NIPPON PAINT NIOZ

Updated Aug'23

NIPPON PAINT NIOZ is a two pack solvent based coating based on moisture curing ethyl silicate and zinc dust. It is suitable for use on steel as a shop primer, 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. Primer/topcoat systems based on **NIPPON PAINT NIOZ** and specified topcoats are suitable for severe corrosive services such as offshore platforms, petrochemical complexes, gas and petroleum refineries.

Product Features:

- Anti-Rust
- Zinc dust pigment complies with ASTM D520 (Type II)
- Conform to Level 2 (6.00K PACK B) & Level 3 (4.00K PACK B) under SSPC-Paint 20 (Zinc Dust Level Classification)
- Dry service temperature range up to 400°C
- Available in Grey Colour

Paint Type	Product Type	Finishing	Recommended Substrate	Pack Size
Solvent based	Interior & Exterior	Matt	Iron and Steel	5 litres - Pack A (Binder) and Pack B (Zinc Dust)

Composition

Pigment	: Zinc dust and Extender
Binder	: Ethyl silicate
Thinner	: Combination of aromatic, alcohol & ether

Technical Data

Drying Time (25-30°C)	: Touch Dry : Approximately 10 minutes at 25°C & 5 minutes at 30°C : Hard Dry : Approximately 3 hours at 25°C & 2 hours at 30°C
Overcoating Time (25-30°C)	: Minimum 1 days overcoating with organic coating (to confirm how many days)
Curing Time (25-30°C)	: 6 - 7 days (Dependent on temperature and humidity).
Typical Thickness	: <u>As a shop primer</u> 25 µm dry film per coat 40 µm wet film per coat <u>As a general purpose primer</u> 40 - 75 µm dry film per coat 60 - 115 µm wet film per coat <u>For use uncoated</u> 75 µm dry film per coat 115 µm wet film per coat
No. of Coats	: 1 coat
Theoretical Coverage	: 26.0 m^2/litre (for dry film thickness of 25 microns) 16.2 m^2/litre (for dry film thickness of 40 microns) 8.7 m^2/litre (for dry film thickness of 75 microns)
Practical Coverage (40% Loss Factor, as guideline)	: 15.6 m^2/litre (for dry film thickness of 25 microns) 9.7 m^2/litre (for dry film thickness of 40 microns) 5.2 m^2/litre (for dry film thickness of 75 microns)
Volume Solid	: 65 ± 2% by volume
Specific Gravity	: 3.00 - 3.10 (for mixture of binder and zinc dust)
Mixing Ratio	: 1 part of binder (Pack A) to 1 part of zinc dust (Part B) (*Stir the content of the Pack A, continue stirring and gradually add the total contents of the Pack B while continue stirring until a homogeneous mix is obtained.)*

Pot Life (25-30°C)	: 6 hours after mixing
Shelf Life (25-30°C)	: Pack A (Liquid) – 9 months Pack B (Powder) - 2 years in tight sealed container **(Subjected to reinspection after exceeding shelf-life period)**

Application Method

Preferably compressed air spray. The preferred equipment is compressed air spray system with agitated pressure pot and air pressure regulators. For touching up small areas brush can be used. Roller is not recommended for application.

For thinning, substitute thinners other than those approved or supplied by Nippon Paint may adversely affect the product performance and void product warranty whether expressed or implied.

Drying time will become remarkably delayed under low temperature. Overcoating of Nippon Paint NIOZ should be done within 6 ~ 7 days but preferably as soon as possible after it has been allowed 16 hours drying (recheck) or else, it is desirable to roughen it by dry sanding with sandpaper before it is overcoated. This is to ensure proper intercoat adhesion.
Exposure of the paint film to water, chemical and abrasion should be avoided as far as possible before full cure of the coating. When chalking occurs, chalks should be removed by water washing. Allow the surface to dry thoroughly prior to overcoating.

Thinner	: ZS-100 Thinner
Compressed Air Spray	: About 10-20% by volume for compressed air spray.

Recommended Coating System

Iron and Steel

Primer	: Nippon Paint NIOZ	: 1 Coat
Mist Coat	: Nippon Paint 8048 (Minimum 50% Dilution)	: 1 Coat
Intermediate	: Nippon Paint 8048	: 1 Coat
Top Coat	: Nippon Paint Polyurethane Recoatable Finish	: 1 Coat
Primer	: Nippon Paint NIOZ	: 1 Coat
Intermediate	: Nippon Paint Epoxy Sealcoat	: 1 Coat
Top Coat	: Nippon Paint Polyurethane Recoatable Finish	: 1 Coat
Primer	: Nippon Paint NIOZ	: 1 Coat
Intermediate	: Nippon Paint 8048	: 1 Coat
Top Coat	: Nippon Paint EA4 Finish (EP)	: 1 Coat

Surface Preparation

The steel surface to be painted should be abrasive blasted to minimum **Sa 2½ ISO 8501-1:2007.** It is important that the standard should be maintained until the paint is applied on. If rust bloom begins to form before the steel surface is coated, it will be necessary to reblast the steel. The surface must be dry and free from abrasive residues and other contaminants before the paint is applied.

Cleaning

Cleaning Solvent : ZS-100 Thinner. Clean up equipment with thinner immediately after use.

Environmental Conditions During Application

- Do not apply when the relative humidity exceeds 85% or when the surface to be coated is less than 3°C above the dew point.
- Do not apply at temperature below 7°C. If not, drying and overcoating times will be considerably extended.
- During application of the paint, naked flame, welding operations and smoking should not be allowed and good ventilation is necessary.

Safety Precautions

- Keep container tightly closed and keep out of reach children or away from food and drink.
- Ensure good ventilation during application and drying.

- During application of paint, naked flames, welding operation, and smoking should not be allowed.
- When applying paint, it is advisable to wear eye protection.
- In case of contact with eye, rinse with plenty of water immediately and seek medical advice.
- Remove splashes from skin by using soap or water.
- Paint must always be stored in a cool place.
- When transporting paint, care must be taken. Always keep container in a secure upright position.
- Dispose off any paint waste in accordance with the appropriate Environment Quality Regulations.

Note

* Theoretical Coverage is based on a mathematical formula and does not consider Loss Factor.

$$\left[\frac{Volume\ Solid\ \%\ x\ 10}{Dry\ Film\ Thickness\ (\mu)}\right] = m^2/lit/coat$$

This theoretical coverage rate has been calculated from the volume solids of the material and is related to the amount of coating applied onto a perfectly smooth surface without wastage. For a practical coverage rate, due allowance should be made for atmospheric conditions, surface roughness, geometry of the article being coated, the skill of applicator, method of application etc. when estimating quantities required for a particular job.

The above information is given to the best of our knowledge based on laboratory tests and practical experience.
However, since we cannot anticipate or control the many conditions under which our products may be used, we can only guarantee the quality of the product itself.
We reserve the right to alter the given without prior notice.