HI-PON 50-01Polyurethane Top Coat

Application Notes

Purpose

The purpose of the guidelines is to ensure that the product, as applied, provides adequate protection against corrosion.

Performance of a coating system depends upon both the correct choice of product(s) and the adoption of the correct guidelines for surface preparation and paint application.

The responsibilities for achieving the specific standards and performance of the coating system very much depends on the surface preparation and paint application, which rest with the Contracting Company. Under no circumstances do these responsibilities rest with Nippon Paint. We will generally provide for the presence of a Technical Service Representative at key stages during the project stage. The role of the Nippon Paint Technical Service Representative is advisory only unless otherwise specified in the terms and conditions of the contract.

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 and grease should be removed in accordance with SSPC-SP 1 solvent cleaning.

All damaged areas should be blast cleaned to Sa2½ (ISO 8501-1:2007) or SSSPC-SP10. However, where abrasive blast cleaning is not possible, mechanical cleaning to ST3 (ISO 8501-1:2007) provided the area is not polished. Repair of the damaged area can then be carried out using a recommended epoxy primer. Please consult Nippon Paint Representatives for suitable primers.

Painting works should only commence after all welding, degreasing, removing of sharp edges, weld splatter, treatment of weld joints and blasting works are completed.

Application

Conditions for application

Avoid paint application when the temperature is below 10°C and relative humidity above 85%. The temperature of substrate must be 3°C above dew point of the surrounding of surrounding air. Paint application should be avoided if the substrate is wet or likely to become wet and in high wind conditions.

Mixing

HI-PON 50-01 is supplied in 2 parts, a liquid binder component (Base) and a liquid component (Hardener). The Hardener should be slowly added to the Base whilst stirring with a mechanical agitator. Mix Once the unit has been mixed, it should be used within the working pot life specified.

Mixing Ratio : Base:Hardener = 4:1 by volume

Notes
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Thinning

It is recommended that thinning does not exceed 10% by volume. If too high a level of thinner or the incorrect thinner is used, the drying and curing processes may be retarded. Only HI-PON PU Thinner should be used.

Working Pot Life

The material should not be applied once the pot life has been exceeded its pot life.
Pot Life : 2.5 hours at 25°C

Application Methods

Airless spray : Tip Size 0.011* to 0.018*
Pressure at Nozzle 140 to 170 kg/cm^2

Application by brush or roller is recommended for small areas only. For best result, use airless spray. If application is by

Application by brush or roller is recommended for small areas only. For best result, use airless spray. If application is by roller, it may be necessary to apply additional coats to achieve the specified dry film thickness.

Ensure all equipment is thoroughly cleaned before and after use.

Film Thickness Per Coat

HI-PON 50-01 is typically applied at 50 -80 microns dry film thickness, equivalent to 83-133 wet film thickness.

Theoretical coverage : 12m^2 / litre at 50 microns dry film thickness

Bright colors and special colors may require the higher end of the recommended thickness range to achieve opacity

Wet Film Thickness Measurement

Checks shall be carried out during the painting operation to ensure that the required film thickness is being maintained. These shall be performed according to the procedure described in ISO 2808, Method No. 1A - Comb gauge.

Dry Film Thickness Measurement

Coating dry film thickness (DFT) shall be measured by means of a thickness meter based on eddy-current or electromagnetic techniques, in accordance to ISO 2808, methods 7B (magnetic-flux), 7C (magnetic-induction), or 7D (Eddy-current). The coating thickness gauge shall be calibrated daily.

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Drying Times

Drying times quoted refer to a single coat applied to give 50-80 microns dry film thickness and have been determined under

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Substrate Temperature	25°C	40°C
Surface Dry	1 hours	0.5 hour
Though Dry	7 hours	4 hours
Cured	5 days	2 days
Dry to recoat (min)	7 hours	4 hours
Dry to recoat (max)*	Extended	Extended

Data on drying time / times given are considered as guidelines only. The actual drying time / times may be shorter or longer, depending on film thickness, ventilation, humidity, underlying paint system and requirement for early handling, etc.

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

Overcoating

Prior to overcoating, coatings shall be dried and cured in accordance to the coating Manufacturer's recommendations. Before overcoating, over-runs, drips and smears shall be removed and any damages to the coating or imperfections shall be made good.

Color Variation

Some coatings used as final finishing colour may fade and chalk when exposed to sunlight and weathering, but not detrimental to the performance of the coating. Some coatings may undergo colour changes, particularly coatings designed for high temperature without affecting performance. Some slight colour variation may occur from batch to batch.

Environmental Conditions

Environmental conditions such as humidity, windy conditions may affect quality and coating finishes. Stains on the finishing coat due to environment fallout and surrounding trade works can be easily removed by detergent and washing. Please consult our Nippon Paint Representatives on the type of detergent to be used. Cleaning shall be the responsibility of the user.

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Disclaimer

The information in this application guideline 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 (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 the technical data sheet, safety data sheet and application notes. This data sheet has been translated into various languages. In the event of any inconsistency, the English version shall prevail.

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