

NIPPON PAINT EA9 RED OXIDE PRIMER
Updated Jan'25

NIPPON PAINT EA9 RED OXIDE PRIMER is a two-pack amine-adduct cured epoxy designed for use as a high-performance primer for many types of surfaces i.e. aluminium, galvanized iron, steelwork, concrete, GRP, masonry, tiles, aluminium/zinc alloy coated steel and phenolic sheeting. Nippon Paint EA9 primer/finish systems have been extensively used for long term corrosion of both ferrous and non-ferrous surfaces within the civil engineering and building industry, and as lining systems for potable water, chemical and fuel storage tanks, palm oil derivatives and vegetable oil.

Product Features:

- Good resistance to abrasion and mechanical damage
- Excellent on correctly prepared surfaces
- Outstanding resistance to aqueous solutions and a wide range of industrial chemicals
- Dry service temperature ranges up to 100°C

Paint Type	Product Type	Finishing	Recommended Substrate	Pack Size
Solvent	Interior	Low Gloss Red Oxide	Steel, galvanized iron, aluminium, stainless steel, aluminium/zinc alloy coated steel, GRP, masonry and tile	5 L (4.5L Base and 0.5L Hardener) 20 L (18L Base and 2L Hardener)

Composition

Pigment	: Inorganic pigments and extender
Binder	: Epoxy and amine adduct
Thinner	: Combination of aromatic, ketone and alcohol

Technical Data

Drying Time (25-30°C)	: Touch Dry : 1 - 2 hours (Dependent on temperature and humidity) : Hard Dry : 4 - 5 hours (Dependent on temperature and humidity)
Overcoating Time (25-30°C)	: Minimum 16 hours (Dependent on temperature and humidity)
Curing Time (25-30°C)	: 6 - 7 days (Dependent on temperature and humidity).
Typical Thickness	: 60 - 80 µm dry film per coat 120 - 160 µm wet film per coat
No. of Coats	: 1 - 2 coats
Theoretical Coverage	: 8.3 m ² per litre per coat (for dry film thickness of 60 microns) : 6.2 m ² per litre per coat (for dry film thickness of 80 microns)
Practical Coverage (40% Loss Factor, as a guideline)	: 5.0 m ² /litre (for dry film thickness of 60 microns) : 3.7 m ² /litre (for dry film thickness of 80 microns)
Volume Solid	: 50 ± 2% by volume
Specific Gravity	: 1.00 – 1.40 (for mixture of base and hardener)
Mixing Ratio	: 9 parts by volume of Base to 1 part by volume of Hardener. <i>(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.)</i>
Pot Life (25-30°C)	: 6 - 7 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 EA9 Red Oxide Primer 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-65 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

Steel

Primer	: Nippon Paint EA9 Red Oxide Primer	: 1 Coat
Intermediate	: Nippon Paint EA9 Finish HB	: 1 Coat
Top Coat	: Nippon Paint PU Recoatable Finish	: 1 Coat

Galvanized / Aluminium / Stainless Steel

Primer	: Nippon Paint EA9 Red Oxide Primer	: 1 Coat
Intermediate	: Nippon Paint EA9 Finish HB	: 1 Coat
Top Coat	: Nippon Paint PU Recoatable Finish	: 1 Coat

Internal Tanks / Silo*

Primer	: Nippon Paint EA9 Red Oxide Primer	: 1 Coat
Intermediate	: Nippon Paint EA9 Finish HB	: 1 Coat
Top Coat	: Nippon Paint EA9 Finish HB	: 1 Coat

* Kindly seek assistance from a Nippon Paint representative for guidance on the appropriate cargo and service temperature of internal tanks/silo.

Surface Preparation

STEEL, INTERNAL STORAGE/SILO (IMMERSION SERVICE)

For optimum performance, abrasive blasting in accordance to **Sa 2½ ISO 8501-1:2007** is desirable. It is important that the standard should be maintained until the paint is applied on. If the steel changes colour or rust bloom begins to form, it will be necessary to reblast the steel. The surface must be dry and free from any abrasive residues, dirt, oil and grease and other contaminants prior to painting. For internal storage/silo that are under immersion services, abrasive blasting must be conducted until in accordance to **Sa 2½ ISO 8501-1:2007**.

GALVANIZED IRON, ALUMINIUM AND STAINLESS STEEL

New galvanised surface requires to be degreased in accordance to **SSPC-SP1**. For old galvanised surface, it must be abraded to remove corrosion deposits. All surfaces must be dry and free from oil and grease prior to painting. For optimum

performance, the surface must be lightly abrasive blasted. If blasting is not possible, abrade with 120 grade paper, clean and dry prior to painting.

Cleaning

Cleaning Solvent : SA-65 Thinner. Clean up equipment with thinner immediately after use.

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.
- 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

* 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.