



# Fosroc

## Waterproofing Solutions

[www.fosroc.com](http://www.fosroc.com)





## Our profile

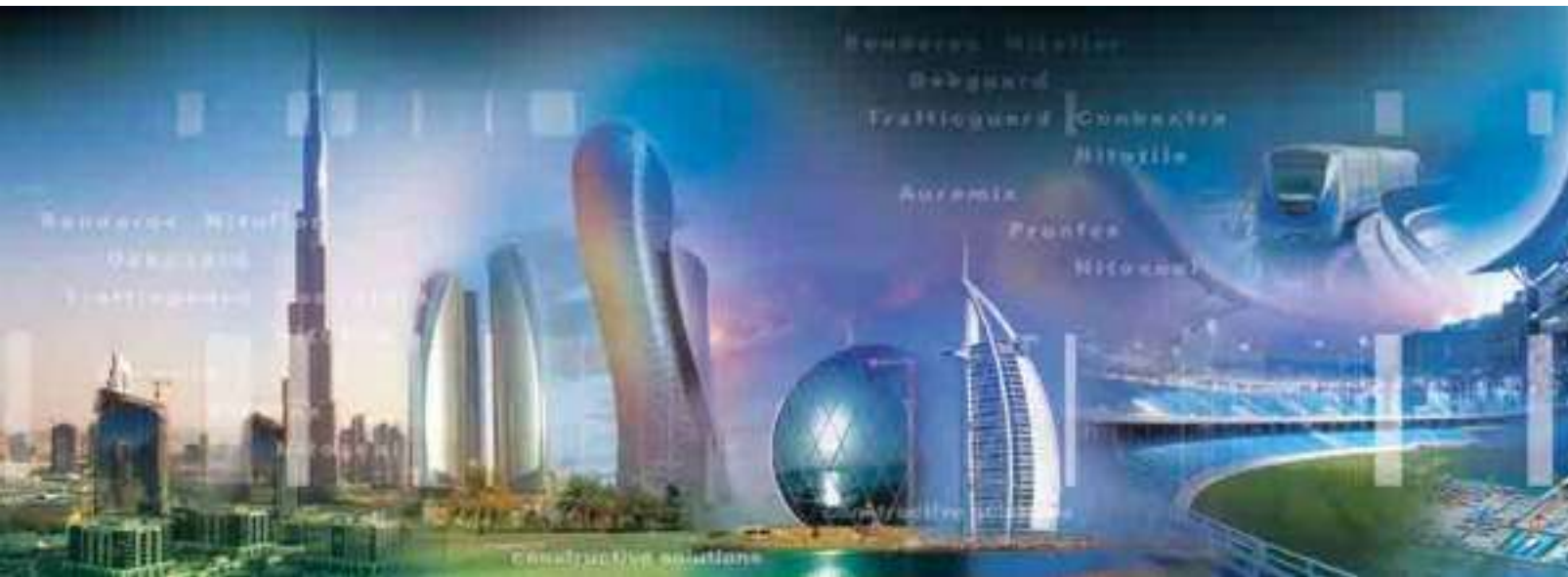
*"The greatest constructions require solid foundations, the best being built on ROCK. Here is the foundation that supports FOSROC"*

**Dr. James Hay**, Chairman – JMH Group

Fosroc commenced its Indian operations in 1981 and established a 100% subsidiary in 1999.

Fosroc has four state-of-the-art manufacturing facilities at Bengaluru, Karnataka; Ankleshwar, Gujarat; Kolkata, West Bengal and Keshwana, Rajasthan.

Fosroc Chemicals (India) Pvt. Ltd. works closely with its customers, including distribution and Applicator associates, through its well-equipped technical service department, a network of sales engineers, customer service professionals, Concrete technologist, Specification team etc. Fosroc India prides itself for the level of technical and customer support that it gives to its valued customers.



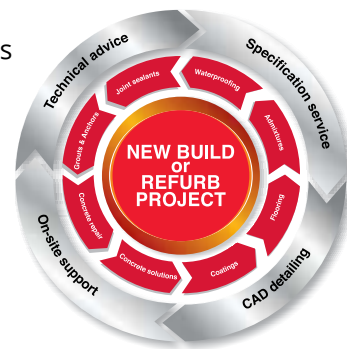
International leverage gives Fosroc the opportunity to offer tried and tested solutions from one geographical region to another with great confidence.

Fosroc Chemicals (India) Pvt. Ltd. provides time-tested solutions that include services such as:

- Diagnosis and Specification Support
- Application Support
- Distribution Support
- After-Sales Service
- Mix design support

Fosroc Chemicals (India) Pvt. Ltd. remains focused on the Industry, Infrastructure and Building Segment with a wide range of quality products.

- Admixtures and Surface Treatments
- Grouts and Anchors
- Industrial Flooring
- Concrete Repair
- Protective Coatings
- Joint Sealants and Adhesives
- Waterproofing
- Cement Additives



## Product range



Admixtures and surface treatments



Grouts and Anchors



Industrial flooring



Concrete repair



Structural Strengthening



Joint Sealants and Adhesives



Waterproofing



Cement Additives

## Waterproofing portfolio

**From basement to roof, Fosroc can assist to achieve the best waterproofing solutions**

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**International leaders in delivering constructive solutions**





# Waterproofing product range

- **Integral waterproofing admixture**  
**Conplast X421IC/WL**
  - Integral waterproofing liquid admixture for concrete and mortar
- **Conplast WP90**
  - Integral waterproofing powder additive for concrete/mortar
- **Liquid applied cement based waterproofing systems**  
**Brushbond**
  - Elastomeric acrylic modified cementitious coating for concrete and masonry surface
- **Brushbond RFX**
  - High performance elastomeric cementitious coating
- **Brushbond Roofguard**
  - High build fibre reinforced acrylic waterproof coating
- **Brushcrete/Hydroproof Xtra**
  - Acrylic polymer for concrete and masonry
- **Nitocote CM210**
  - Two-component acrylic polymer modified, elastomeric cementitious coating
- **Crystalline waterproofing system**  
**Brushbond TGP**
  - Crystalline capillary waterproofing system for concrete substrates
- **Conplast Crystalline**
  - Integral waterproofing admixture based on crystalline formation to produce water tight concrete.
- **Bituminous waterproof coating**  
**Nitoproof 100 - 120**
  - High build bituminous waterproofing coating
- **Pitch modified PU waterproof coating**  
**Nitoproof 600 Standard**
  - Liquid applied single component elastomeric waterproofing coating
- **Pitch Free PU waterproof coating**  
**Nitoproof 600 PF**
  - Liquid applied single component elastomeric waterproofing membrane
- **Solar reflective & thermal insulating coating**  
**Brushbond Ti Flexicoat**
  - Elastomeric acrylic polymer based solar reflective and insulating coating
- **Sheet membranes**  
**Proofex Torchseal Systems**
  - Torch applied waterproofing membrane
- **Proofex Self Adhesive Systems**
  - Cold applied Self Adhesive waterproofing membrane
- **Proofex PGP**
  - Loose laid PVC waterproofing membrane

- **Proofex ORG**
  - Loose laid reinforced TPO waterproofing membrane
- **Proofex OGP**
  - Loose laid synthetic TPO waterproofing membrane
- **Proofex OFB**
  - Fleece-backed fully bonded synthetic TPO waterproofing membrane
- **Proofex Engage (BBA Appoved)**
  - Pre-applied waterproofing membrane conforming to the requirements of BS EN 13967:2004 and BS 8102:2009
- **Proofex Sheet Drain**
  - Geocomposite HDPE drainage and protection membrane
- **Fosroc Membrane HDPE-P System**
  - Pre-applied HDPE pressure sensitive adhesive waterproofing membrane
- **Fosroc Proofex 3000**
  - High performance waterproofing and radon barrier membrane for basements and structures
- **Polyurea spray applied coating**  
**Fosroc Polyurea WPE**
  - Fast setting, pure polyurea elastomeric waterproof coating
- **Fosroc Polyurea WH 200/GR**
  - Fast setting, hybrid polyurea elastomeric waterproof coating
- **Waterstops**  
**Supercast PVC**
  - Centrally and externally placed PVC waterstops
- **Supercast SW10**
  - Swellable waterstop for in-situ concrete
- **Supercast SW20**
  - Swellable waterstop for in-situ concrete
- **Supercast SW30**
  - High swell hydrophilic waterstop for in-situ concrete
- **Supercast SW Adhesive**
  - Problem solving gun grade hydrophilic sealant and adhesive
- **Injection hose system**  
**Supercast Predimax Injection Hose**
  - Injection hose for protection against potential and active leaks in construction and cold joints in concrete
- **Cementitious micro concrete**  
**Renderoc RG**
  - General purpose, non-shrink, cementitious micro-concrete
- **Epoxy micro concrete**  
**Supercast EPT**
  - Piletop encapsulation resin system

