Nitoproof 650PU

constructive solutions

Polyurethane based Liquid applied two component elastomeric water proofing membrane.

Uses

Nitoproof 650 PU is used to provide a continuous, seamless, water and vapour proof membrane for concrete. Typical applications will include roofs, podiums, balconies, floor slabs, suspended floors, inspection pits, after bridge decks basement retaining wall.

Advantages

- Solvent free non-toxic formulation
- Pitch free Polyurethane
- Cures to form a permanently flexible, resilient barrier over a wide range of temperatures
- Root Resistance*
- Excellent continuous adhesion to concrete prevents lateral water migration
- Irreversible chemical cure does not permit melting or flow of film at elevated ambient temperautres
- Capable of bridging substrate cracks up to 3.7mm
- Easy to apply, requires no special equipment

* Protection screed required

Description

Nitoproof 650 PU is a two component liquid polyurethane. It cures to form a tough, elastomeric, waterproof membrane Nitoproof 650PU is designed for use on horizontal and vertical surfaces, covered by a protective screed/protection borad.

Technical support

Fosroc offers comprehensive technical support, including help at the design stage, application advice and on site problem solving. Specifiers and contractors are encouraged to contact our trained staff for answers to their questions.

For further information please contact Fosroc

Typical Properties

Service temperature range	: - 35°C to +80°C
Tack free time @ 25°C	: < 5 hours
Mixed density	: 1.5 ± 0.1 g/cc
Solids content(%)	: 98

GreenPro Ecolabel Certified by CII

Typical results from membrane cured for 28 days:

Elongation (%) (ASTM D412)	: > 600%
Tensile Strength (N/mm^2) (ASTM D412)	: > 6
Pull off Adhesion strength to concrete applied with Nitoproof WB primer (ASTM D4541	: >1N/mm^2
Tear Resistance	: 30 N/mm
Moisture Vapour transmission (g/sq.m/hr) (ASTM E96)	: 0.4
Initial hardness (Shore A) (ASTM 2240)	: 67
Puncture Resistance (ASTM E 154)	: > 170 N
Resistance to water pressure DIN EN 1928	: No leak
Thermal Resistance	: Pass@80°C for 100 days
Fire Resistance	: Class F
Resistance to plant root EN 13948	: Pass
Crack Bridging (ASTM C836)	: 3.7mm
Chemical resistance	: Unaffected by mild acids, alkalis and water borne salts. Does not biodegrade.

Note: The typical physical properties given above are derived from testing in a controlled laboratory environment. Results derived from testing field-applied samples may vary, dependent on actual site conditions.

Specification clauses

Supplier Specification

Where shown on the drawings, the liquid applied, elastomeric polyurethane waterproof membrane shall be Nitoproof 650PU obtained from Fosroc. It shall be used in accordance with the manufacturer's current application instructions.

Nitoproof 650PU

Performance Specification

The liquid applied, elastomeric waterproofing membrane, where shown on the drawings, shall be made of hydrocarbon free polyurethane. The membrane when cured shall be capable of an extension of not less than 600%. Its tensile strength shall exceed 6N/mm and the moisture vapour transmissions shall be less than 0.4 g/mm^2/24 hour. It shall be used in accordance with the methods given in the manufacturer's data sheet.

Application instructions

Surface preparation and Priming

All surfaces to be waterproofed should be clean, sound and dry. Porous concrete surfaces to be primed with Nitoproof WB primer.

Nitoproof WB Primer is a two component product and must be mixed & applied in order to perform as specified. Transfer base and the hardener to a suitable fresh container and mix thoroughly with a slow speed mixer for 2 -3 minutes which makes the mix as a milky white paste .

Add double the quantity of clean water by volume (4ltr water to 2ltr pack size, 12 liter water to 6ltr pack size) to the mix gradually under mixing which makes the mix as low viscous milky white liquid. Apply using a roller or brush. Do not apply on running or standing water. The application to be completed within 3 hour of mixing at 27 deg C. The mixed material should be periodically hand stirred if is kept idle for more than 15 minutes.

