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.* carbon steel, galvanized steel, shop primed steel, aluminium, concrete, GRP and phenolic sheeting.

INTENDED USE

Universal corrosion protection for all areas in atmospheric environments. Suitable for 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. Can be use for maintenance and repair.

GENERAL PROPERTIES

Colour	: Red Oxide
Gloss Level	: Matt
Volume Solid	: 50 ± 2 %
Specific Gravity	: 1.28 ± 0.05 kg/l (Mixed)
Flash Point	: Base: 7 °C Hardener: 23 °C Mix: 7 °C
VOC	: 512 g/L (EPA Method 24)
Typical Thickness	: 60 – 80 µm dry film 120 – 160 µm wet film

Comply with National technical regulation QCVN 08:2020/BCT on the limits of Lead content in paints.

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

For optimum performance, abrasive blast clean to Sa 2½ (ISO 8501-1) or 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 Primed Surface

This product is suitable for application to the unweathered steelwork freshly coated with approved shop primers. 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) or SSPC-SP10, to achieve surface profile 50 – 75 µm.

Concrete Substrates

New concrete shall be properly cured prior to coating application. All surfaces should be clean and free from laitance, curing compounds, release agents, efflorescence, grease, oil, dirt, organic growth, old coatings and loose or disintegrating concrete. Surface preparation should be done in accordance to SSPC-SP13 / NACE No. 6.

Non-Ferrous Surfaces

Ensure surface is clean, dry and free from metal corrosion products. For optimum performance, brush blast to Sa 1 (ISO 8501-1) or SSPC-SP7 or abrade using coarse emery paper following treatment as described above.

Galvanized Steel Surfaces

Degrease to SSPC-SP1 and remove any white zinc corrosion products by hand abrasion cleaning.

Damaged Area

Damage area should be prepared with abrasive blast cleaning to Sa 2½ (ISO 8501-1) or SSPC-SP10. When abrasive blasting is not possible, mechanical cleaning to St3 (ISO 8501-1) or SSPC-SP3 is acceptable. Hi-Pon 20-03 should be applied over a surface that is dry and free from all contamination.

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 above 85 %. The temperature of steel surface must be minimum 3 °C above dew point of surrounding air.

APPLICATION GUIDE

Mixing Ratio : **BASE : HARDENER**
9 : 1 (by volume)

Base and hardener should be mixed thoroughly before use with a mechanical agitator

Pot Life : 25 °C
6 hours

Theoretical Coverage : 8.3 m^2/litre at 60 µm DFT
6.3 m^2/litre at 80 µm DFT

Thinner : Hi-Pon Epoxy Thinner

Cleaner : Hi-Pon Epoxy Thinner

APPLICATION METHOD

Conventional air and airless spray are 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

Airless Spray : Tip Size : 0.015" – 0.025"
Pressure at nozzle : 150 – 170 bar

Drying Time : Substrate Temperature

	25 °C	40 °C
Surface Dry	1 hr	30 mins
Through Dry	6 hrs	3 hrs
Cured	7 days	3 days
Dry to Overcoat (min)	6 hrs	3 hrs
Dry to Overcoat (max)	Extended	

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

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.

HEAT RESISTANCE

Dry, Atmospheric

- Continuous : 100 °C
- Minimum : - 40 °C
- Intermittent : 120 °C

Intermittent temperature duration – 1 hour maximum

The temperatures listed relate to retention of protective properties. Aesthetic properties may suffer at these temperatures. Heat resistance is influenced by the total coating system. If used as part of a system, ensure all coatings in the system have similar heat resistance.

RECOMMENDED COATING SYSTEM

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

Intermediate:

- 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

Top Coat:

- Hi-Pon 40-04 Epoxy Top Coat
- Hi-Pon 50-01 AS Polyurethane Top Coat
- Hi-Pon 50-03 Polyurethane Top Coat
- Hi-Pon 50-07 Polysiloxane 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	
	Volume	Container Size	Volume	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 Base : 12 months (25 °C)
Hardener : 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.

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.