

PRODUCT DESCRIPTION

Hi-Pon 80-14 Vinyl Ester Lining is a two-pack, trowel applied high chemical resistant vinyl ester coating, with inert fillers and fibreglass reinforcement. Suitable for properly prepared carbon steel and concrete substrates in atmospheric and immersed environments.

INTENDED USE

It is designed for use in the internal lining of chemical storage tanks and pipes, and for structural steelwork in environments where superior resistance to chemical attack is required. Suitable for use in most aggressive environments. Excellent resistance in both aliphatic and aromatic organic solvents, and concentrated organic and inorganic acids.

GENERAL PROPERTIES

Colour	: Translucent Purple
Gloss Level	: Not applicable
Volume Solid	: 100 % Reactive (~ 85 % of contents are convertible to solid)
Specific Gravity	: 1.05 ± 0.05 kg/l (Mixed)
Flash Point	: Base: 31 °C Hardener: 43 °C Mix: 31 °C
VOC	: 228 g/L (EPA Method 24)
Typical Thickness	: Refer below

COATING THICKNESS**Basecoat (Base + Talcum Powder)**

- One layer at 1300 - 1700 µm dry film (1530 - 2000 µm wet film)
- Theoretical coverage of 0.57 m²/litre at 1500 µm DFT

Laminate (Base saturated reinforced mat)

- Two layers of Chopped Strand Mat saturated with resin
- One layer of Glassfiber Surface Mat saturated with resin
- Theoretical coverage of 8.50 m²/litre at 100 µm DFT for each layer

Topcoat (Base only)

- One or two layers at 75 - 100 µm dry film each (88 - 117 µm wet film each)
- Theoretical coverage of 8.50 m²/litre at 100 µm DFT for each layer
- Final coat with air dry agent.

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 75 – 100 microns (3 – 4 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.

Concrete Substrates

New concrete shall be properly cured prior to coating application. All surfaces should be clean and free from laitance, curing compounds, release agents, efflorescence, grease, oil, dirt, organic growth, old coatings and loose or disintegrating concrete. Surface preparation should be done in accordance to SSPC-SP13 / NACE No. 6. A suitable primer or sealer is required prior to coating application.

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 relative humidity is above 80 %. The temperature of steel surface must be minimum 3 °C above dew point of surrounding air. When surface temperatures exceed 35°C, Hi-Pon 80-14 should be overcoated as soon as hard dry to avoid intercoat adhesion problems.

APPLICATION GUIDE

Mixing Ratio : **BASE** : **HARDENER**
50.3 : 1 (by volume)

Base and hardener should be mixed thoroughly before use with a mechanical agitator

[1] Preparation of Basecoat

: **HI-PON** : **TALCUM**
80-14 : **POWDER**
45 : 55 (by weight)

21 KG : 25.7 KG

Note: Calculation based on 20 L set of Hi-Pon 80-14 (Base + Hardener)

[2] Preparation of Final Top Coat

: **HI-PON** : **AIR DRY**
80-14 : **AGENT**
41.3 : 1 (by weight)

21 KG : 0.508 KG

Note: Calculation based on 20 L set of Hi-Pon 80-14 (Base + Hardener)

Pot Life	:	<u>25 °C</u> 30 mins	<u>35 °C</u> 20 mins
(Pot life will vary substantially with temperature)			
Thinner	:	Do not thin	
Cleaner	:	Hi-Pon Vinyl Ester Thinner	

APPLICATION METHOD

Trowel is recommended for application of basecoat. Brush and roller are use for application of resin saturant and smoothing liquid. Care must be taken to achieve the specified dry film thickness.

General Application Guide:

- Using a trowel, apply 1500 µm of basecoat
- Apply the chopped strand mat by pressing into the basecoat, and apply resin saturant until the reinforcement is translucent. Remove air bubbles with a spike roller.
- Apply another layer of chopped strand mat in accordance to Step 2.
- Apply glassfiber surface mat into the surplus resin from Step 2 and 3, and allow curing.
- Apply two layers of top coat at 100 µm DFT each. Final top coat may require the use of air-dry agent.

APPLICATION DETAILS

Drying Time	:	Substrate Temperature	<u>25 °C</u>	<u>35 °C</u>
		Surface Dry	1 hr	45 mins
		Through Dry	3 hrs	2 hrs
		Cured	5 days	3 days
		Dry to Overcoat (min)	3 hrs	2 hrs
		Dry to Overcoat (max)	5 days	3 days

Remarks: Where the overcoating interval is exceeded, confirm recoatability by wiping with styrene monomer. If the surface becomes 'tacky', adhesion is acceptable. If not softened by styrene, the surface must be sweep blasted or mechanically abraded to provide a non-glossy, abraded surface. Primed surface must be dry and free of foreign matter at time of lining, coating or flooring application.

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 : 150 °C
- Minimum : - 40 °C
- Intermittent : 177 °C

Wet, Immersed

- Fresh Water : 70 °C
- Crude Oil : 80 °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 system is recommended for Hi-Pon 80-14 Vinyl Ester Lining:

Primer:

- Hi-Pon 80-13 Vinyl Ester Primer

For the choice of coating system for different application, refer to the product brochure or contact Nippon Paint for professional recommendation.

PACKAGING

<u>Unit</u>	<u>Base</u>		<u>Hardener</u>	
	Volume	Container Size	Volume	Container Size
20 L	19.61 L	20 L	0.39 L	1 L

STORAGE

Shelf Life Base : 6 months (20 °C) minimum
 Hardener : 6 months (20 °C) minimum

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. Recommended storage temperature range is 10 °C – 15 °C to prolong shelf life for Base only. Best practice would be to store Base and Hardener in separate locations.

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.
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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 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 (whether 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 this data sheet. This data sheet has been translated into various languages. In the event of any inconsistency, the English version shall prevail.