



# HI-PON 20-03 EPOXY RED OXIDE PRIMER

TECHNICAL DATA SHEET

## PRODUCT DESCRIPTION

Hi-Pon 20-03 Epoxy Red Oxide Primer is a two-pack amine-adduct cured epoxy primer designed for use as a high performance primer for many types of surfaces i.e. aluminium, galvanizing, steelwork, concrete, GRP and phenolic sheeting.

## INTENDED USE

As a primer 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.

## GENERAL PROPERTIES

<b>Colour</b>	: Reddish Brown
<b>Gloss Level</b>	: Matt
<b>Volume Solids, %</b>	: 50 ± 2 %
<b>Specific Gravity</b>	: 1.20 – 1.40 kg/l (Mixed)
<b>Flash point</b>	: Base: 7°C    Hardener: 23°C    Mix: 7°C
<b>VOC</b>	: 512 g/L (EPA Method 24)
<b>Typical Thickness</b>	: 60 – 80 µm dry film : 120 – 160 µm wet film

## SURFACE PREPARATION

All surfaces should be clean, dry and free from contamination. The surface should be assessed and treated in accordance with ISO 8504. Oil or grease should be removed in accordance with SSPC-SP1 solvent cleaning.

### Abrasive Blast Cleaning

Abrasive blast cleaning to Sa 2½ (ISO 8501-1:2007) or SSPC-SP6. For optimum performance, blast cleaned to SSPC-SP10 with a surface profile of 50 – 75 microns (2 – 3 mils). If oxidation has occurred between the blasting and application of this product, the surface should be re-blasted to the specified visual standard. Surface defect revealed by the blast cleaning process should be ground, filled or treated in the appropriate manner.

### Shop Primer Surface

This product is suitable for application to the unweathered steelwork freshly coated with zinc silicate shop primers. If the zinc shop primer shows extensive or widely scattered breakdown or excessive zinc corrosion, overall sweep blasting will be necessary. Other types of shop primer are not suitable for over coating and will required complete removal by abrasive blast cleaning. Weld seams and damaged areas should be blast cleaned to Sa 2½ (ISO 8501-1:2007).



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## Damaged Area

Damage area should be prepared with abrasive blast cleaning to Sa 2½ (ISO 8501-1:2007). When abrasive blasting in small area is not possible, mechanical cleaning to St 3 (ISO 8501-1:2007) is acceptable.

Hi-Pon 20-03 Epoxy Red Oxide Primer should be applied over a surface that is dry and free from all contamination and must be applied within the overcoating intervals specified (refer to application section for details).

## Other Surfaces

The coating may be used on other substrates. Please contact your local Nippon Paint office for more information.

### CONDITION DURING APPLICATION

Avoid paint application when the temperature is below 10°C and relative humidity is over 85%. The temperature of steel surface must be a minimum 3°C above dew point of surrounding air.

### APPLICATION GUIDE

<b>Mixing Ratio</b>	: Base : Hardener = 9 : 1 (by volume) Base and hardener should be mixed thoroughly before use.
<b>Pot Life</b>	: 25°C 6 hours
<b>Theoretical Coverage</b>	: 6.2 m <sup>2</sup> /litre at 80 µm DFT
<b>Thinner</b>	: Hi-Pon Epoxy Thinner

### APPLICATION METHOD

Airless spray is recommended for application. Brush and roller are recommended for stripe coating and small areas. Care must be taken to achieve the specified dry film thickness.

### APPLICATION DETAILS

<b>Airless Spray</b>	: Tip Size	: 0.015" – 0.021"
	: Pressure at nozzle	: 140 – 170 kg/cm <sup>2</sup>
<b>Typical Thickness</b>	: 60 – 80 µm dry film	
	: 120 – 160 µm wet film	
<b>Drying Time</b>	: Substrate Temperature	: 25°C      40°C
	: Surface Dry	: 1 hr      0.5 hr
	: Through Dry	: 6 hrs      3 hrs
	: Cured	: 7 days      3 days
	: Dry to recoat (min)	: 6 hrs      3 hrs
	: Dry to recoat (max)*	: Extended



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The given data must be considered as guidelines only. The actual drying time/times before recoating may be shorter or longer, depending on film thickness, ventilation, humidity, underlying paint system, requirement for early handling and mechanical strength etc. A complete system can be described on a system sheet, where all parameters and special conditions could be included.

\* Where an "extended" overcoating time is stated, consult Nippon Paint Protective Coatings for recommended surface preparation to achieve optimal intercoat adhesion.

## RECOMMENDED PAINTING SYSTEM

The following coating systems are recommended for Hi-Pon 20-03 Epoxy Red Oxide Primer:

### Intermediate

- Hi-Pon 20-03 Epoxy White Primer
- Hi-Pon 20-04 STE 80
- Hi-Pon 20-04 STE IM 80
- Hi-Pon 30-02 Epoxy MIO 80
- Hi-Pon 30-03 Epoxy Midcoat 80

### Topcoat

- Hi-Pon 40-02 Epoxy Top Coat
- Hi-Pon 40-04 Epoxy Top Coat
- Hi-Pon 50-01 Polyurethane Top Coat
- Hi-Pon 50-03 Polyurethane Top Coat

For the choice of coating system for different application, refer to the product brochure or contact Nippon Paint for professional recommendation.

## PACKAGING

Unit	Base		Hardener	
	Vol	Container Size	Vol	Container Size
5 L	4.5 L	5 L	0.5 L	1 L
20 L	18 L	20 L	2 L	5 L

## STORAGE

**Shelf life** : Part A: 12 months (25°C)  
Part B: 12 months (25°C)

Subject to re-inspection thereafter. Higher temperature during storage may reduce the shelf life and may lead to gelling in the tin. Frequent temperature cycles may also shorten the shelf life.



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Store in tightly closed container in a dry, cool and well ventilated space, keep away from sources of heat and ignition.

## SAFETY PRECAUTION

- This product is intended for use of professional applicators. Refer to the safety information display on the container and in the safety data sheet (SDS) before using the product.
- Use this product in well-ventilated area, avoid skin contact, spillage on the skin should immediately be removed with suitable cleanser, soap and water.
- Eye should be well flush with water and seek for medical attention immediately upon contact with this product.
- During the application, naked flame, welding operation and smoking is not allowed. Adequate ventilation should be provided.
- If you have any doubt regarding the suitability of use, refer to Nippon Paint for further advice.

## DISCLAIMER

The information in this data sheet is given to the best of Nippon Paint's knowledge and practical experience. Users may consult with Nippon Paint on the general suitability of the product for their needs and specific application practices though it remains each user's responsibility to determine the suitability of the product for the user's particular use. The condition of the substrate and application are not within Nippon Paint's control. Therefore no implied conditions, warranties or other terms will apply to the Product. Nippon Paint does not and cannot warrant the results which the user may obtain by using the product. In no event will Nippon Paint be liable to the user for any kind of loss (whether direct or indirect) even if Nippon Paint was previously advised of it. In line with Nippon Paint's policy for continuous development, Nippon Paint reserves the right to modify the product and the information in this data sheet without prior notice. It is the user's responsibility to check with Nippon Paint for the latest version of this data sheet. This data sheet has been translated into various languages. In the event of any inconsistency, the English version shall prevail.