# Waterproofing solutions

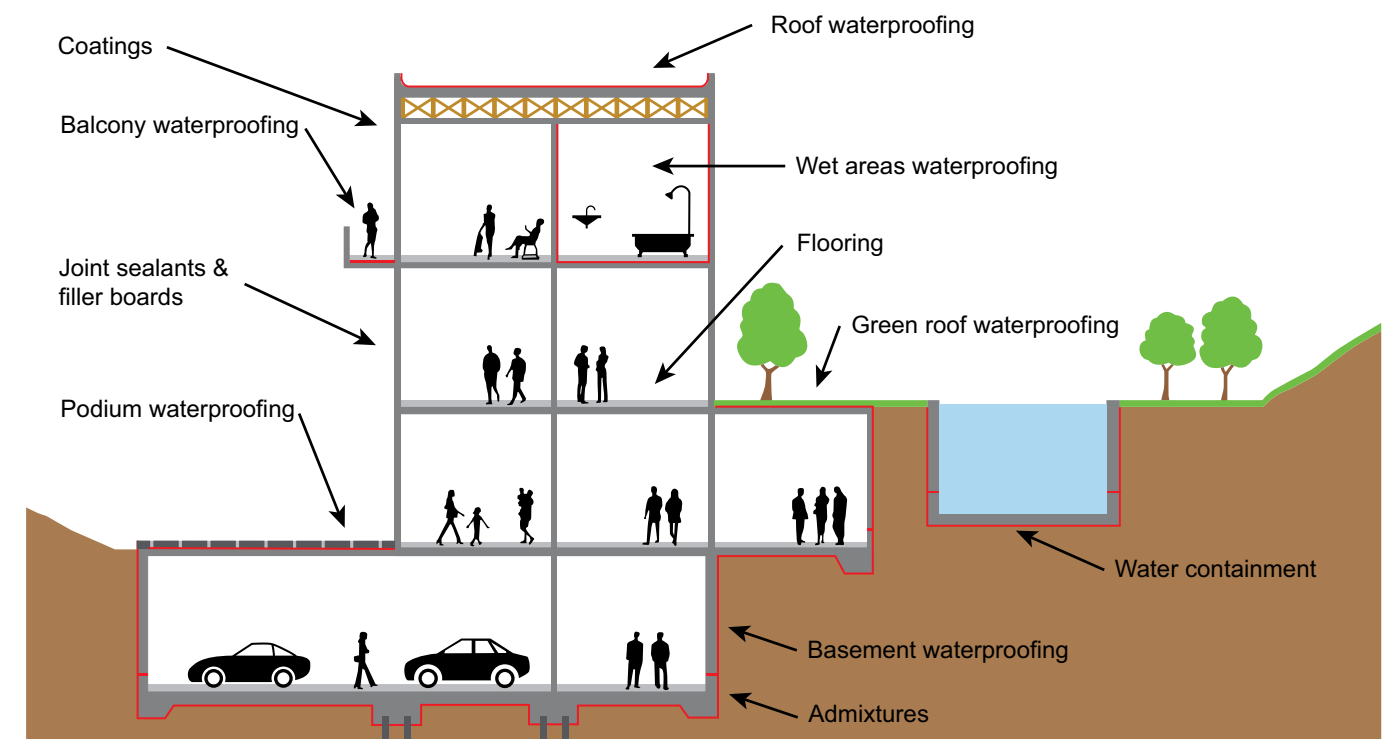


Fosroc has vast experience in providing constructive solutions to many iconic building structures around the world has been built on a broad portfolio of products. These include waterproof membranes, waterstops, joint sealants, concrete repair mortars, resin flooring, protective coatings, structural strengthening, grouts and concrete admixtures manufactured to the highest quality standards backed by independent test certificates.

At Fosroc, we recommend the best technology for each project rather than being driven by one particular response. We liaise and evaluate with our customers the most appropriate solution for what they are trying to achieve. We just want to deliver what is best to the customer providing peer-to-peer based solutions for engineering problems to ultimately find a number of ways to create value.

We have a full range of world-class waterproofing systems providing the most up-to-date technologies from basement to roof to ensure long-lasting integrity and durability of your building structure.

- **Below ground waterproofing**
- **Above ground waterproofing**
  - **Roof Slab**
  - **Wet Areas**
  - **Greenroof and Podium**
- **Water retaining structure**



# Below ground waterproofing

Fosroc's innovative below ground waterproofing systems comply with recognised guidelines, providing clients with the most cost-effective solutions possible which have been proven successful over a long number of years for all types of below ground construction.

Fosroc below ground waterproofing systems are fully compatible, giving designers peace of mind and assured quality from a single source, worldwide company.

Waterproofing is required each time a structure is built below ground and especially where the water table is permanently above the underside of the basement floor level. A high water table causes hydrostatic pressures to be exerted underneath basement floors and against basement walls. This hydrostatic pressure forces water into the building through cracks, joints and any porous substrates causing possible major structural damage and is likely to contribute to mould, corrosion and other moisture related problems.

To minimise risk, strategies for dealing with ground water, soil gases and contaminants should be considered from the earliest stages of the planning

and design processes with designers, specialists and manufacturers establishing and maintaining effective channels of communication, by being involved at the early stages of any project.

An ever increasing level of importance is being placed by clients and designers with regards to structural integrity, cost-effectiveness and durability. Fosroc recognises this and offers an unparalleled range of waterproofing solutions for below ground structures to combat these demands, providing clients with high performance products backed by excellent customer/technical service delivered through a comprehensive international network.

## BS8102:2009

The recently revised BS8102:2009 standard for water-proofing below ground structures, gives recommendations and provides guidance on methods of dealing with and preventing the entry of water from surrounding ground into a structure below ground level. Designers are encouraged to follow a process chart, to ensure that the correct waterproofing system will be selected. Some of the recommendations are highlighted below:

# Product Selection chart

Products	No of basements	Water table	Resistant to ground chemicals	Bonding with Concrete	Screed protection	Life expectancy
Proofex Engage	3 basements	Water table at ground level	Aggressive ground chemicals	Mechanically bonded to concrete	Do not require protection	Life expectancy > 15 years
Fosroc Membrane HDPE-P System	3 basements	Water table at ground level	Aggressive ground chemicals	Pressure sensitive fully bonded system	Do not require protection	Life expectancy > 15 years
Fosroc Proofex 3000	3 basements	Water table above the raft	Resistance to ground salts	Fully bonded self adhesive system	Require protection	Life expectancy > 10 years
Proofex PGP	3 basements	Water table at ground level	Aggressive ground chemicals	Loose laid system	Require protection	Life expectancy > 15 years
Proofex Torchseal 4PI/4SI	2 basements	Water table above the raft	Resistance to ground salts	Loose laid system for raft	Require protection	Life expectancy > 10 years
Proofex Torchseal 3PI/3SI	1 basement	Water table above the raft	Resistance to ground salts	Loose laid system for raft	Require protection	Life expectancy > 10 years
Proofex Self Adhesive Geotext	2 basements	Water table above the raft	Resistance to ground salts	Loose laid system for raft	Do not require protection	Life expectancy > 10 years
Proofex Self Adhesive PR20	2 basements	Water table above the raft	Resistance to ground salts	Loose laid system for raft	Require protection	Life expectancy > 10 years
Proofex Self Adhesive PR15	1 basement	Water table above the raft	Resistance to ground salts	Loose laid system for raft	Require protection	Life expectancy > 10 years
Nitocote CM210	1 basement	Water table above the raft	Resistance to ground salts	Loose laid system for raft	Require protection	Life expectancy > 5 years

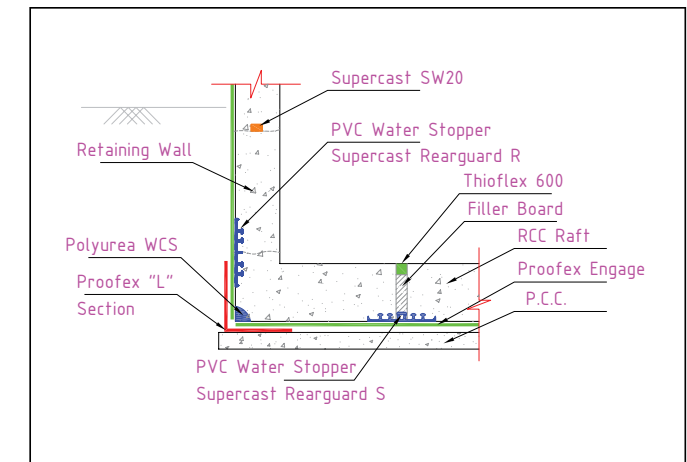
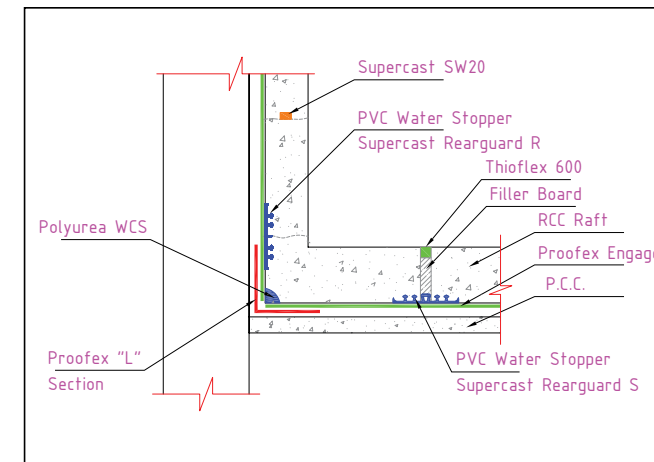
# Below ground waterproofing

## Proofex Engage system

Basement waterproofing	Deep basement-high water table	Life expectancy – more than 15 years
Proofex Engage	Pre-applied system	Fully-bonded system

For below ground structures where the exterior face of the structural concrete is inaccessible, the waterproofing must be applied prior to pouring the concrete. Conventional systems are either loose-laid or self-adhering to the substrate not the structural concrete. This means there is no seal between the waterproofing and the structural concrete which can lead to water travelling between the waterproofing and the structure from any leakages that may occur. BS8102:2009 highlights this problem and recommends that a fully-bonded pre-applied waterproofing system be used to mitigate this risk. A similar problem occurs where ground settlement takes place.

Fosroc has developed an innovative system, Proofex Engage, which incorporates a unique cell mesh which mechanically bonds to freshly placed concrete giving a tenacious waterproof seal, preventing water migration even if ground settlement occurs. It is installed rapidly with no need for blinding concrete, priming or protection and can be trafficked immediately after application. It is also gas-resistant and highly durable and is unaffected by contaminants within the ground. Quality is assured through BBA and EN13967:2004 and the system is suitable for use in accordance with BS8102:2009 Grades 1, 2 and 3.



