ZINKY-12

INORGANIC ZINC RICH PRIMER 77

TECHNICAL DATA SHEET

PRODUCT DESCRIPTION

Zinky-12 Inorganic Zinc Rich Primer 77 is a two-pack, solvent-based coating composed of ethyl silicate and zinc dust. It is suitable for use on steel as a primer for high performance systems and as a single treatment coating for a variety of marine environment. It prevents corrosion and provides excellent resistance to weathering, abrasion, impact, heat and many solvents.

The level of zinc dust by weight present in the dried film conforms to SSPC-Paint 20 (Level 2). The type of zinc dust used complies with ASTM D 520 (Type II). It has been tested for Slip Coefficient and Creep Resistance, using ASTM A490 bolts and meets Class B requirements by RCSC Specification for Structural Joints Using High-Strength Bolts (Appendix A).

INTENDED USE

It is designed for severe corrosive environments such as offshore platforms, petrochemical complexes, gas and petroleum refineries, pulp and paper mills and corrosive chemical plants. Provide excellent corrosion protection of properly prepared carbon steel exposed up to temperature of 540 °C, with suitable top coat.

GENERAL PROPERTIES

Colour	: Grey
Gloss Level	: Matt
Volume Solid	: 62 ± 2 %
Specific Gravity	: 2.18 ± 0.05 kg/l (Mixed)
Flash Point	: Base: 23 °C Hardener: N/A Mix: 23 °C
VOC	: 510 g/L (EPA Method 24)
Typical Thickness	: 50 – 75 µm dry film 81 – 121 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

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.

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. Zinky-12 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 above 45 °C, or humidity is below 50 %. Increase the humidity by spraying water when humidity is below 50 %. To achieve the best film performance, humidity should be kept above 65 %. The temperature of steel surface must be minimum 3 °C above dew point of surrounding air.

APPLICATION GUIDE

Mixing Ratio : **BASE : HARDENER**

4.5	:	1	(by volume)
0.685	:	1	(by weight)

Add Hardener (Zinc Powder) into Base and mixed thoroughly before use with a mechanical agitator.

Pot Life : 25 °C
4 hours

Theoretical Coverage : 12.4 m^2/litre at 50 µm DFT
8.3 m^2/litre at 75 µm DFT

Thinner : Zinky-2000 Thinner

Cleaner : Zinky-2000 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. Avoid mud cracking.

APPLICATION DETAILS

Airless Spray

Tip Size	: 0.015" – 0.023"
Pressure at nozzle	: 120 – 150 bar

Drying Time

Substrate Temperature	25 °C	40 °C
Surface Dry	10 mins	5 mins
Through Dry	2 hrs	1 hr
Cured	4.5 hrs	2 hrs
Dry to Overcoat (min)	4.5 hrs	2 hrs
Dry to Overcoat (max)	Extended	

Remarks: All zinc salts should be removed prior to overcoating. Curing time and overcoat period are depending on humidity conditions.

For high temperature systems, the thickness of Zinky-12 should be restricted to 50 µm dry film.

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

It is recommended that prior to overcoating a solvent rub test to ASTM D4752 should be undertaken. A value of 4 indicates a satisfactory degree of cure for overcoating purposes.

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 : 400 °C
- Minimum : - 40 °C
- Intermittent : 540 °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 Zinky-12 Inorganic Zinc Rich Primer 77:

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 Polyurethane Top Coat
- Hi-Pon 50-07 Polysiloxane Top Coat

- Hi-Floro 6738 Fluorocarbon Top Coat

High Temperature Top Coat:

- Hi-Pon 400HT
- Hi-Pon 600HT AC

For overcoating on zinc silicate primer, a mist coat of subsequent coating is required to minimize pinholing.

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	
	Weight	Container Size	Weight	Container Size
20.3 KG (9.3 L)	8.3 KG (7.6 L)	10 L	12 KG (1.7 L)	10 L

STORAGE

Shelf Life Base : 6 months (25 °C) minimum
Hardener : 24 months (25 °C) minimum

Shelf life from date of manufacture, when stored in original, unopened containers. 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

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