worn.
Inhalation: Remove to fresh air, loosen collar and keep patient rested.
Ingestion: In case of accidental ingestion. DO NOT INDUCE VOMITING. Seek immediate medical attention.
- 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 any paint waste in accordance with the appropriate Environment Quality Regulations.

Note : A Material Safety Data Sheet (MSDS) is available upon request.

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.