

NIPPOGARD POOLFLEX (formerly known as Nippon SM PVC Pool Lining)

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DESCRIPTION

NippoGARD POOLFLEX is an eco-friendly, flexible polyester reinforced, UV-resistance, multi-layer, anti-root, synthetic single-ply pool waterproofing sheet membrane based on reinforced premium quality polyvinyl chloride (PVC) containing ultraviolet light stabilisers and chemicals protection layer, specially designed for swimming pool and theme park projects. It is harmless, non-toxic, and anti-skid. It is designed fully-bonded hot-air welding installation methods. It is packed into plastic bag or non-woven bag.

USES

NippoGARD POOLFLEX is suitable for waterproof all kind of pools and pool shape applications with designed texture and pattern finishing:

- In ground pools
- Above ground pools
- Theme parks

ADVANTAGES

- Excellent resistance to Microbial Growth
- Repels dirt and stains, and facilitates the cleaning of the liner
- Easy welding and secure installation
- Excellent UV resistance and anti-aging
- Excellent abrasion resistance
- High mechanical performance
- High resistance against impact load
- Excellent solar reflection performance
- Excellent low-temperature flexibility and bending
- Root-resistance
- Seismic and compressive resistance
- Fine puncture resistance
- Convenient maintenance with low cost



Product Type	Product	Pack Size	Finishing	Standard Color	Substrate
Sheet Form Membrane	NippoGARD POOLFLEX	2m (W) x 25m(L) 2m (W) x 30m(L)	PVC	Refer Appendix	Concrete

Application Data

Application Temperature	: 5°C to 45°C
Theoretical Coverage	: 50 or 60m ²
Special Notes	: 1. Do not apply the membrane on standing water wet concretes : 2. Provide adequate ventilation when installing in the confined areas or spaces : 3. Avoid overheating of membrane

Typical Technical Data

Thickness, mm (EN 1849-2)	: 1.50
Mass per unit area, kg/m ² (EN 1849-2)	: 1.85
Length, m (EN 1848-2)	: 25
Width, m (EN 1848-2)	: 2
Tensile Strength, N/50mm (EN12311-2)	: ≥ 1200
Elongation at break, % (EN12311-2)	: ≥ 17
Joint peel strength, N (EN12316-2)	: ≥ 300
Joint shear resistance, N (EN12317-2)	: ≥ 800
Tear resistance, N (EN12310-2)	: ≥ 200

Dimensional stability, % (EN1107-2)	: ≤ 0.5
Cold flexibility, °C (EN495-5)	: -25
Static loading resistance, kg (EN12730)	: 20
Impact resistance, mm (EN12691)	: ≥ 900
Water-tightness (EN1928)	: Pass
UV resistance, 3000 hour (EN ISO 4892-2)	: > Degree 3
Root puncture resistance (EN14416)	: Pass
Water absorption, % (EN ISO 62)	: < 0.1
Resistance to Micro-organisms (EN ISO 846)	: < 5.0
Resistance to bacteria (EN ISO 846)	: No Stains
Resistance to chloride (EN 15836-2)	: Degree 3
Resistance to staining agents (EN 15836-2)	: Degree 4

**All values given are subject to -5 to +10% tolerance*

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 bare substrate. Any cracks, honey combs, water leakage area should be repaired by Nippon Repair System (for more detail, please refer to Nippon Techno Commercial Department) before the waterproofing work proceed. The substrate must be sound. The concrete surface should be flat and free from holes and undulations. Any holes and undulations should be resurfacing with Nippon Scratch Coat System. The surface should be solid, flat, clean and smooth.

Installation

A. General

1. All side and end lap joints shall be hot-air welded either hand applied or by means of automatic machines. Lap area shall be a minimum of 75mm wide.
2. All mechanics shall have successfully completed a course of instruction provided by a Nippon Techno Commercial 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 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.

C. Fully Bonded

The roof waterproofing membrane is bonded to substrate by contact adhesive **Nippon Paint PVC Glue** depending on the type of substrate. Seam overlaps are welded by hot air. Adhering flashings: **NippoGARD POOLFLEX** is adhered to substrate layers such as reinforced concrete, rendering, timber panels, metal sheets etc. using Nippon PVC Glue.

D. Corner and Upstand Treatment

For corner detailing use **NippoGARD POOLFLEX** Internal or External corner pieces. For terminations use Nippon Paint Termination Metal Strip and U bar. For vertical detailing use Nippon Paint PVC Glue and Nippon Paint PVC adhesive. For additional details on installation including relevant fixings and washers and a list of Nippon approved applicators refer to your local office.

Recommended Waterproofing System**Concrete Substrate**

Waterproofing : **NippoGARD POOLFLEX** : 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 application of membrane, adequate ventilation should be provided. When ignited, the torch should be watched at all times.

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 rain, UV, sunlight, cold or moisture, 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.

Cleaning

Clean up equipment or tools with thinner immediately after use.

Safety Precautions

- Keep membrane tightly closed and upright, and keep out of reach 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.

Appendix 1

NippoGARD POOLFLEX- SMOOTH SURFACE

White



Light Blue



** Dark Blue*



Green



Light Grey



Dark Grey



Yellow



**Standard Colour*

Appendix 2

NippoGARD POOLFLEX- ANTI-SLIP SURFACE

** Mosaic*



Water Ripple



Dark Blue



**Standard Colour*