The diluted primer should be applied at a coverage of 8-10 m2/litre, preferably using roller. The applied primer should be allowed to reach tack free condition (4 to 5 hours) before applying Nitoproof 650PU.The application of Nitoproof 650PU should be completed before 16 hours@ 27deg C from the time of application of Nitoproof WB primer

Mixing of Nitoproof 650PU

The two components Part A and Part B should be mixed in the ratio of 1:1 with a slow speed drill at 300 rpm for 3-4 min. The mix should be immediately used within 30 minutes.

Cracks

Shrinkage and non-moving cracks should be pre-treated with not less than 1.5 mm thick coating of Nitoproof 650PU extending minimum 50mm either side of the crack. A layer of reinforcement cloth can be sandwiched in between the 2 coats, Allow to cure before general application.

Right Angle Bends

All right angle bends must have a minimum 25 x 25mm angle fillet installed prior to application of Nitoproof 650PU. All angle joints, protrusions and stress points should be pretreated with an additional application of Nitoproof 650PU extending 50 -100mm either side of the detail. Any pretreated areas must be cured overnight before general application of the membrane.

Application Methods

Nitoproof 650PU can be applied by brush, squeegee, roller or spray. If applied in 2 coats , the second coat should be applied in perpendicular direction to the first coat Where required, Nitoproof 650PU may be reinforced using a suitable fabric reinforcement. For consumption, more than 1.5 kg, can be applied in 2 coats . For consumption less than 1.5 kg per Sqm , can be applied in a single coat. Please contact your local Fosroc office for details.

The newly applied membrane must be allowed to cure for a minimum 24 hours at 25°C. Tools and equipment should be clean with suitable solvent immediately after use.

Protection:

Nitoproof 650 PU shall be protected with a protection screed or any other suitable protective layer, as recommended by Fosroc. For areas exposed to UV rays, the cured Nitoproof 650 PU membrane shall be protected with Dekguard PU, a UV resistant topcoat for long-term exposure.

Flood Test

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

Cleaning

Tools and equipment should be cleaned with a suitable solvent immedaitely after use. Do not use the solvent for thinning.

Limitations

Nitoproof 650PU should be protected from UV light not more than 14 days after application. This can normally be achieved by use of a protective screed/board.

Nitoproof 650PU

Estimating

Supply

Nitoproof 650PU (Mixing ratio 1:1)	: 20 kg pail Part A 20kg pail Part B
Coverage	: 1.5 kg/m² corresponds to Dry Film Thickness of 0.97 to 1.07mm based on the site conditions.

Storage

Shelf life

Minimum 12 months in original unopened containers if kept below 25°C.

Note : In accordance with Commercial or Health & Safety requirements packaging detail may alter. Please contact your local Fosroc office for detail.

Precautions

Health and safety

Some people are sensitive to resin systems. Impervious gloves and barrier cream should be used when handling these products. Eye protection should be worn. If accidental eye contamination occurs, wash thoroughly with plenty of water and seek medical advice. If contact with skin occurs, it must be removed before curing takes place. Wash off with an industrial skin cleaner followed by plenty of soap and water. Do not use solvent. Ensure adequate ventilation when using these products.

For further information, refer to the Product Material Safety Datasheet.

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.

Fosroc Chemicals (India) Pvt. Ltd.
Head Office
Embassy Point
No.150, 2nd Floor,
Infantry Road,
Bangalore-560001

telephone	fax	e-mail
++91 80-42521900	++91 80-22281510	enquiry.india@fosroc.com

Regional Offices

Chennai
Hills Centre,Old No 5,
New No 9, 3rd Cross Street,
Jeth Nagar, Raja Annamalaipuram,
Chennai 600 028.
Ph: 9500064795

Mumbai
MBC Park, 12th floor, Office No.12B,
'D' Block, Near G Corp/Hyper City
Kasarwadawali, Ghodbunder Road,
Thane (West) 400 615
Ph: +91 22 6229 6800

Noida
Unit No. 601, Highway Tower-II
A-13/2, 6th Floor, Sector– 62
Gautam Buddha Nagar,
Noida 201 309, Uttar Pradesh
Ph: +91 120 6121900
Fax: 0120-4270622

Kolkata
Shrachi Tower,Wing A,3rd floor, Anandapur Em Bypass
Anandapur, Kolkata
West Bengal 700 107
Ph: +91 8420985630
Fax: 033-24990278