HI-PON 50-01

POLYURETHANE TOP COAT

TECHNICAL DATA SHEET

PRODUCT DESCRIPTION

Hi-Pon 50-01 Polyurethane Top Coat is a two-pack, aliphatic acrylic polyurethane finish coat. It provides high durability, excellent gloss and colour retention. It also offers good abrasion, chemical and impact resistance when applied over proven systems.

INTENDED USE

It is designed for use in both new construction and as an industrial maintenance finish which can be used in a wide range of environments including offshore structures, refineries, power plants, bridges, transportation vehicles and buildings.

GENERAL PROPERTIES

Colour	: Standard colours as per colour cards Special colours available upon request
Gloss Level	: High-Gloss
Volume Solid	: 60 ± 2 %
Specific Gravity	: 1.12 ± 0.10 kg/l (Mixed) – depending on colours
Flash Point	: Base: 23 °C Hardener: 23 °C Mix: 23 °C
VOC	: 386 g/L (EPA Method 24)
Typical Thickness	: 50 – 80 µm dry film 83 – 133 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.

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. After the surface preparation, patch suitable primer prior to the application of Hi-Pon 50-01.

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**	
		4	:	1	(by volume)

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

Pot Life : 25 °C
2.5 hours

Theoretical Coverage : 12.0 m^2/litre at 50 µm DFT
7.5 m^2/litre at 80 µm DFT

Thinner : Hi-Pon PU Thinner

Cleaner : Hi-Pon PU Thinner

APPLICATION METHOD

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

APPLICATION DETAILS

Conventional Air Spray : Tip Size : 1.2 mm – 1.6 mm
Pressure at nozzle : 2 – 4 bar

Drying Time :

Substrate Temperature	25 °C	40 °C
Surface Dry	1 hr	0.5 hrs
Through Dry	7 hrs	4 hrs
Cured	5 days	2 days
Dry to Overcoat (min)	7 hrs	4 hrs
Dry to Overcoat (max)	Extended	

Remarks: (1) For airless application parameters, consult Nippon Paint Protective Coatings. (2) 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 50-01 Polyurethane Top Coat:

Primer:

- Zinky-12 Inorganic Zinc Rich Primer 77
- Zinky-13 Inorganic Zinc Rich Primer 85
- Zinky-22 Epoxy Zinc Rich Primer 80
- Zinky-23 Epoxy Zinc Rich Primer 85
- Hi-Pon 20-03 Epoxy Red Oxide Primer
- Hi-Pon 20-04 STE 80
- Hi-Pon 20-04 STE IM 80
- Hi-Pon 20-07 Epoxy Zinc Phosphate 70
- Hi-Pon 20-10 Epoxy Zinc Phosphate 63

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

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 L	5 L	1 L	1 L
20 L	16 L	20 L	4 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.