## Advantages

- Rapid installation – no blinding concrete or protection required
- Assured watertight integrity even in the event of ground settlement
- No water-tracking
- Easy jointing and compatible full range of ancillaries
- Integrity assured at pile caps
- Excellent solution for precast concrete
- Protects structure against ground contaminants
- Long-term watertight durability





## Fosroc Membrane HDPE-P System

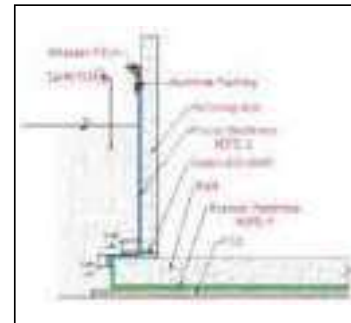
Basement waterproofing	Deep basement-high water table	Life expectancy – more than 15 years
Membrane HDPE-P/Membrane HDPE-P(Smooth)RF	Resistant to aggressive ground salts	Pressure sensitive fully bonded system
Membrane HDPE-S	Resistant to aggressive ground salts	Post applied high performance self adhesive HDPE membrane

Fosroc Membrane HDPE-P/Membrane HDPE-P(Smooth)RF is a pre-applied HDPE pressure sensitive adhesive waterproofing membrane which bond integrally to poured concrete, remaining in place if settlement of substrate occurs. It is supplied with a self adhesive selvedge along one side of the roll to provide sealed laps and a comprehensive range of auxiliary products to simplify the application process. Fosroc Membrane HDPE-P/Membrane HDPE-P(Smooth)RF 1.2/1.5 mm provides water vapour protection to water excluding structures and protects concrete from aggressive ground salts, chemicals and hydrocarbons.

Fosroc Membrane HDPE-S is a post applied high performance self adhesive HDPE membrane for waterproofing application for retaining walls, RC members and basement substructures. Fosroc Membrane HDPE-S is supplied as a membrane with 1.2mm thickness having a self adhesive glue which helps in bonding to all the casted RC members

### Advantages

- Simple application - no primers or protection material required
- Inert product - no risk of a reaction with ponded waste prior to concrete being poured
- Forms integral bond to poured concrete
- No lateral travel of water



Hot-air Shovel-gun



Overlapping of Membrane



HDPE-P Rolls



## Fosroc® Proofex 3000

Basement waterproofing	Deep basement-high water table	Life expectancy – more than 10 years
Fosroc Proofex 3000	Self Adhesive system	SBS- based membranes



Proofex 3000 is a cold applied, flexible, waterproof, high performance membrane incorporating a cross laminated HDPE carrier film with a polymer modified bitumen compound.

A high performance self adhesive membrane for a range of waterproofing and radon barrier applications including basements and substructures. Proofex 3000 provides a vapour, radon and waterproof membrane to water excluding structures and protects concrete from attack by aggressive ground salts.

### Advantages

- Cross-laminated HDPE film for protection against damage
- Dimensionally stable
- Combines toughness with flexibility for detailing around corners
- Self adhesive layer system makes installation quick, simple and reliable
- Resistant to ground water, soluble sulphates and chlorides
- Suitable for waterproofing basements grades 2 and 3 as defined in BS 8102 : 2009, 'Protection Of Structures Against Water From The Ground'
- Radon protection as defined by BRE report 211

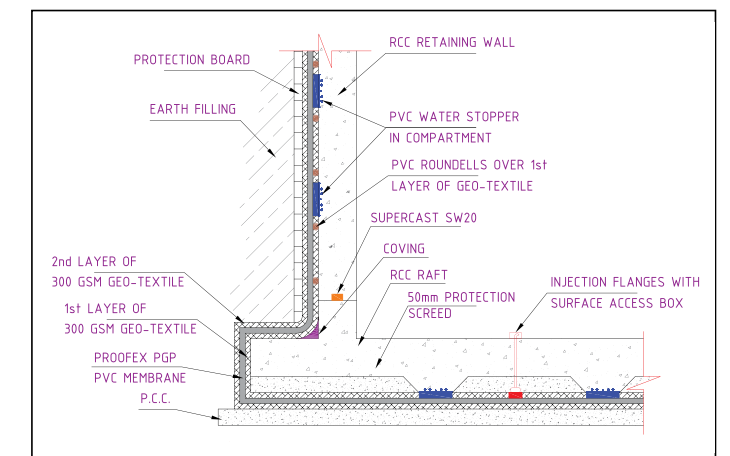
## Proofex PGP system

Basement waterproofing	Deep basement-low water table	Life expectancy – more than 10 years
Proofex PGP	Resistance to aggressive ground salts	Loose-laid system

Proofex PGP, a loose-laid PVC membranes system, is available in large rolls. Overlaps joining is realised through welding with hot air. Compartments can be laid out using Supercast PVC waterstops which are welded to the membranes. Provision for treatment of post leakages using re-injectable hose. Signal layers helps to identify and rectification of damages during installation.

### Advantages

- Rapid installation – available in large rolls
- Welded joints for maximum watertightness
- Compatible full range of ancillaries
- Integrity assured at pile caps
- Protects structure against ground contaminants
- Long-term watertight durability
- Good puncture resistant
- Resistance to root penetration





Proofex PGP



Proofex PGP Fitters



Predimax Injection Hose



PVC Roundels



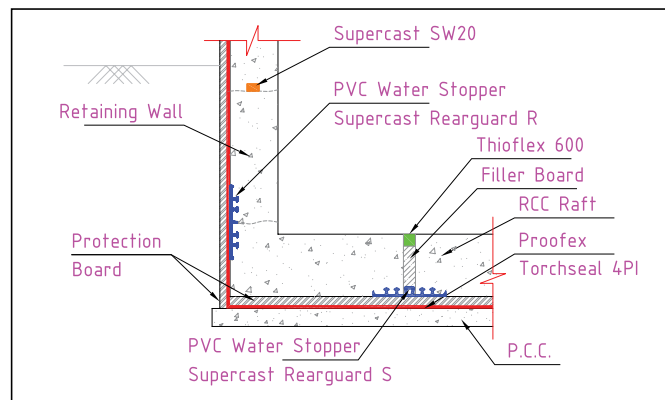
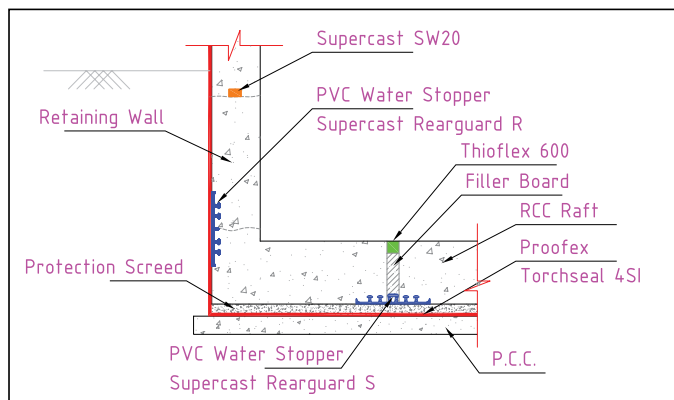
## Proofex Torchseal System

Basement waterproofing	Deep basement- high water table	Life expectancy – more than 10 years
Proofex Torchseal 4SI/4PI	Torch-applied system	APP-modified bituminous membranes

Proofex Torchseal 4SI/4PI are 4 mm thick quality torch applied APP-based slated/plain membranes manufactured from premium grade modified bitumen, reinforced with a core of non-woven polyester fabric weighing 160 g/m<sup>2</sup>, rot-proof and are malleable. The core gives the membrane its excellent mechanical properties, allows for good elongation and affords high resistance to piercing.

### Advantages

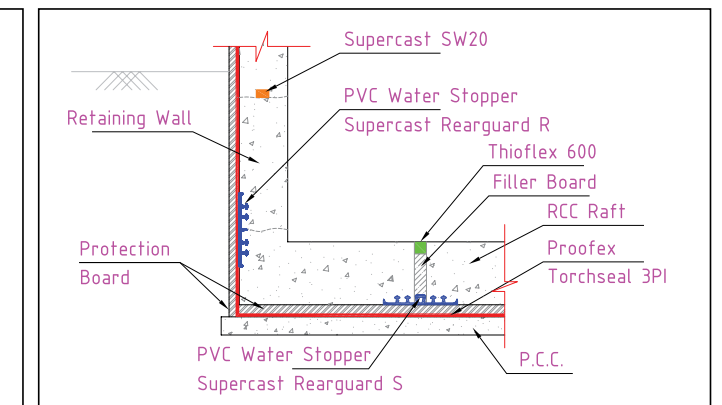
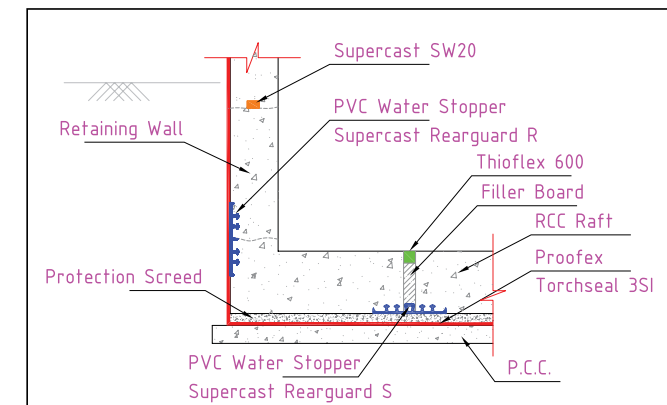
- High-strength reinforcement gives excellent resistance to puncture and stress
- Bonds well to the substrate
- Easily torch applied
- Readily formed to contours



