

# TECHNICAL DATA SHEET FOR

## FLOOR-PRO 201 VAPOUR BARRIER

**FLOOR-PRO 201 VAPOUR BARRIER** is a two-component, water-based coating formulated with epoxy polyamide. It is designed as a negative water vapour barrier/membrane coating for both vertical and horizontal surface

### FEATURES

- As barrier coat that resist up to 250 kPa hydrostatic pressure (25 metre head of water),
- Can be applied over new concrete and damp substrate, preventing rising dampness and formation of efflorescence
- Good adhesion on common substrate such as concrete, masonry, brick, stone and timber
- Can be overcoated with various coating such as epoxy, polyurethane, MMA, cementitious coating and decorative paints
- Water-based, low odour and environmentally friendly product

### APPLICATION AREAS

- As vapour barrier to resist positive and negative hydrostatic pressure for both vertical and horizontal surface
- Suitable to use as primer, positive and negative water proofing membrane for flooring and wall, basements area, carparks, tunnels where prevention of rising dampness, efflorescence, water seepage and damp penetration are needed

### PHYSICAL PROPERTIES

|                                       |                                                                  |
|---------------------------------------|------------------------------------------------------------------|
| <b>Chemical Composition</b>           | Two-component water- based epoxy polyamide membrane coating      |
| <b>Colour</b>                         | Grey                                                             |
| <b>Finish</b>                         | Semi-gloss                                                       |
| <b>Density, mixed</b>                 | 1.30 g/cm <sup>3</sup> @ 28°C                                    |
| <b>Tensile strength</b>               | >3 N/mm <sup>2</sup>                                             |
| <b>Resistance to Hydrostatic</b>      | Resist up to 250 kPa, 25m head pressure of water (ASTM C1306.95) |
| <b>Water Vapour Transmission Rate</b> | 10.5 g/m <sup>2</sup> /24 hrs (ASTM E96 Section 12)              |
| <b>Permeance Film</b>                 | Approx. 3.2 x 10 <sup>-8</sup> g/Pasm <sup>2</sup>               |

\*Conditions such as installation process, inappropriate maintenance, short and long-term wear and use as well as surface contaminants (wet or dry) affects the slipperiness of flooring materials. To meet slip resistance requirement for wet conditions and/or surface contaminants (wet or dry), appropriate textured or anti-slip floor systems are recommended. Please contact Nippon Paint for further details and specifications.

\*\*The final floor finish shall follow the profile of the concrete, therefore appropriate levelling compound is recommended to treat the undulating surface.

### APPLICATION GUIDE

|                                 |                                                                                                                               |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <b>Mixing Ratio (by volume)</b> | Part A : Part B<br>1 : 1                                                                                                      |
| <b>Number of coats</b>          | 2 coats                                                                                                                       |
| <b>Recommended Thickness</b>    | 300 µm DFT per coat                                                                                                           |
| <b>Theoretical Coverage</b>     | 0.66 L/m <sup>2</sup> in 2 coats to achieve min DFT of 300 microns for it to function as an effective waterproofing membrane. |
| <b>Dilution</b>                 | Up to 10% of clean water                                                                                                      |
| <b>Recoating time</b>           | 4 hrs @ 28°C                                                                                                                  |
| <b>Pot Life (Working time)</b>  | 1 hr @ 28°C                                                                                                                   |

| <b>Curing time</b>                                 | <b>Product</b>                                                                 | <b>Curing Period</b> | <b>Primer Required</b> |
|----------------------------------------------------|--------------------------------------------------------------------------------|----------------------|------------------------|
|                                                    | Solvent-Based Epoxy                                                            | Apply after 4 days   | No                     |
|                                                    | Solvent free Epoxy                                                             | Apply after 3 days   | No                     |
|                                                    | Polyurethane                                                                   | Apply after 7 days   | No                     |
|                                                    | MMA                                                                            | Apply after 7 days   | No                     |
|                                                    | Cementitious SLC                                                               | Apply after 1 day    | Yes                    |
|                                                    | Decorative coatings                                                            | Apply after 2 days   | No, if aqueous         |
|                                                    | Note: In the presence of water pressure, add 1 day to the above curing period. |                      |                        |
| <b>Substrate Temperature relative to dew point</b> | $\geq 3^{\circ}\text{C}$                                                       |                      |                        |
| <b>Recommended application temperature range</b>   | Minimum $10^{\circ}\text{C}$<br>Maximum $30^{\circ}\text{C}$                   |                      |                        |
| <b>Relative Humidity</b>                           | $< 85\%$                                                                       |                      |                        |

### SUBSTRATE REQUIREMENTS

- Concrete or screed substrate compressive strength should be of minimum  $25 \text{ N/mm}^2$  and adhesive pull off strength of  $1.5 \text{ N/mm}^2$ .
- The moisture content of concrete shall be  $< 4\%$  or dried up to  $85\% \text{ RH}$  as per BS8204. It shall be free from rising damp and must be waterproofed against negative ground water pressure.

### SURFACE PREPARATION

- Concrete substrate must be clean, free of laitance and contaminants.
- In the event the moisture content is  $> 4\%$ , FLOOR-PRO 203 SL EPOXY MOISTURE BARRIER may be applied as temporary moisture barrier system.
- Allow to cure over-night before the application of subsequent coating system. Prepare the concrete substrate surface by captive shot blasting, scarifying or mechanical grinding. Repair damaged area and patch up cracks and holes using a suitable repair material compatible with the coating system.

### APPLICATION METHOD

#### Priming

- Ensure the dry concrete substrate was dampened with water prior application of FLOOR-PRO 201 VAPOUR BARRIER. It is recommended to dilute FLOOR-PRO 201 VAPOUR BARRIER with 10% clean water to achieve good penetration.
- It is mandatory to obtain a minimum 300 microns dry film thickness (D.F.T.) for it to function as an effective waterproofing and vapour barrier membrane

#### Mixing

- Stir the Components A & B of FLOOR-PRO 201 VAPOUR BARRIER individually to ensure uniformity prior to mixing together.
- Once premixed, add the full contents of both components (in the ratio of 1:1 by volume) in a large 30 litre bucket and mechanically mix until a homogenous blend is obtained

#### Application

- Apply FLOOR-PRO 201 VAPOUR BARRIER onto the prepared surface at spread rate of  $0.3 \text{ litre per m}^2$  per coat.

- At up-stands and direction changes, pretreat the surface by first priming the concrete, followed by applying the first layer of FLOOR-PRO 201 VAPOUR BARRIER.
- Whilst the coating is still wet, immediately embed with fiber mesh into FLOOR-PRO 201 VAPOUR BARRIER by pressing strongly & evenly down into the membrane using a steel roller
- Allow an approximate time interval of 4 hours before applying the second coat of FLOOR-PRO 201 VAPOUR BARRIER

#### PACKAGING

| Components | PART A (BASE) | PART B (HARDENER) |
|------------|---------------|-------------------|
| TOTAL 20 L | 10L           | 10L               |

#### STORAGE AND SHELF LIFE

The product must be stored in accordance with national regulations. Keep the containers in a dry, cool, well ventilated space and away from sources of heat and ignition. Containers must be kept tightly closed. Handle with care. (Unopened and in good condition temperature 10°C to 30°C)

| Components | PART A (BASE) | PART B (HARDENER) |
|------------|---------------|-------------------|
| Months     | 12            | 12                |

#### SAFETY PRECAUTION

- This product is intended for use by 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 flushed 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 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.