

Nitoproof 600

Liquid applied, single component, elastomeric & seamless waterproofing membrane.

Uses

The high elasticity, excellent bond and low water permeability of Nitoproof 600 make it ideal for a wide range of water/vapour proofing applications such as:

- foundations & basements
- tunnels
- ground floors
- suspended floors
- car decks
- roof terraces and balconies
- exposed and inverted roofs

The excellent chemical resistance of Nitoproof 600 makes it particularly suitable for tanking applications in areas where aggressive ground water conditions prevail.

Advantages

- **One component:** Readily applied direct from the can.
- **Easily applied:** Liquid application means details are simplified
- **Highly elastic:** Cures to give permanently flexible resilient barrier over a wide range of temperatures, capable of bridging substrate cracks (up to 2 mm wide from zero initial width) formed after installation.
- **Rapid Installation:** High build grade significantly reduces time spent on preparatory works and detailing.
- **Excelent adhesion:** Can be applied to a wide range of substrates. Continuous adhesion prevents lateral migration of water.
- **Impervious:** Outstanding barrier properties ensure protection against corrosive soil conditions.
- **Thermally stable:** Irreversible chemical cure eliminates melting and flow at high temperature.
- **Seamless:** Liquid application means no joints in the membrane.
- **Weathering resistant:** Excellent resistance to oxidation and embrittlement.
- **Versatile:** Available in two grades to meet an site requirements.
- **Easily Repaired:** Mechanical damage to the membrane is easily repaired by spot application of Nitoproof 600.

Description

Nitoproof 600 is a single component pitch modified polyurethane which cures by reaction with atmospheric moisture to give a tough elastomeric, waterproof membrane. It is supplied in two grades, to meet all site application methods and requirements.

- Nitoproof 600 STD - Low to medium viscosity grade (approx 600 poise) for roller, squeegee or spray application to horizontal and vertical surfaces.
- Nitoproof 600 HB - High build grade (1000 poise minimum) for vertical surfaces, corner and edge detailing, cant formation and heavy applications.

Standards compliance

Meets the requirements of ASTM C836-84.

Properties

Application Properties

Minimum Application

- Temperature: 5°C
- Application Life: Up to 48 hours stored in closed (after opening pack) containers.
- Tack free time at 25°C: 15 hours.
- Time to full through cure at 25°C: 48 hours at 1.3 mm thickness.
- Film Build: On a vertical surface, using standard grade, a build of 1.3 mm may be achieved in two coats. Using HB grade, 1.3 mm is achievable in one coat.

Cured membrane properties (14 days)

| Grade: | Typical Result | | Test Method |
|--|----------------|-----|------------------------------|
| | Std. | HB | |
| Ultimate Elongation (%): | 800 | 535 | ASTM 0412-83 |
| Ultimate Tensile Strength (N/mm ²): | 1.9 | 2.0 | ASTM D412-83 |
| Modulus at 100% Elongation (N/mm ²): | 0.6 | 0.7 | ASTM 0412-83 |
| Recovery from 200% elongation (%): | 95 | 95 | ASTM D412-83 |
| Tear Resistance (N) | 12 | 12 | ASTM D624-73 Die B (ISO/R34) |

Nitoproof 600

Water Vapour
Transmission
for 1.3 mm Film

| | | | |
|------------------------------|-------|-------|---------------|
| (g/m ² /24h): | 9.7 | 9.9 | ASTM E96-80 |
| Permeability (ng/m/Pa/s)* | 0.073 | 0.086 | ASTM E96-80 |
| Shore 'A' Hardness: | 30 | 39 | ASTM D2240-86 |

| | | | |
|------------------------------------|--|----|---------------|
| Aged Hardness (7 days at 70°C): | 37 | 44 | ASTM D2240-86 |
| Artificial Weathering: | No loss of flexibility after 4000 hrs. exposure | | BS3900 |

Service Temperature
(continuous ambient): -40°C to +70°C

Chemical Properties

Nitoproof 600 is unaffected by a range of mild acids, alkalis and water borne salts and is resistant to bio-deterioration. Check with Fosroc technical department for specific chemical data.