## Proofex Torchseal system

Basement waterproofing	Deep basement- low water table	Life expectancy – more than 10 years
Proofex Torchseal 3SI/3PI	Torch-applied system	APP-modified bituminous membranes

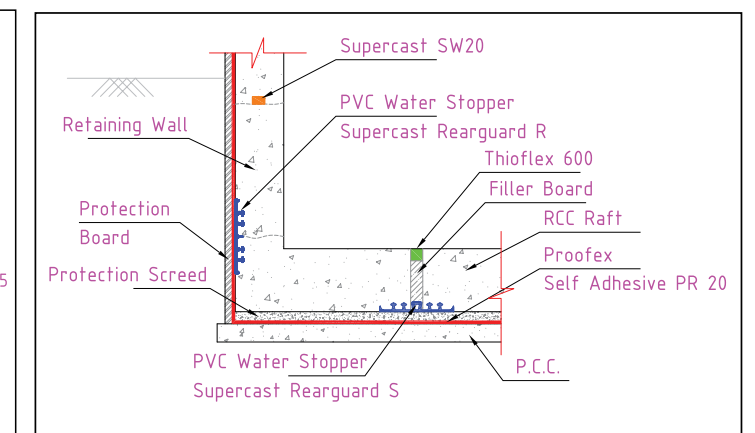
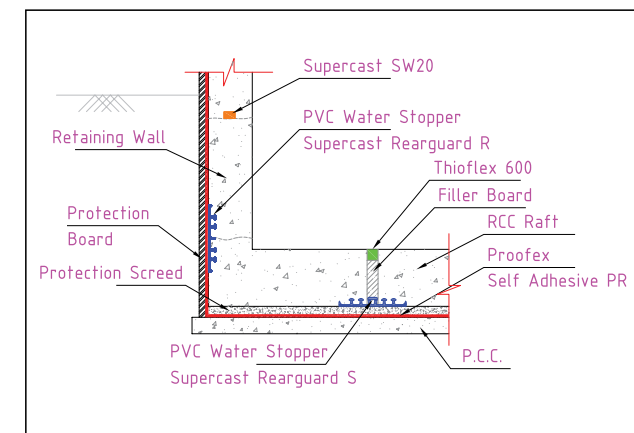
Proofex Torchseal 3SI/3PI are 3 mm thick quality torch applied APP based slated/plain membranes manufactured from premium grade modified bitumen, reinforced with a core of non-woven polyester fabric weighing 160 g/m<sup>2</sup>, rot-proof and is malleable. The core gives the membrane its excellent mechanical properties, allows for good elongation and affords high resistance to piercing.



## Proofex Self Adhesive PR15/20 system

Basement waterproofing	Deep basement- low water table	Life expectancy – more than 10 years
Proofex Self Adhesive PR15/20	Self Adhesive system	SBS-based membranes

Proofex Self Adhesive PR15/20 is a 1.5/2 mm cold applied Self Adhesive sheet membrane comprising of a polymer modified bitumen layer internally reinforced with polyester, bonded on to an outer surface of cross laminated polyethylene film. The polymer bitumen adhesive layer is protected on the underside by a silicone release paper which is removed just prior to the application of Proofex Self Adhesive PR15/20 to the tack coat primed substrate. The applied membrane is then immediately protected from UV light and mechanical damage during subsequent back filling by the application of Protection Board, or a sand/cement screed. It provides a continuously bonded waterproof membrane for building and civil engineering structures.

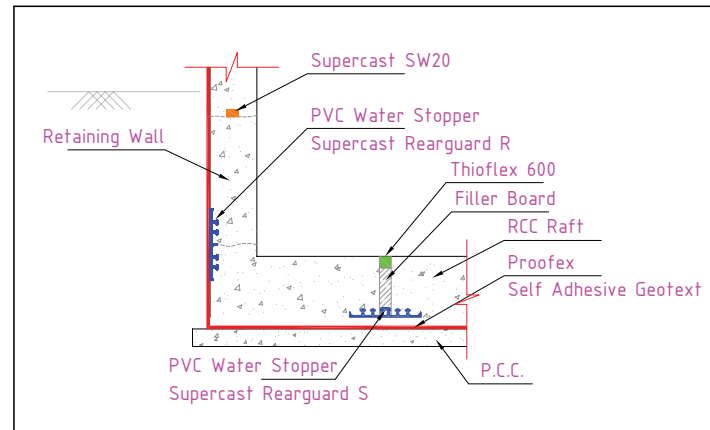




## Proofex Self Adhesive Geotext system

Basement waterproofing	Deep basement - low water table	Life expectancy - more than 10 years
Proofex Self Adhesive Geotext	SBS-based Self Adhesive system	Protection screed not mandatory

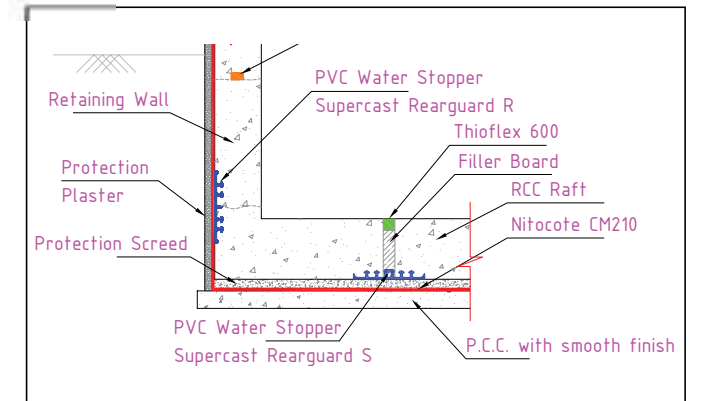
Proofex Self Adhesive Geotext is a 2 mm cold-applied SBS modified bituminous Self Adhesive sheet membrane comprising of a polymer-modified bitumen layer internally reinforced, bonded on to an outer surface of 250 GSM laminated Geo-fabric film. The polymer bitumen adhesive layer is protected on the underside by a silicone release paper which is removed just prior to the application of Proofex Self Adhesive Geotext to the tack coat primed substrate. It provides a continuously bonded waterproof membrane for below ground waterproofing building and civil engineering structures.



## Nitocote CM210 System

Basement waterproofing	Shallow basement - low water table	Life expectancy - more than 5 years
Nitocote CM210	Polymer modified cementitious system	Seamless coating to the PCC below raft/ to the positive side waterproofing

Nitocote CM210 two-component polymer-modified cementitious coating is supplied in pre-packaged form. The product is designed to be easily mixed on-site using a slow speed drill fitted with a mixing paddle and then applied to the substrate using a trowel for best results. Nitocote CM210, available in grey and white, cures to form an elastomeric impermeable membrane. Ideal for potable water retaining structures, basement waterproofing from negative and positive side, Drainage culverts, Foundations in contact with ground water under saline condition.

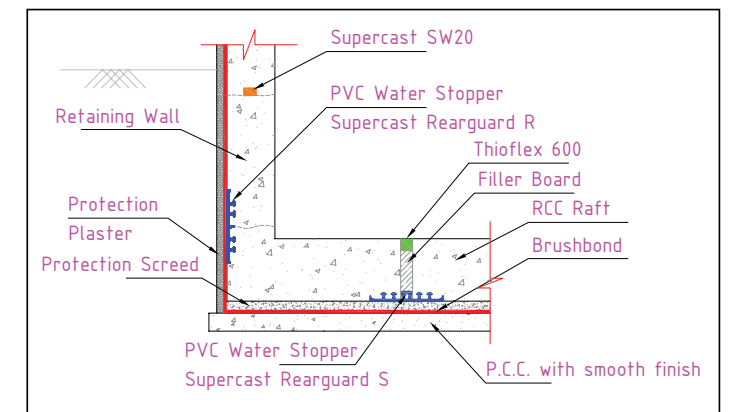


## Brushbond TGP System/Conplast Crystalline System

Basement waterproofing	Deep basement - high water table	Life expectancy - more than 5 years
Brushbond TGP	Crystalline system	Fully bonded seamless coating
Conplast Crystalline	Crystalline system	An integral waterproofing admixture to produce water tight concrete

Brushbond TGP crystalline capillary waterproofing system contains proprietary blend of portland cement, quartz aggregate and special chemicals. In the presence of moisture, the active chemicals in Brushbond TGP\* crystalline waterproofing system penetrates concrete and reacts chemically with free lime to produce insoluble crystals.

This crystalline growth reduces porosity by blocking capillaries and filling hairline non-structural cracks (up to 0.25 mm wide) caused by shrinkage or expansion. Unlike metallic and membrane types of waterproofing which only form a surface barrier, Brushbond TGP\* crystalline waterproofing system, in the presence of water, continues producing crystals and lasting imperviousness to water.



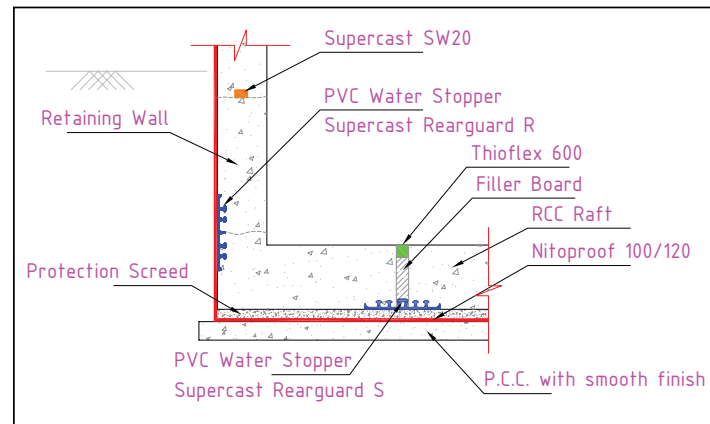
## Conplast Crystalline

Conplast Crystalline is an integral waterproofing admixture to produce water tight concrete. The active chemical in Conplast Crystalline react with moisture available in concrete to produce non soluble crystalline formation throughout the pores of capillary tracks thus making concrete permanently sealed against later penetration from any direction.

