

NIPPON PAINT EPOXY MICACEOUS IRON OXIDE
Updated Jul' 25

NIPPON PAINT EPOXY MICACEOUS IRON OXIDE is a two pack high build polyamide cured epoxy coating containing micaceous iron oxide pigment. It is specially formulated to give high order of protection for steel structure against corrosion. If it is to be applied over steel surface, it is preferable to be used in combination with the primers as recommended.

Product Features:

- Good resistance to abrasion and mechanical damage
- Excellent adhesion on correctly prepared and primed surfaces
- Dry service temperature range up to 100°C
- Available in Grey Black, Dark Grey and Silver Colour

Paint Type	Product Type	Finishing	Recommended Substrate	Pack Size
Solvent based	Interior & Exterior	Low-Gloss	Iron and Steel	5 L (4.0L Base and 1.0L Hardener) 20 L (16.0L Base and 4.0L Hardener)

Composition

Pigment	: Micaceous Iron Oxide & extenders
Binder	: Epoxy & Polyamide
Thinner	: Combination of aromatic, ketone and alcohol

Technical Data

Drying Time (25-30°C)	: Touch Dry : Approximately 2 - 3 hours : Hard Dry : 16 hours
Overcoating Time (25-30°C)	: Minimum 16 hours
Curing Time (25-30°C)	: 7 days (Dependent on temperature and humidity).
Typical Thickness	: 50 - 100 µm dry film per coat 70 - 145 µm wet film per coat
No. of Coats	: 1 - 2 coats
Theoretical Coverage	: 14.0 m ² /litre (for dry film thickness of 50 microns) 7.00 m ² /litre (for dry film thickness of 100 microns)
Practical Coverage (40% Loss Factor, as a guideline)	: 8.4 m ² /litre (for dry film thickness of 50 microns) 4.2 m ² /litre (for dry film thickness of 100 microns)
Volume Solid	: 70 ± 3% by volume
Specific Gravity	: 1.65 – 1.75 (for mixture of Base and Hardener)
Mixing Ratio	: 4 parts by volume of Base to 1 part by volume of Hardener. (Stir the content of the Base component, continue stirring and gradually add the total contents of the Hardener component, continue stirring until a homogeneous mix is obtained.)
Pot Life (25-30C)	: 6 - 8 hours after mixing
Shelf Life	: Up to 24 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.

When airless spray is being used, excessive high tip spraying pressure should be avoided. The minimum pressure at the pump conducive with good atomisation should be used. Brush and roller are recommended for small areas and touch-up only. Good quality brushes and mohair/ short nap rollers should be used with full strokes. Avoid rebrushing. Additional coats may be required to achieve minimum specified film thickness.

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.

Drying time will become remarkably delayed under low temperature. Overcoating the previous coat of **Nippon Paint Epoxy Micaceous Iron Oxide** should be done within 6 ~ 7 days but preferably as soon as possible after it has been allowed 16 hours drying or else, it is desirable to roughen it by dry sanding with sandpaper before it is overcoated. This is to ensure proper intercoat adhesion.

Exposure of the paint film to water, chemical and abrasion should be avoided as far as possible before full cure of the coating. When chalking occurs, chalks should be removed by water washing. Allow the surface to dry thoroughly prior to overcoating.

Thinner	: SA-18 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" – 0.017"
	: Spray angle : 60° - 70°
	: Dilution : Up to 5% thinner by volume

Recommended Coating System

Iron and Steel

Primer	: Nippon Paint Nippezinc E2 Primer	: 1 Coat
Intermediate	: Nippon Paint Epoxy Micaceous Iron Oxide	: 1 Coat
Top Coat	: Nippon Paint Polyurethane Recoatable Finish	: 1 Coat
Primer	: Nippon Paint Zinc Rich Primer HS	: 1 Coat
Intermediate	: Nippon Paint Epoxy Micaceous Iron Oxide	: 1 Coat
Top Coat	: Nippon Paint Polyurethane Recoatable Finish	: 1 Coat
Primer	: Nippon Paint NIOZ	: 1 Coat
Intermediate	: Nippon Paint Epoxy Micaceous Iron Oxide	: 1 Coat
Top Coat	: Nippon Paint Polyurethane Recoatable Finish	: 1 Coat
Primer	: Nippon Paint 8048 Zinc Phosphate Primer QD	: 1 Coat
Intermediate	: Nippon Paint Epoxy Micaceous Iron Oxide	: 1 Coat
Top Coat	: Nippon Paint Polyurethane Recoatable Finish	: 1 Coat

Surface Preparation

The surface must be dry and free from any abrasive residues, dirt, oil and grease and other contaminants prior to painting. For steel structure, the surface must be primed with 1 coat of appropriate primer before application of Nippon Paint Epoxy Micaceous Iron Oxide. Primers recommended are epoxy primers, epoxy zinc primer or ethyl silicate zinc primer.

Cleaning

Cleaning Solvent : SA-18 Thinner. Clean up equipment with thinner immediately after use.

Tests

1. **ASTM D3359** on Adhesion of Paint by Tape Test
2. **ISO 4624** on Adhesion of Paint by Pull-Off Test
3. **ISO 6272-1** on Impact Resistance by Falling Weight
4. **ISO 3251** on Non-Volatile Matter
5. **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

- 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 off 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.