Electrical Properties

| Volume resistivity (Ohm Cm) | | Standard | HB |
|--------------------------------|--|------------------------|------------------------|
| 85 volt: | | 42.6 x 10 ⁹ | 42.6 x 10 ⁹ |
| 500 volt: | | 42.6 x 10 ⁹ | 42.6 x 10 ⁹ |

Application Instructions

Surface Preparation

All surface to be waterproofed should be clean, sound and dry.

Concrete surfaces should have a light steel-trowel followed by a fine hair-broom or equivalent finish which is dry and free from dust, oil and other contaminants.

Remove all high spots.

Moss and lichen must be removed physically followed by treatment with fungicidal wash to kill any spores and inhibit further growth. After treatment wash down thoroughly and allow to dry.

Laitence should be removed from concrete by grit blasting wire brushing or water jet blasting and allowing to dry.

All metal surfaces should be made dean of point, oils, rust and other contaminants. Abrade to expose bright metal then wipe clean with Fosroc Solvent 101 before priming.

Preparatory treatment

Priming

Priming is not normally required on good quality concrete substrates. However, absorbent surfaces such as porous concrete, sand/cement screed and cement boards will require sealing to prevent absorption of Nitoproof 600. This should be done using a 1:1 mixture of Nitoproof 600 and a recommended solvent (consult Fosroc technical department). Nitoproof FC110 should be used for highly porous substrates. Use Nitoproof Felt Primer" as a primer for bituminous surfaces and Nitoprime 14 for metal, glazed and PVC surfaces. All metal and PVC surfaces should be cleaned and abraded before priming.

Movement Joints

All expansion and movement joints should be sealed with Thioflex 600. When cured, Debonding Tape should be applied to the top surface of the sealant and the joint then overcoated with a 1.3 mm thick application of Nitoproof 600 extending 150 mm each side of the tape. Embed a 100 mm or 150 mm wide strip of Nitoproof Scrim*, then allow to cure before general application.

Cracks

All shrinkage and non-moving structural cracks should be pretreated with not less than a 1.3 mm coating of Nitoproof 600 extending 75 mm either side of the crack. Allow to cure overnight before general application.

Right Angle Bends

All critical right angle bends must have a cant strip or coving detail installed. This may be either pre-formed or fabricated from Nitoproof 600 HB. If pre-formed strip is used, it must be bedded in to a layer of Nitoproof 600 HB then given a reinforcing pretreatment by application of a 1.3 mm thick coat extending 150 mm either side of the coving. Whilst still wet, a 150 mm wide strip of Nitoproof Scrim is embedded into the Nitoproof 600 as reinforcement (ensure thorough wetting). If Nitoproof 600 HB is used, it should be firmly trowelled into the corner and formed into a 20 mm x 20 mm triangular coving.

All other angles, joints, protrusion and stress points should be pretreated with a heavy application of Nitoproof 600 HB extending 50 to 100 mm either side of the detail. Reinforcement with Nitoproof Scrim is recommended where movement is possible.

Allow pretreatments to cure overnight before general application.



Nitoproof 600

General application

Nitoproof 600 should be applied by brush, trowel, squeegee or airless spray (two coat application for standard grade on vertical surfaces).

Nitoproof 600 is applied at a minimum wet film thickness of 1.3 mm (1.3 litre/m). This is in addition to the preparatory work.

Roller application: Use a short haired synthetic pile roller.

Spray application: Use a Graco King type pump, with 60:1 ratio at pressure 5.5 Bar (80 p.s.i.). Hose diameter 13 mm with 10 mm wip end. Tip size 0.58 mm - 0.84 mm (23-33 thou).

Nitoproof 600 HB should be applied by trowel or squeegee (mainly vertical surfaces).