# Below ground waterproofing

## Nitoproof 100/120 System

Basement waterproofing	Shallow basement – low water table	Life expectancy – more than 5 years
Nitoproof 100/120	Bitumen-modified system	Fully-bonded seamless coating



Nitoproof 100 and 120 are based on raw materials which are amongst the most water and water-vapour resistant surface coating materials available. They are also resistant to a wide range of chemical attack. Specially selected bitumens are blended to produce various grades, each designed to provide the best possible protective coating for its practical purpose. Nitoproof 120 incorporates fibres which give body to the film and act as reinforcement in the coating, eliminating cracking and crazing under conditions of thermal movement.



# Above ground waterproofing

## Roof slab

Roofs are constantly exposed to the aggressive effects of external weathering and can accumulate ponding water as a result of their inefficiency in quickly shedding water during heavy rainfall. Structures located in coastal areas are even more vulnerable to deterioration due to the effects of chloride and moisture in the marine environment. These factors can lead to cracking and damage of the waterproofing system and subsequent water penetration and loss of concrete integrity. With roof areas often not being easily accessible, a robust and low maintenance solution is also an important consideration.

## The Fosroc solution

Fosroc's range of liquid, brush and spray-applied systems have been designed to provide a high level of protection to new and for the repair of existing ones. These waterproofing systems have the benefit of being easily applied ensuring an extremely durable, waterproof finish. The ease of application means quick installation, low maintenance and cost effective solution.

## Product Selection chart

Products	Protection to membrane	Life expectancy	UV Resistant	Thickness
Brushcrete/ Hydroproof XTRA	Protection required	Life expectancy > 5 years	Not applicable	Thickness of the coating is < 1 mm
Brushbond	Protection required	Life expectancy > 10 years	Not applicable	Thickness of the coating is 1 mm
Brushbond RFX	Protection required for accessible roof	Life expectancy > 10 years	Resistant	Thickness of the coating is 1 mm
Brushbond Roofguard	Protection not required	Life expectancy > 5 years	Resistant	Thickness of the coating is 1 mm
Nitoproof 600 Standard	Protection required	Life expectancy > 10 years	Not applicable	Thickness of the coating is 1.3 mm
Nitoproof 600 PF	Protection required	Life expectancy > 10 years	Not applicable	Thickness of the coating is 1.5 mm
Proofex Torchseal 4PI/4SI	Protection required for accessible roof	Life expectancy > 10 years	Not applicable	Thickness of the membrane is 4 mm
Proofex Self Adhesive PR15/20	Protection required for accessible roof	Life expectancy > 10 years	Not applicable	Thickness of the coating is 1.5 to 2 mm
Proofex PGP	Protection required	Life expectancy > 15 years	Not applicable	Thickness of the system is 1.5 mm
Proofex ORG/OGP (Green product)	Protection not required	Life expectancy > 15 years	Resistant	Thickness of the system is 1.2 / 1.5 and 1.8 mm
Polyurea WH 200/GR	Protection required (Optional)	Life expectancy > 15 years	UV Resistant. But for colour stability protective coating required	Minimum thickness of coating is 1.5 mm
Polyurea WPE	Protection required (Optional)	Life expectancy > 15 years	UV Resistant. But for colour stability protective coating required	Minimum thickness of coating is 1.5 mm



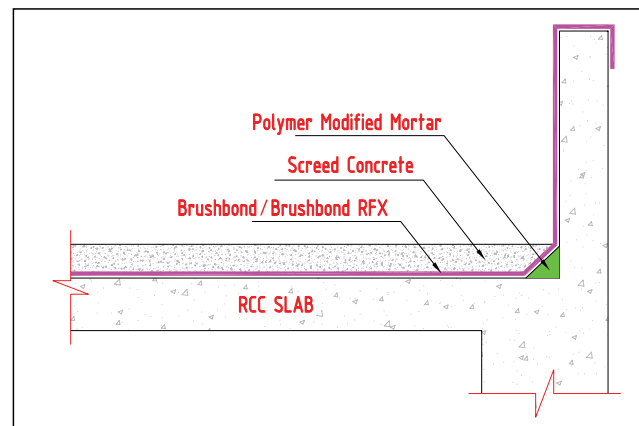
# Above ground waterproofing

## Brushbond/Brushbond RFX system

Roof waterproofing	Polymer-modified cementitious system	Life expectancy - more than 10 years
Brushbond/Brushbond RFX	Fully-bonded seamless coating	Liquid applied system

Brushbond/Brushbond RFX is liquid applied two-component acrylic polymer modified elastomeric waterproofing membrane. Product can simply be applied by a stiff brush, or trowel to obtain the desired thickness. Brushbond/Brushbond RFX powder consists of specially selected cements, graded hard-wearing aggregates and polymer additives.

The polymer provides Brushbond/Brushbond RFX with exceptional adhesion, toughness and durability. Withstands high positive hydrostatic pressures.

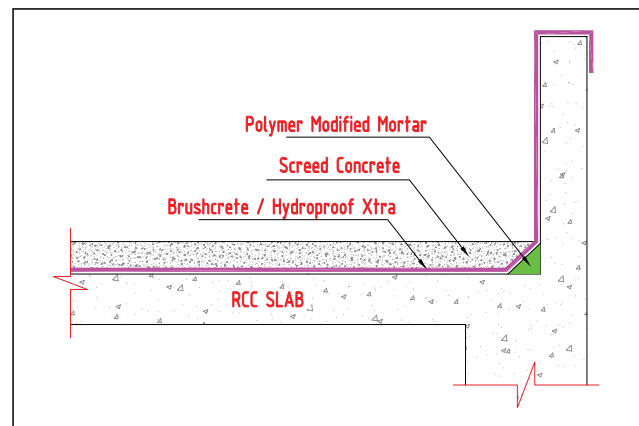


## Brushcrete/Hydroproof XTRA system

Roof waterproofing	Polymer-modified cementitious system	Life expectancy - less than 5 years
Brushcrete/Hydroproof XTRA	Fully-bonded seamless coating	Liquid applied system

Brushcrete/Hydroproof XTRA is a single-component acrylic-based polymer when blended with cement, forms a composite polymer-modified cementitious waterproofing system, when used in conjunction with fibre mesh, forms a tough hard wearing surface.

Brushcrete Hydroproof XTRA polymer in conjunction with cement provides a seamless waterproof coating to concrete and masonry surfaces. It can be used as a waterproof coating.

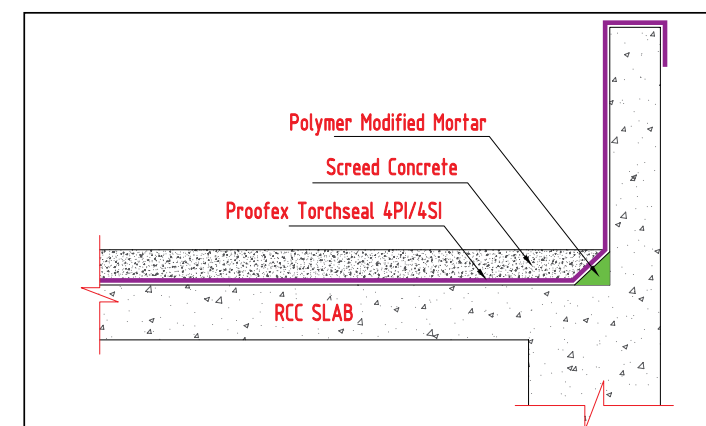


# Above ground waterproofing

## Proofex Torchseal system

Roof waterproofing	APP-modified bituminous membrane	Life expectancy - more than 10 years
Proofex Torchseal 4SI/4PI	Torch applied system	Membrane system

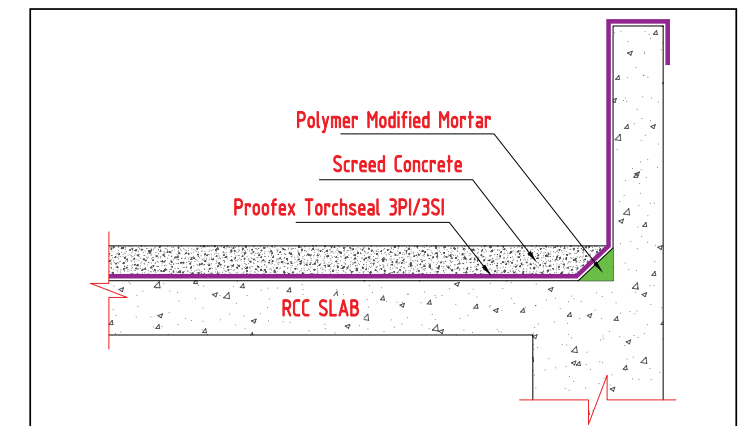
Proofex Torchseal 4SI/4PI are 4 mm thick quality torch applied APP-based slated/plain membranes manufactured from premium grade modified bitumen, reinforced with a core of non-woven polyester fabric weighing 160 g/m<sup>2</sup>, rot-proof and is malleable. The core gives the membrane its excellent mechanical properties, allows for good elongation and affords high resistance to piercing. Proofex Torchseal 4SI/4PI membranes are ideal for use in a wide range of waterproofing applications such as medium and large roofs. The applied membrane is then immediately protected from UV light and from mechanical damage by sand/cement screed. Provides a continuously bonded waterproof membrane for roofing application.



