



HI-PON 90-05 EPOXY HB 85

TECHNICAL DATA SHEET

PRODUCT DESCRIPTION

Hi-Pon 90-05 Epoxy HB 85 is a two-pack, surface-tolerant, high solids modified epoxy coating. It has excellent cathodic disbondment resistance and will continue to cure when immersed in water.

INTENDED USE

It is designed for use in highly corrosive environments, such as areas in the splash or tidal zones. Suitable for properly prepared carbon steel and concrete substrates in atmospheric and immersed environments. May be applied to wet blast or ultra high pressure water cleaned substrates. Recommended for offshore environments, refineries, power plants, bridges, mining equipments and general structural steels. Compatible with cathodic protection systems.

GENERAL PROPERTIES

Colour	: Black & Yellow
Gloss Level	: Gloss
Volume Solids, %	: 85 ± 2 %
Specific Gravity	: 1.65 kg/l (Mixed)
Flash point	: Base: 32°C Hardener: 44°C Mix: 32°C
VOC	: 204 g/L (EPA Method 24)
Typical Thickness	: 250 – 500 µm dry film : 294 – 588 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.

Hand or Power Tool Preparation

Hand or power tool clean to a minimum St3 (ISO 8501-1:2007) or SSPC-SP3 for atmospheric use only. Note, all scale must be removed and areas which cannot be prepared adequately by chipping or needle gun should be spot blasted to a minimum standard of Sa 2 (ISO 8501-1:2007) or SSPC-SP6.

Ultra High Pressure Hydroblasting / Abrasive Wet Blasting

May be applied to surfaces prepared to Sa 2 (ISO 8501-1:2007) or SSPC-SP6 which have flash rusted to no worse than Grade HB2 M. It is also possible to apply to damp surfaces in some circumstances.



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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 4°C and relative humidity is above 85%. The temperature of steel surface must be minimum 3°C above dew point of surrounding air.

In special cases where overcoating is required and curing has been at low temperature and high relative humidity, ensure no amine bloom is present prior to application of subsequent coats.

APPLICATION GUIDE

Mixing Ratio	: Base : Hardener = 4 : 1 (by volume) Base and hardener should be mixed thoroughly before use.
Pot Life	: 25°C 45 minutes
Theoretical Coverage	: 3.4 m ² /litre at 250 µm DFT 1.7 m ² /litre at 500 µm DFT
Thinner	: 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

Airless Spray	: Tip Size	: 0.021" – 0.026"	
	: Pressure at nozzle	: > 170 kg/cm ²	
Typical Thickness	: 250 – 500 µm dry film		
	: 294 – 588 µm wet film		
Drying Time	: Substrate Temperature	25 °C	40 °C
	Surface Dry	4 hrs	1.5 hrs
	Through Dry	7 hrs	3 hrs
	Cured	6 days	3 days
	Dry to recoat (min)	7 hrs	3 hrs
	Dry to recoat (max)	7 days	4 days



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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.

When applied between tides on piles and jetties, Hi-Pon 90-05 Epoxy HB 85 can be immersed after 30 minutes. Early immersion will lead to a slight whitening of colours, especially on darker colours. The anti-corrosive performance is however not affected.

RECOMMENDED PAINTING SYSTEM

The following coating systems are recommended for Hi-Pon 90-05 Epoxy HB 85:

Hi-Pon 90-05 is normally applied directly to steel; however, it can also be applied over the following primers.

Shop Primer:

- Zinky-10 Inorganic Zinc Shop Primer

Primer:

- Zinky-22 Epoxy Zinc Rich Primer 80
- Hi-Pon 20-04 STE IM 80
- Hi-Pon 20-10 Epoxy Zinc Phosphate 63

Intermediate/Topcoat:

- Hi-Pon 90-05 Epoxy HB 85
- 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
20 L	16 L	20 L	4 L	5 L

STORAGE

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



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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 by 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.