NIPPON PAINT NOVO U-CHEM

Updated Dec'22

NIPPON PAINT NOVO U-CHEM is a two-pack, high build novolac epoxy coating, designed for long term corrosion protection lining of storage tank for a wide range of chemicals, solvents, crude oil and vegetable oil derivatives such as palm oil & fatty acids. Its wide range of chemical resistance properties has made it a durable, high performance coating for blast cleaned steel surfaces. **NIPPON PAINT NOVO U-CHEM** can be used as a self priming high build finish under immersion as well as non-immersion services.

Product Features:

- Self priming and high build finish
- Highly resistant to a variety of chemicals
- Good resistance to high temperature cargo such as hot water, crude oil, palm oil & fatty acid

Paint Type	Product Type	Finishing	Recommended Substrate	Pack Size
Solvent based	Interior & Exterior	Low Gloss White & Grey	Iron and Steel	5 L (4.41L Base and 0.59L Hardener) 20 L (17.65L Base and 2.35L Hardener)

Composition

Pigment	: Inorganic pigment and extender
Binder	: Novolac epoxy resin
Thinner	: Combination of aromatic and alcohol

Technical Data

Drying Time (25-30°C)	: Touch Dry : Approximately 3.5 hours : Hard Dry : 16 hours
Overcoating Time (25-30°C)	: Minimum 16 hours
Curing Time (25-30°C)	: 6 - 7 days (Dependent on temperature and humidity).
Typical Thickness	: 100 - 150 μm dry film per coat 140 - 210 μm wet film per coat
No. of Coats	: 2 – 3 coats
Theoretical Coverage	: 7.2 m^2/litre (for dry film thickness of 100 microns) 4.8 m^2/litre (for dry film thickness of 150 microns)
Practical Coverage (40% Loss Factor, as a guideline)	: 4.3 m^2/litre (for dry film thickness of 100 microns) 2.9 m^2/litre (for dry film thickness of 150 microns)
Volume Solid	: 72 ± 2% by volume
Specific Gravity	: 1.76 – 1.86 (for mixture of Base and Hardener)
Mixing Ratio	: 7.5 parts by volume of Base to 1 part by volume of Hardener. (*Stir the content of the Base component, continue stirring and gradually add the total contents of the Hardener component, continue stirring until a homogeneous mix is obtained.)*
Pot Life (25-30C)	: 2 - 3 hours after mixing
Shelf Life	: Up to 24 months in tight sealed container **(Subjected to reinspection after exceeding shelf-life period)**

Application Method

Brush, roller, compressed air spray and airless spray. Preferably use airless spray if a thicker coat is required in one application. Brush, roller and compressed air spray generally lead to lower film thickness, so more applications may be required to obtain the recommended thickness per coat.

When airless spray is being used, excessive high tip spraying pressure should be avoided. The minimum pressure at the pump conducive with good atomisation should be used. Brush and roller are recommended for small areas and touch-up only. Good quality brushes and mohair/

short nap rollers should be used with full strokes. Avoid rebrushing. Additional coats may be required to achieve minimum specified film thickness.
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 the previous coat of Nippon Paint Novo U-Chem should be done within 6 ~ 7 days but preferably as soon as possible after it has been allowed 16 hours drying 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	: Nippon Paint U-Chem Thinner
Brush/ Roller	: If necessary, add up to 5% thinner by volume.
Compressed Air Spray	: If necessary, add about 10% to 15% thinner by volume.
Airless Spray	: Delivery pressure : 210 – 250 kg/cm^2
	: Tip size : 0.017" – 0.021"
	: Spray angle : 60° - 70°
	: Dilution : Up to 5% thinner by volume

Recommended Coating System

Iron and Steel

Primer	: Nippon Paint Novo U-Chem	: 1 Coat
Intermediate/Top Coat	: Nippon Paint Novo U-Chem	: 1 Coat

Surface Preparation

For optimum performance, abrasive blasting in accordance to **Sa 2½ ISO 8501-1:2007** is desirable. Average surface profile of 50 - 100 microns is acceptable. The surface to be coated must be clean and dry. Soluble salts can be removed by fresh water wash and scrubbing. Dry brushing should be sufficient to remove dirt.

Cleaning

Cleaning Solvent : Nippon Paint U-Chem 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.
- 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.
- Ensure good ventilation during application and drying.
- 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.
- 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 any paint waste in accordance with the appropriate Environment Quality Regulations.

Note : A Material Safety Data Sheet (MSDS) 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.