## Proofex Torchseal system

Roof waterproofing	APP-modified bituminous membrane	Life expectancy - more than 10 years
Proofex Torchseal 3SI/3PI	Torch applied system	Membrane system

Proofex Torchseal 3SI/3PI are 3 mm thick quality torch applied APP based slated/plain membranes manufactured from premium grade modified bitumen, reinforced with a core of non-woven polyester fabric weighing 160 g/m<sup>2</sup>, rot-proof and is malleable. The core gives the membrane its excellent mechanical properties, allows for good elongation and affords high resistance to piercing. Proofex Torchseal 3SI/3PI membranes are ideal for use in a wide range of waterproofing applications such as medium & large roofs. The applied membrane is then immediately protected from UV light and from mechanical damage by sand/cement screed. Provide a continuously bonded waterproof membrane for roofing application.



# Above ground waterproofing

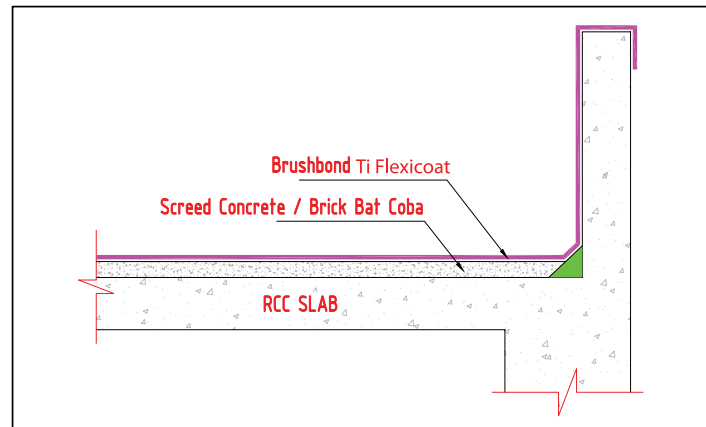
## Brushbond Ti Flexicoat

Roof waterproofing	Acrylic polymer-based solar reflective & insulating coating	Life expectancy – Less than 10 years
Brushbond Ti Flexicoat	Fully-bonded seamless coating	Thermal insulation & heat-reflective coating

Elastomeric acrylic polymer-based solar reflective and insulating coating.

Brushbond Ti Flexicoat is a water-based white coloured emulsion comprising of acrylic polymers and specially designed hollow “microspheres”, less than 100 microns in diameter with non-conductive properties. These microspheres collectively acts as thermal insulation blanket covering the structure effectively reflecting solar radiation back into the atmosphere. This results in impressive temperature reduction behind the substrate by a min. of 10 °C. This system also has certain waterproofing properties and is able to bridge hairline cracks caused by thermal movements.

Application Areas include: Concrete roofs, metal roofs, asbestos sheet, other metal surfaces, external and internal walls, cold storage facilities, steam pipes and fittings wood, tiles, PU foams and asphalt shingles.

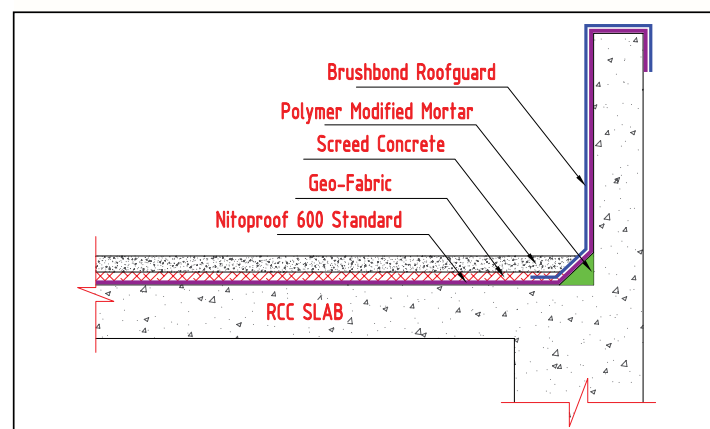


## Nitoproof 600 Standard system

Roof waterproofing	Modified pitch polyurethane system	Life expectancy – more than 10 years
Nitoproof 600 Standard	Fully-bonded seamless coating	Liquid-applied system

Nitoproof 600 Standard is single component pitch modified polyurethane cures by reaction with atmospheric moisture to give a tough elastomeric waterproof membrane of 1.3 mm thick. It is supplied in a single grade to meet all site application methods and requirements.

Nitoproof 600 Standard is a medium viscosity grade (approximately 600 poise) for roller, squeegee or spray application to horizontal and vertical surfaces.



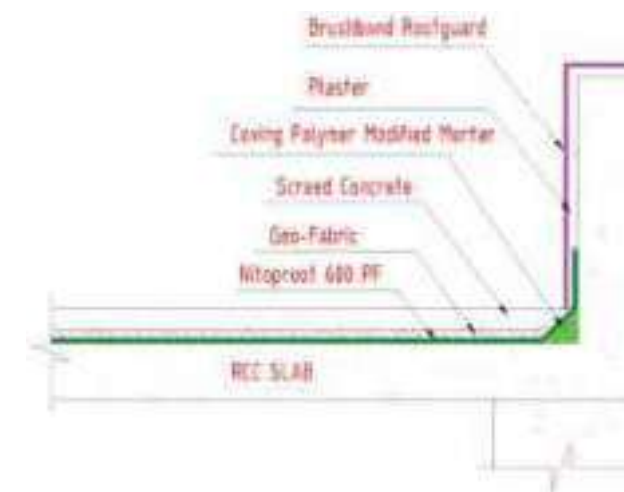
# Above ground waterproofing

## Nitoproof 600 PF system

Roof waterproofing	Pitch free polyurethane System	Life expectancy more than 10 years
Nitoproof 600 PF	Fully-bonded seamless coating	Liquid-applied system

Nitoproof 600PF is a single component pitch free liquid polyurethane. It cures by reaction with atmospheric moisture to form a tough, elastomeric, waterproof membrane. Nitoproof 600PF is designed for use on horizontal and vertical surfaces, covered by a protective screed or render.

Nitoproof 600PF can be applied by brush, squeegee or roller. It is applied at a minimum wet film thickness of 1.5mm in 2 coats.

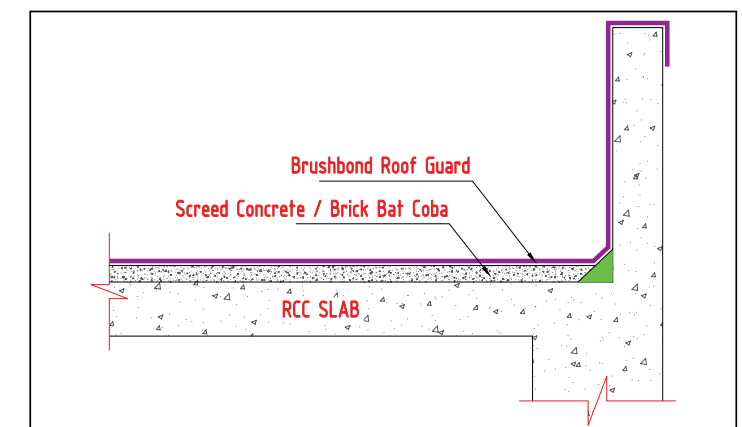


## Brushbond Roofguard system

Roof waterproofing	Acrylic polymer-modified fibre reinforced system	Life expectancy – less than 10 years
Brushbond Roofguard	Fully-bonded seamless coating	Application for exposed roof

Brushbond Roofguard is a single component acrylic polymer modified, fibre reinforced high build easy roller / brushable coating available in different colours for application in multiple layers, minimum 3-layer application is recommended for best performance. Thickness of each coat shall be approximately 330 microns.

The product can be applied directly on existing concrete, brickbat coba and screed concrete even without removal provided the substrates are sound enough for application of the coating avoiding the risk of damage to the old roof associated while removing of the existing overlays. The product provides a seamless, tough durable water-resistant coating which can withstand light pedestrian traffic and also has excellent weather resistance for exterior applications.



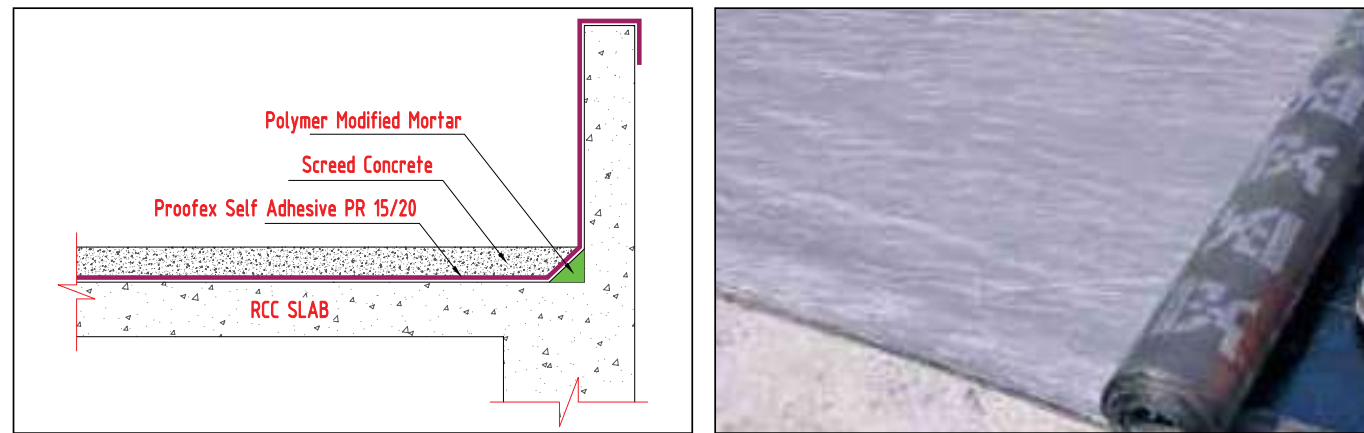


# Above ground waterproofing

## Proofex Self Adhesive system

Roof waterproofing	SBS-modified bituminous membrane	Life expectancy – more than 10 years
Proofex Self Adhesive PR15/20	Self adhesive system	Fully-bonded system

Proofex Self Adhesive PR15/20 is a 1.5 and 2 mm thick cold-applied Self Adhesive sheet membrane comprising of a polymer-modified bitumen layer internally reinforced with polyester, bonded on to an outer surface of cross laminated polyethylene film. The polymer bitumen adhesive layer is protected on the underside by a silicone release paper which is removed just prior to the application of Proofex Self Adhesive PR15/20 to the tack coat primed substrate. The applied membrane is then immediately protected from UV light and from mechanical damage by sand/cement screed. Provide a continuously bonded waterproof membrane for roofing application.



