

**NIPPOGARD BITUSELF** *(formerly known as Nippon SM Self Adhesive)*
*Updated Sept'22*
**DESCRIPTION**

**NippoGARD BITUSELF** is a polymer modified self-adhesive bitumen waterproofing membrane, laminated onto a tough HDPE film on one side (facing up) and a silicone release film on the other side (facing down). **NippoGARD BITUSELF** conforms to the requirement of BS8102, and designed to use as below ground waterproofing membrane.

**USES**

**NippoGARD BITUSELF** is suitable for below ground tanking waterproofing applications such as:

- RC retaining walls
- Foundations and Basement slabs
- Lift Pits
- Cut and Cover Tunnels, Subways

**ADVANTAGES**

- Dual functions: as waterproof and vapor-proof
- Cold apply, self-adhesive and easy to apply
- Excellent adhesion to both vertical and horizontal surfaces
- Good tear resistance
- Good puncture resistance
- Excellent resistance to soil chemicals, chlorides, sulphates, dilute acids and alkalis.

Product Type	Product	Pack Size	Finishing	Standard Color	Substrate
Sheet Form Membrane (Self Adhesive)	<b>NippoGARD BITUSELF</b>	20m <sup>2</sup> /Roll	Bituminious	Black	Concrete

**Application Data**

Application Temperature	: 10°C to 55°C
Service temperature	: 4°C to 80°C
Theoretical Coverage	: 20m <sup>2</sup>
Special Notes	: 1. An approved membrane protection board should be installed over the membrane at vertical retaining wall prior to backfilling. The membrane shall be protected with 50mm cement sand protection screed on horizontal slab. : 2. The membrane is not root resistant.

**Typical Technical Data**

Upper surface	: HDPE film
Lower surface	: Silicone release film
Thickness, mm (EN 1849-1)	: 1.5
Width, m (EN 1848-2)	: 1
Length, m (EN 1848-2)	: 20
Mass per unit area, kg/m <sup>2</sup> (EN 1849-1)	: 1.6
Softening point, °C (ASTM D36)	: ≥ 105
Tensile Strength (L/T), N/mm <sup>2</sup> (ASTM D 882)	: 20/20
Elongation at break (L/T), % (ASTM D 882)	: 300/300
Tear resistance (L/T), N/mm (ASTM D 1004)	: 120/110
Adhesion Strength, N/mm (ASTM D1000)	: 1.8 (Primed concrete) : 2.2 (Self)
Puncture resistance, N (ASTM E154)	: > 220
Chemical resistance, pH (ASTM D543)	: 2.5 – 11.5
Water absorption at 24 hours, % (ASTM D570)	: 0.14

Hydrostatic pressure resistance, at 5 bar (BS EN 12390-8)	: $\geq 70$
Cold flexibility, °C (ASTM D1970)	: -15
Crack bridging ability, mm (ASTM C836)	: $> 1$
Shelf life	: 12 months

*\*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 Paint Repair System (for more detail, please refer to Nippon Paint Technical 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 Paint Scratch Coat System. The surface should be clean smooth and cast to fall.

#### Priming

Apply **NIPPON PAINT PRIMEBIT** at 4-6m<sup>2</sup>/L by brush, roller or spray, and allow to dry prior to application of **NippoGARD BITUSELF**.

#### Alignment

Unroll the **NippoGARD BITUSELF** membrane and aligning the side laps. Start the installation of membrane plies at the low point or drains, such that the flow of water is over or parallel to the plies, but never against the laps. All the overlaps joint shall be installed to have "up" slope laps over "down" slope laps.

#### Sealing

Peel off the release film from the bottom side and start unrolling the membrane and press it down to the surface. Smoothen the membrane from the center to the edges with a wooden press in order to remove any entrapped air. An iron roller shall be used for rolling on top of the applied membrane to ensure a proper and strong adhesion of the membrane with the base surface. Side overlaps should be at minimum 50mm and end overlaps at minimum 100mm.

#### Right Angle and Corner Treatment

Right angle and corner should have 25mm **NippoBOND** modified cement sand angle fillet.

#### Protection

The membrane shall be protected from damaged due to ongoing construction activities or backfilling aggregates by either 50mm cement sand protection screed on horizontal slab or appropriate protection board.

## Recommended Waterproofing System

### **Concrete Substrate**

Primer	: <b>Nippon Paint PRIMEBIT</b>	: 1 coat
Waterproofing	: <b>NippoGARD BITUSELF</b>	: 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%.

## 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. Bitumen stains can be removed by using a cloth dipped in thinner.

**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.