NIPPOGARD ROOFLEX PP1500 *(formerly known as Nippon SM PVC PP1500)*

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DESCRIPTION

NippoGARD ROOFLEX PP1500 is an eco-friendly, polyester reinforced, UV-resistance, multi-layer, synthetic single-ply roofs waterproofing sheet membrane based on premium quality polyvinyl chloride (PVC) containing ultraviolet light stabilizers, specially designed for all kinds of exposed flat roofing and detailing project.

*Note: For a fully bonded system, kindly opt for **NippoGARD ROOFLEX PL1500** grade with fleece backed.*

USES

NippoGARD ROOFLEX PP1500 is suitable for all kinds of flat exposed roof waterproofing applications with loose laid and mechanical fastening systems such as:

- Large expose roofs (RC concrete, and metal roofs)
- Green roof
- Roof garden
- Podium deck

ADVANTAGES

- High workability and weldability
- Excellent UV resistance and anti-aging
- High mechanical performance
- High resistance against impact load
- Excellent solar reflection performance
- Excellent low-temperature flexibility and bending
- Not compatible with old bitumen

Product Type	Product	Pack Size	Finishing	Standard Color	Substrate
Sheet Form Membrane *(Mechanical Fastening)*	**NippoGARD ROOFLEX PP1500**	40m^2/Roll	PVC	White	Concrete, Metal

Application Data

Application Temperature	: 5°C to 45°C
Theoretical Coverage	: 40m^2
Special Notes	: Do not apply the coating on standing water wet or damp concretes : Provide adequate ventilation when installing in the confined areas : Avoid overheating of membrane

Typical Technical Data

Color	: Top layer – White/ Grey; Bottom layer - Grey/Black
Visible Defects (EN 1850-2)	: Pass
Thickness, mm (EN 1849-2)	: 1.5 (-5/ +10%)
Width, m (EN 1848-2)	: 2m (-0.5/ +1%)
Length, m (EN 1848-2)	: 20m (-0.5/ +2%)
Mass per unit area, kg/m² (EN 1849-2)	: 2.1 (-5/ +10%)
Tensile Strength, N/50mm (EN 12311-2)	: ≥ 1200 (+/- 100)
Tensile Strength, MPa (ASTM D412-13)	: ≥ 20
Elongation at break, % (EN 12316-2)	: ≥ 20 (+/- 5)
Elongation at break, % (ASTM D412-13)	: ≥ 260
Joint peel strength, N (EN 12316-2)	: ≥ 300
Joint shear resistance, N (EN 12317-2)	: ≥ 800
Tear resistance, N (EN 12310-2)	: ≥ 200
Dimensional stability, % (EN 1107-2)	: ≤ 0.5

Cold flexibility, °C (EN 495-5)	: -25
Static loading resistance, kg (EN12730 B)	: 20
Water-tightness (EN1928 B)	: Pass
UV resistance, 5000H (EN 1297)	: Pass
Fire resistance (EN13501-1)	: Class E
Root puncture resistance (EN 14416)	: Pass

Application Method

Substrate Preparation

Concrete Substrate

The substrate must be thoroughly clean and dry, free from dust, grease and oil. All the contaminants, previous waterproofing and impurity must be removed till the bare substrate. Any cracks, honeycombs, or water leakage area should be repaired by **Nippon Paint Repair System** (for more detail, please refer to Nippon Paint Technical Department) before the waterproofing work proceed. Thesubstrate must be sound. The concrete surface should be flat and free from holes and undulations. Any holes and undulations should be resurfaced with **Nippon Paint Scratch Coat System**. The surface should be clean smooth and cast to fall.

Installation

A. General

1. All side and end lap joints shall be mechanically fixed with washers and nails, followed by hot-air welded either hand applied or by means of automatic machines. The lap area shall be a minimum of 80mm wide when machine welding, and a minimum of 100mm wide when hand welding.
2. All mechanics shall have successfully completed a course of instruction provided by a Nippon Paint technical representative prior to welding.
3. All surfaces to be welded shall be clean and dry. No adhesives shall be present within the lap areas.

B. Hand Welding

1. Hand-welded seams shall be completed in two stages. Equipment shall be allowed to warm up for at least one minute prior to the start of welding.
2. The back edge of the lap shall be welded with a thin, continuous pre-weld to prevent the loss of hot air during the final welding. Tack welding is not permitted on field sheets.
3. The nozzle shall be inserted into the seam at a 45° angle to the edge of the membrane. Once the proper welding temperature has been reached and the membrane begins to “flow”, the hand roller is positioned perpendicular to the nozzle and pressed lightly. For straight seams, the 40 mm wide nozzle is recommended for use. For corners and compound connections, the 20 mm wide nozzle shall be used.

Corner and Upstand Treatment

Use **NippoGARD ROOFLEX PP1500** internal/external corner pieces for corner detailing; and termination metal strip and u-bar for upstand terminations. For vertical detailing, use **Nippon Paint PVC adhesive**. For additional details on installation including relevant fixings and washers and a list of Nippon Paint’s approved applicators, kindly refer to the nearest local office.

Recommended Waterproofing System

Concrete Substrate (Exposed roof)

Waterproofing	: **NippoGARD ROOFLEX PP1500**	: 1 layer (1.5mm thickness)

Environmental Conditions During Application

- Apply temperature: 5-45°C. Do not apply when the surface to be coated is less than 3°C above the dew point.
- The humidity for application is 30-80%
- During the application of the membrane, adequate ventilation should be provided. When ignited, the torch should be watched at all times. The torch should not be rested on finished roofing.

Cleaning

Clean up equipment or tools with thinner immediately after use.

Storage and Transportation

This product should be stored horizontally in a shaded or cool and adequate ventilation warehouse. Do not stack pallets on top of each other. The storage temperature should be 15-35°C. This product should be covered or away exposure from to rain, UV, sunlight, cold or moisture, and source of flame and heat. When transporting, care must be taken. It is always kept membrane in a secure horizontal position. Failure to comply with the recommended storage may result in considerable premature deterioration of the product. This product does not expire if correctly stored.

Safety Precautions

- Keep membrane tightly closed and upright, and keep out of reach of children or away from food and drink.
- Ensure good ventilation during installation.
- Always use protective hand gloves when handling or applying the product.
- When applying, it is advisable to wear eye protection.
- Dispose off any waste in accordance with the appropriate Environment Quality Regulations.

Note

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.