NIPPON PAINT PROTECTIVE FINISH FD

Updated July'25

NIPPON PAINT PROTECTIVE FINISH FD is a finish coating based on a combination of oil modified alkyd. It has excellent weathering resistance and is recommended as finishing coat for steel structure and iron surfaces under non-immersion condition.

Product Features:

- Good Durability
- Fungus Resistance
- Excellent Gloss

Paint Type	Product Type	Finishing	Recommended Substrate	Pack Size
Solvent based	Interior & Exterior	High Gloss	Iron and Steel	1 Litres, 5 Litres, 20 Litres

Composition

Pigment	: Organic & Inorganic Pigment
Binder	: Long oil alkyd
Thinner	: White spirit

Technical Data

Drying Time (25-30°C)	: Touch Dry	: Approximately 2 hours (Dependent on temperature and humidity)
	: Hard Dry	: 8 hours (Dependent on temperature and humidity)
Overcoating Time (25-30°C)	: Minimum 8 hours (Dependent on temperature and humidity)	
Typical Thickness	: 30 - 40 μm dry film per coat 60 ~ 80 microns for wet film	
No. of Coats	: 1-2 coats	
Theoretical Coverage	: 16.7 m^2/litre (for dry film thickness of 30 microns) 12.5 m^2/litre (for dry film thickness of 40 microns)	
Practical Coverage (40% Loss Factor, as a guideline)	: 10.0 m^2/litre (for dry film thickness of 30 microns) 7.5 m^2/litre (for dry film thickness of 40 microns)	
Volume Solid	: 50 ± 2% by volume	
Specific Gravity	: 0.90 - 1.15	
Shelf Life	: Up to 24 months in tight sealed container **(Subjected to reinspection after exceeding shelf-life period)**	

Application Method

Thinner	: Nippon Paint General Purpose Thinner	
Brush/ Roller	: If necessary, add about 5% thinner by volume.	
Compressed Air Spray	: If necessary, add about 10% to 15% thinner by volume.	
Airless Spray	: Delivery pressure	: 140 – 170 kg/cm^2
	: Tip size	: 0.015" – 0.017"
	: Spray angle	: 60° - 70°
	: Dilution	: Up to 5% thinner by volume

Recommended Coating System

Iron and Steel

Primer	: Nippon Paint Zinc Phosphate Primer / Nippon Paint Red Oxide Primer	: 1 Coat
Intermediate	: **Nippon Paint Protective Finish FD**	: 1 Coat
Top Coat	: **Nippon Paint Protective Finish FD**	: 1 Coat

Primer	: Nippon Paint Zinc Phosphate Primer / Nippon Paint Red Oxide Primer	: 1 Coat
Intermediate	: Nippon Paint Micaceous Iron Oxide	: 1 Coat
Top Coat	**: Nippon Paint Protective Finish FD**	: 1 Coat
Primer	: Nippon Paint Etching Primer 120	: 1 Coat
Top Coat	: **Nippon Paint Protective Finish FD**	: 1 Coat

Surface Preparation

IRON/STEEL

The surface to be painted shall be power tool cleaned to minimum **SSPC-SP3 or St 3 ISO 8501- 1:2007**, free from mill scale. It must be dry and free from dirt, grease, oil and other contaminants before application of the paint. For optimum performance, abrasive blasting in accordance to **Sa 2½ ISO 8501-1:2007** is desirable. It is important that the standard should be maintained until the paint is applied on. If the steel changes colour or rust bloom begins to form, it will be necessary to reblast the steel. The surface must be dry and free from any abrasive residues, dirt, oil and grease and other contaminants prior to painting.

GALVANIZED STEEL

New galvanised surface requires to be degreased in accordance to **SSPC-SP1.** For old galvanised surface, it must be abraded to remove corrosion deposits. All surfaces must be dry and free from oil and grease prior to painting. For optimum performance, the surface must be lightly abrasive blasted. If blasting is not possible, abrade with 120 grade paper, clean and dry prior to painting.

Cleaning

Cleaning Solvent : Nippon Paint General Purpose Thinner. Clean up equipment with thinner immediately after use.

Tests

1. **ISO 15184** on Pencil Hardness
2. **ASTM D3359** on Adhesion of Paint by Tape Test
3. **ISO 2813** on Gloss Level
4. **ISO 6272-1** on Impact Resistance by Falling Weight
5. **ASTM D5402-19** on Solvent Resistance
6. **ISO 2812-4** on Chemical Resistance
7. **ISO 16474-3** on QUV-A for Gloss Retention Resistance

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℃. 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

- In the wet state, this product is highly inflammable. In case of fire, blanket flames with foam, carbon dioxide or dry chemicals.
- Keep away from sources of ignition. No smoking.
- Keep container tightly closed and keep out of reach from children.
- Do not breathe vapour/spray. Applying paint to large surface areas under closed environment should use air supplied breathing equipment. For small areas or short periods, a suitable cartridge mask should be worn.
  Inhalation : Remove to fresh air, loosen collar and keep patient rested.
  Ingestion : In case of accidental ingestion. DO NOT INDUCE VOMITING. Seek immediate medical attention.
- Avoid contact with skin and eyes. Wear suitable protective coating such as overalls, goggles, dust masks and gloves. Use a barrier cream.
  Eyes : In the event of accidental splashes, flush eyes with water immediately and obtain medical advice.
  Skin : Wash skin thoroughly with soap and water or approved industrial cleaner. DO NOT USE solvent or thinners.
- Care must be taken when transporting paint. Keep container in a secure upright position.
- Do not empty into drains or watercourses. Dispose of any paint waste in accordance with the appropriate Environmental Quality Regulations.

Note : A Chemical Safety Data Sheet (CSDS) is available upon request.

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.

Disclaimer

The information contained in this document is provided to the best of Nippon Paint's knowledge, based on laboratory testing and practical experience. As our products are considered semi-finished goods, their performance may be influenced by conditions beyond Nippon Paint's control. As such, we can only guarantee the quality of the product itself.
Minor variations may be introduced to comply with local regulations. Nippon Paint reserves the right to modify the information in this document without prior notice.

Users are encouraged to consult Nippon Paint for specific guidance on the suitability of this product for their intended use and application method.

In case of discrepancies between language versions, the English (United Kingdom) version shall prevail.