By use of the appropriate grade, the correct film thickness can be achieved in one pass. In critical applications where surety of film thickness is paramount two coats should be applied at right angles to one another. Quantities per coat should be gauged to give the specified final film thickness.

If a water test is to be run the membrane should cure for a minimum of 10 days.

Flood Test

Prior to placement of protection, flood to a minimum depth of 50 mm of water for 24 hours. Drains should be plugged and barriers placed to contain the water.

Curing and Protection

Nitoproof 600 membrane must be cured for a minimum of 24 hours at 25°C before placing protection.

Where damage to the membrane is possible (By traffic, back filling etc.) it should be protected by a cementitious screed or protection boards. A dust coat of cement should be used to prevent adhesion of the membrane to the boards.

Where a bond with the topping is not required, a separator sheet should be used.

Protection from solar radiation. All exposed areas of Nitoproof 600 should be coated with Nitoproof Reflectacoat to ensure maximum resistance to ultra-violet radiation.

Cleaning

Tools and equipment should be cleaned with Fosroc Solvent 101 immediately after use. **Do not use for thinning**, except where a sealing coat is required.

Precautions

Health and Safety

Some people are sensitive to resin systems. Gloves and a barrier cream, Kerodex Antisolvent, Rozalex Antipaint, Debba-Wet-Work or similar, should be used when handling these products. If contact with the resin occurs it must be removed before it hardens, with a resin removing cream such as Kerocleanse Standard Grade Skin Cleanser and Rozaklens Industrial Skin Cleanser. Follow by washing with soap and water. **Do not use solvent.** The use of goggles is recommended but should accidental eye contamination occur, wash thoroughly with plenty of water and seek medical advice.

Ensure adequate ventilation when using resin and solvent containing materials.

Fire

Nitoproof 600, Nitoprime 14, Nitoflor FC110, Nitoproof Reflectacoat and Fosroc Solvent 101 contain flammable solvents. Do not use near open flames nor smoke during use.

Flash Points:

| | |
|------------------------|------|
| Nitoproof 600 | 45°C |
| Nitoproof 600 | 45°C |
| HB Nitoprime 14 | 12°C |
| Fosroc Solvent 101 | 23°C |
| Nitoflor FC 110 | 24°C |
| Nitoproof Reflectacoat | 40°C |

Storage

The shelf life is at least 6 months in original unopened containers if stored in a cool dry place below 30°C.

Packaging

| | |
|-------------------------------|--------------------------------|
| Nitoproof 600 (All Grades) | 22 litre pails |
| Nitoproof FC 110 | 5 litre packs |
| Nitoproof Felt Primer | 5 kg packs |
| Nitoproof Reflectacoat | 5 and 25 litre packs |
| Nitoproof 14 | 1 litre packs |
| Fosroc Solvent 101 | 5 litre packs |
| Nitoproof Scrim | 100 mm and 150mm width roll |



Nitoproof 600

Supply

Consult your local Fosroc office or representative

Technical service

Fosroc provides a comprehensive technical advisory service supported by a team of field specialists.

Additional information

Nitoproof 600 products are part of the Nitoproof range of waterproofing systems.

* See separate data sheets.

FOSROC



PT. Fosroc Indonesia

Jl. Akasia II Blok A8 No. 1
Delta Silicon Industrial Park
Lippo Cikarang
Bekasi 17550
Indonesia

www.fosroc.com

Important note

Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale, copies of which may be obtained on request. Whilst Fosroc endeavours to ensure that any advice, recommendation, specification or information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products, whether or not in accordance with any advice, specification, recommendation or information given by it.

telephone:
+ 62 21 897 2103
+ 62 22 520 1308
+ 62 31 502 9142

fax:
+ 62 21 897 2107
+ 62 22 522 2713
+ 62 31 502 2711

email:
indonesia@fosroc.com

Registered Office: Jl. Akasia II Blok A8 No. 1, Delta Silicon Industrial Park, Lippo Cikarang, Bekasi 17550, Indonesia