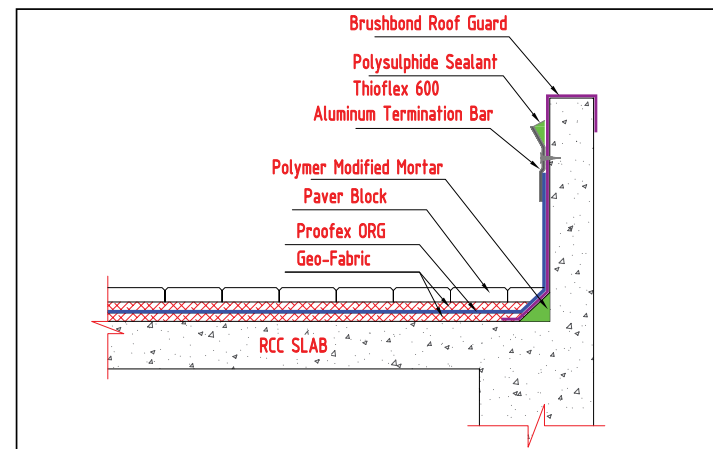
## Proofex PGP system

Roof waterproofing	PVC membrane	Life expectancy – more than 15 years
Proofex PGP	Loose-laid system	For covered roofing

Proofex PGP flexible PVC synthetic membrane for the waterproofing of roof. The membrane is manufactured in two different colours, it is coloured light grey on top and black on the underside. This helps to identify any damages that may occur during application. Proofex PGP is available at 1.5 and 2 mm thick.

### Advantages

- Rapid installation – available in large rolls
- Welded joints for maximum watertightness
- Compatible full range of ancillaries
- Long-term watertight durability
- Good resistance to puncturing



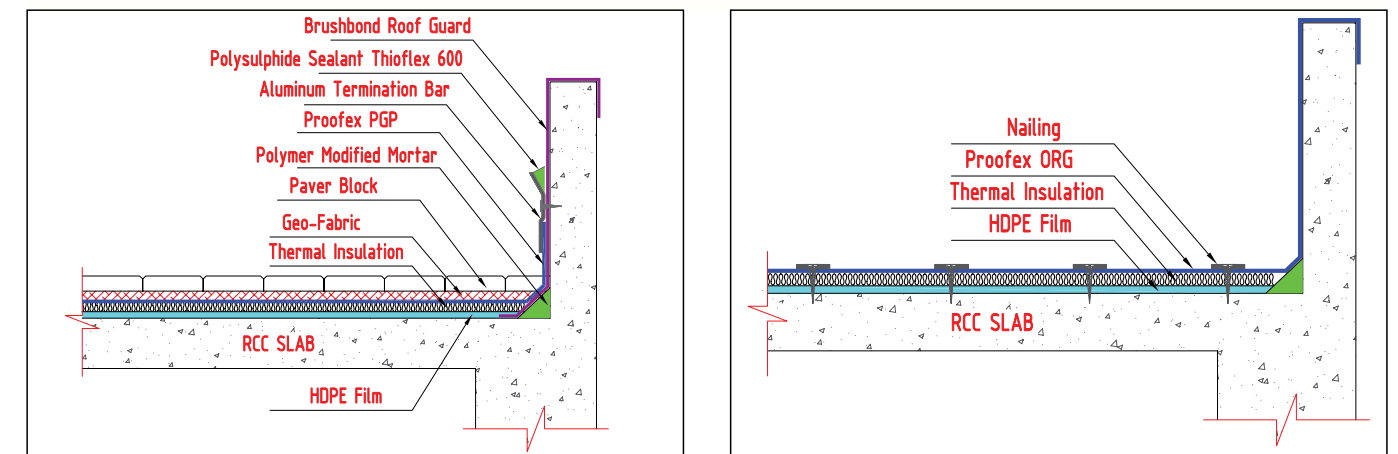
# Above ground waterproofing

## Proofex ORG/OGP system

Roof waterproofing	TPO membrane	Life expectancy – more than 15 years
Proofex ORG/OGP	Loose-laid system	Exposed roofing

Proofex ORG/OGP are TPO/FPA (Thermoplastic Polyolefin Flexible Polypropylene Alloy) reinforced membrane produced by extrusion of granules resulting from the incorporation of ethylene propylene rubber into a polypropylene matrix together with other additives as appropriate to the type of membrane.

The membrane is manufactured in two different colours, it is coloured grey on top and black on the underside. This helps to identify any damages that may occur during application. A white coloured grade is available which has a Solar Reflective index of 99, suitable for cool roof applications. Proofex ORG/OGP are available in 1.2, 1.5 and 1.8 mm thickness.



## Wet areas

Bathrooms, toilets and wet areas in kitchen that are in continuous contact with water are vulnerable to potential leakages and subsequent damages to its structure and interior finishes.

These critical applications can be dealt with by using a wide variety of waterproofing products supplied by Fosroc, ensuring peace of mind for long-term durability and comfort.

**Brushbond** is a two-component acrylic polymer-modified elastomeric waterproofing membrane. Brushbond can simply be applied by a stiff brush, or trowel to obtain the desired thickness.

**Brushbond** has exceptional adhesion, toughness and durability. It withstands high positive hydrostatic pressures.

- Can be applied to damp concrete
- Excellent crack-bridging performance
- Easy application by brush, roller or trowel
- Minimum surface preparation needed – low labour costs
- Breathable – allows transmission of water vapour from interior of building

**Nitotile MPA:** A ready mixed polymer modified cement based powder multi-purpose tile adhesive. It provides outstanding adhesive/tensile strength, high mortar flexibility & excellent workability of tiles with cementations surfaces like, plaster, concrete etc. & used for fixing various types of tiles. **Nitotile Grout/Nitotile EPW Grout** shall be used for sealing tile joints.



## Green roof and Podium

### Aesthetics

Green roofing is growing rapidly in popularity with building owners and community planners across the world. A green roof can transform an underused and functional area into an attractive feature, such as a garden or open space that can be visited and enjoyed by building occupants. Realisable property values are higher for such buildings and this form of roofing can sustain the marketability of office structures.

### Additional energy savings

Green roofing acts as a thermal insulator to protect buildings from high external temperatures in hot climates and retaining heat in colder climates, minimising air conditioning or heating costs. In hot climates green roofing also helps in cooling surrounding areas, but in any area the installation of a green roof may also reduce the requirements for traditional insulation.

### Increased durability

A well-designed green roof system can outperform other forms of roofing, which may suffer from wide temperature variations or the effects of Ultra-Violet (UV) radiation.

### Improved sound insulation

The green roof can be used as an acoustic barrier, creating a healthier environment for the occupants. The growing medium serves to block lower sound frequencies, whilst the plants block higher frequencies.

## Providing storm water retention

Green roofing may also have benefits in storm water management. Rain water is captured and held within the growing media for release back into the atmosphere through evaporation. This decreases the amount of water run-off into local water systems; by delaying and reducing peak storm water run-off rates and volumes, lower loading is placed on drainage systems.

## Environment-friendly air purification

As well as absorbing carbon dioxide during photosynthesis and releasing oxygen into the built environment, plants can also reduce particulate and other pollution by filtering these from the air. Materials trapped at the greenery surface area is washed by rain or watering into the growing medium below.

A green podium is a designated green area created by adding layers of growing medium and plants on top of a functional roofing system and typically consists of:

- Plants selected to suit client specifications
- A growing medium, which may or may not include soil
- A filter geotextile to contain the roots and the growing medium while allowing for water penetration
- A specialised drainage layer, sometimes with built-in water reservoirs to retain water
- The waterproofing/roofing membranes, with an integral root resistance
- The roof structure with traditional insulation either above or below

## Extensive landscaping

**Shallow growing medium, low-plant diversity**

- Light weight roof
- Low maintenance and long life
- Vegetation left to grow freely
- Restricted access
- More limited choice of plants
- Less energy efficiency benefits

## Intensive landscaping

**Deep soil, more favourable conditions for plants, high plant diversity**

- Heavy weight loading on roof
- Higher maintenance costs
- More visually attractive
- Often accessible, more recreational
- Greater choice of plants
- More energy efficiency benefits



## Landscape waterproofing

A successful, functional and aesthetic green roof can only be delivered through holistic design of a complete system. Inappropriate interface, poor installation and inadequate product selection can create weak points that are expensive to correct. The Fosroc system-based approach is essential in creating and maintaining a value-adding asset.

### Waterproofing

The waterproofing membrane forms the core part of the green roof and must provide a permanent barrier that retains long-term resistance to root penetration.

Selection of membrane type must consider factors such as structural loading, substrate type and material, fixing preferences and design detailing. This detailing to perimeters, outlets, upstands and protrusions through the roof is also affected by the depth of the green roof build up.



Social, environmental & economic benefits



# Above ground waterproofing

## Fosroc Polyurea WPE (Spray applied Polyurea)

- Seamless waterproofing system
- Fast cure spray application
- Excellent durability
- CEN TS14416 root resistant



## Fosroc Polyurea WH 200/GR

- Environment friendly – zero VOC
- Good thermal stability
- Fast turnaround time
- Excellent impact, abrasion and puncture resistance

## Proofex OGP

(loose laid TPO)

- TPO/FPA waterproofing membranes
- FLL root resistant
- Watertight welded laps

## Proofex ORG

(loose laid reinforced TPO)

- Environment-friendly – recyclable, no plasticisers

## Proofex OFB

(fully bonded TPO)

- Various thicknesses
- Large roll size

## Proofex Torchseal Antiroot

- APP Torch applied membranes

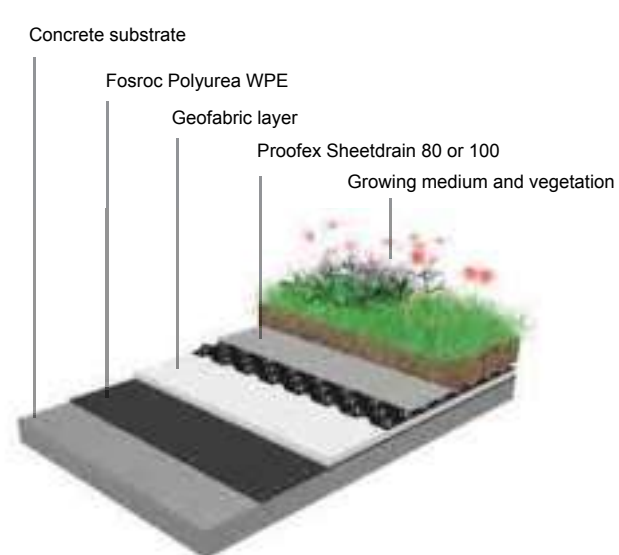
## Proofex Self Adhesive Antiroot

- SBS Self Adhesive membranes

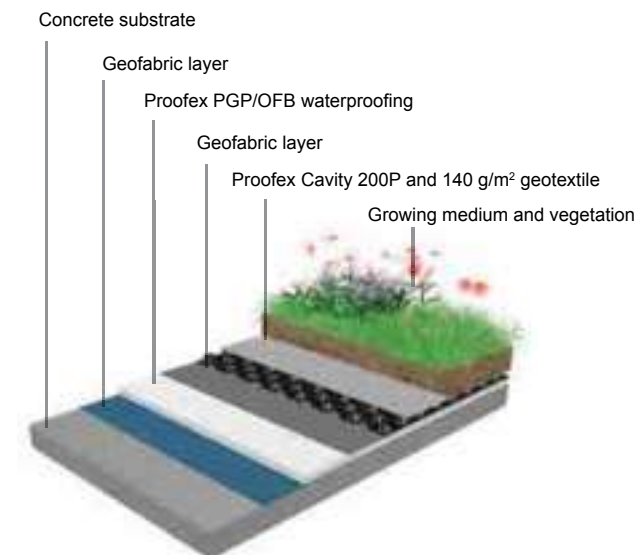


# Above ground waterproofing

## Typical details: Landscape Waterproofing



Waterproofing with Fosroc Polyurea system



Waterproofing with Proofex PGP/OFB system

## Fosroc® Polyurea WH 200/GR

Fosroc Polyurea WH 200/GR is a spray-applied, 100% solids, flexible, two-component, rapid curing hybrid Polyurea system, designed as a waterproofing and protective coating.

It combines the advantages of seamless coating with long life cycles and high durability.

Fosroc Polyurea WH 200/GR is environment friendly - zero VOC with good thermal stability. It gives fast turnaround time with excellent impact, abrasion and puncture resistance.

Ideally suggested for:

- Podium decks
- Roof gardens
- Green roofs
- Stadium stands
- Service roofs
- Cut and cover tunnels



### Recommended application areas of application

Application Area	Polyurea WH200/GR	Polyurea WPE	Application Area	Polyurea WH200/GR	Polyurea WPE
Podium slabs*	✓	✓	Jetties, Piers, wharfs	✓	✓
Roof gardens*	✓	✓	Jetties, Piers, wharfs	✓	✓
Cut/ cover tunnels	✓	✓	Clean and dirty water tanks	✗	✓
Service roofs	✓	✓	Secondary containment bunds	✗	✓
Metal deck roofs	✓	✓	Chemical resistance	✗	✓
Green roofs*	✓	✓	High abrasion resistance	✗	✓
Stadium stands	✓	✓	Foot traffic 2 minutes	✗	✓

\*Contact Fosroc team.

## Product Selection chart – landscape waterproofing

Products	Type of Landscape	Protection to membrane	Chemical resistance	Life expectancy	Bond with the Substrate
Fosroc Polyurea WPE (Green certified product)	Intensive/Extensive Landscape	Not required	Good resistance to chemicals	Life expectancy > 15 years	Fully bonded system-Prevent lateral migration of water
Fosroc Polyurea WH 200/GR	Extensive Landscape	Not required	Good resistance to chemicals	Life expectancy > 15 years	Fully bonded system-Prevent lateral migration of water
Proofex PGP	Intensive/Extensive Landscape	Not required	Good resistance to chemicals	Life expectancy > 15 years	Loose laid system
Proofex OFB (Green certified product)	Intensive/Extensive Landscape	Not required	Good resistance to chemicals	Life expectancy > 15 years	Fully bonded system-Prevent lateral migration of water
Nitoproof 600 Standard/PF	Intensive Landscape	Required	Mild resistance to chemicals	Life expectancy > 10 years	Fully bonded system-Prevent lateral migration of water
Proofex Torchseal Antiroot	Intensive/Extensive Landscape	Required	Mild resistance to chemicals	Life expectancy > 10 years	Partially bonded system
Proofex Self Adhesive Antiroot	Intensive/Extensive Landscape	Required	Mild resistance to chemicals	Life expectancy > 10 years	Fully bonded system-Prevent lateral migration of water

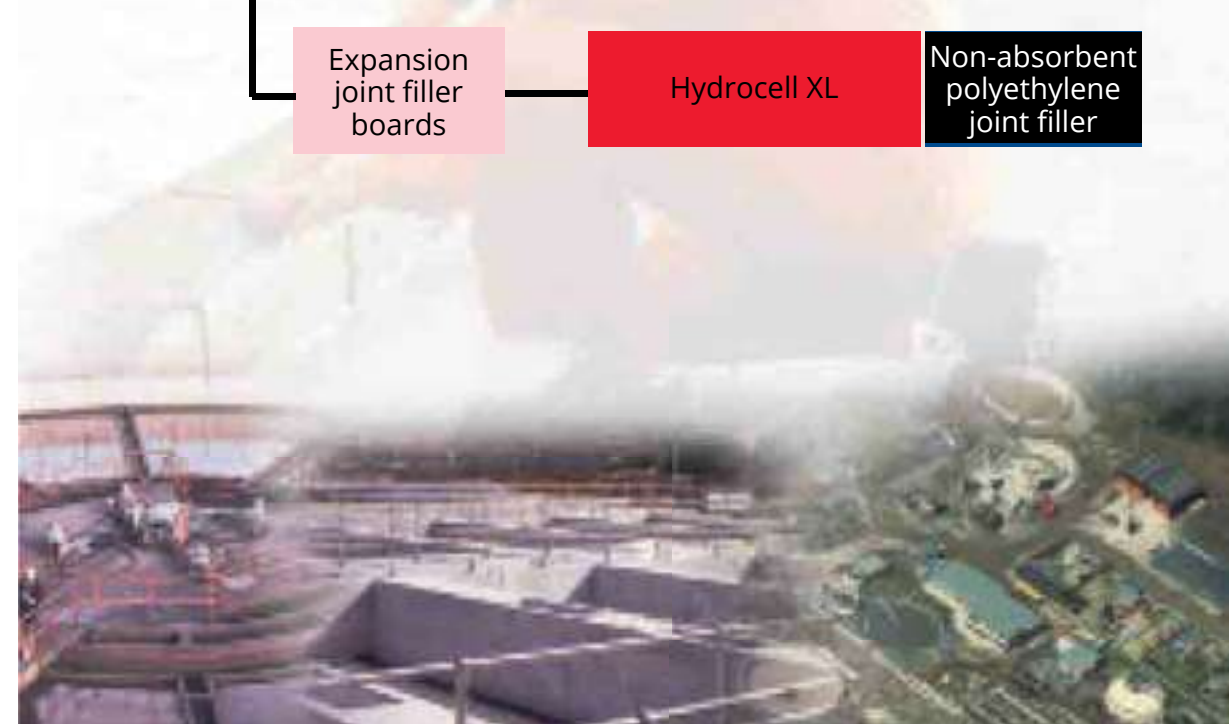
## Clean water - product selector

Products approved for use in direct contact with drinking water	Internal coating	Nitocote CM210 (WRAS Approved)	Cementitious coating
	Patch repairs	Renderoc Plug	Rapid setting plugging mortar
Products approved for use in direct contact with drinking water	Waterstops	Supercast PVC	PVC waterstops for expansion
		Supercast SW	Hydrophilic waterstop
	Joint sealants	Nitoseal MS600	One part MS sealant
Products approved for use in direct contact with drinking water	Internal coating	Nitocote EP405	Solvent free epoxy resin coating
	Surface repairs	Renderoc FC	Cementitious render
Product not requiring certification (Application for external areas)	Externally placed waterproofing membranes	Proofex Engage	Pre-applied waterproof membranes
	Externally placed waterproofing membranes	Proofex Self Adhesive	Self Adhesive waterproof membranes
	Externally placed drainage membranes	Proofex Sheetdrain	High density drainage membranes



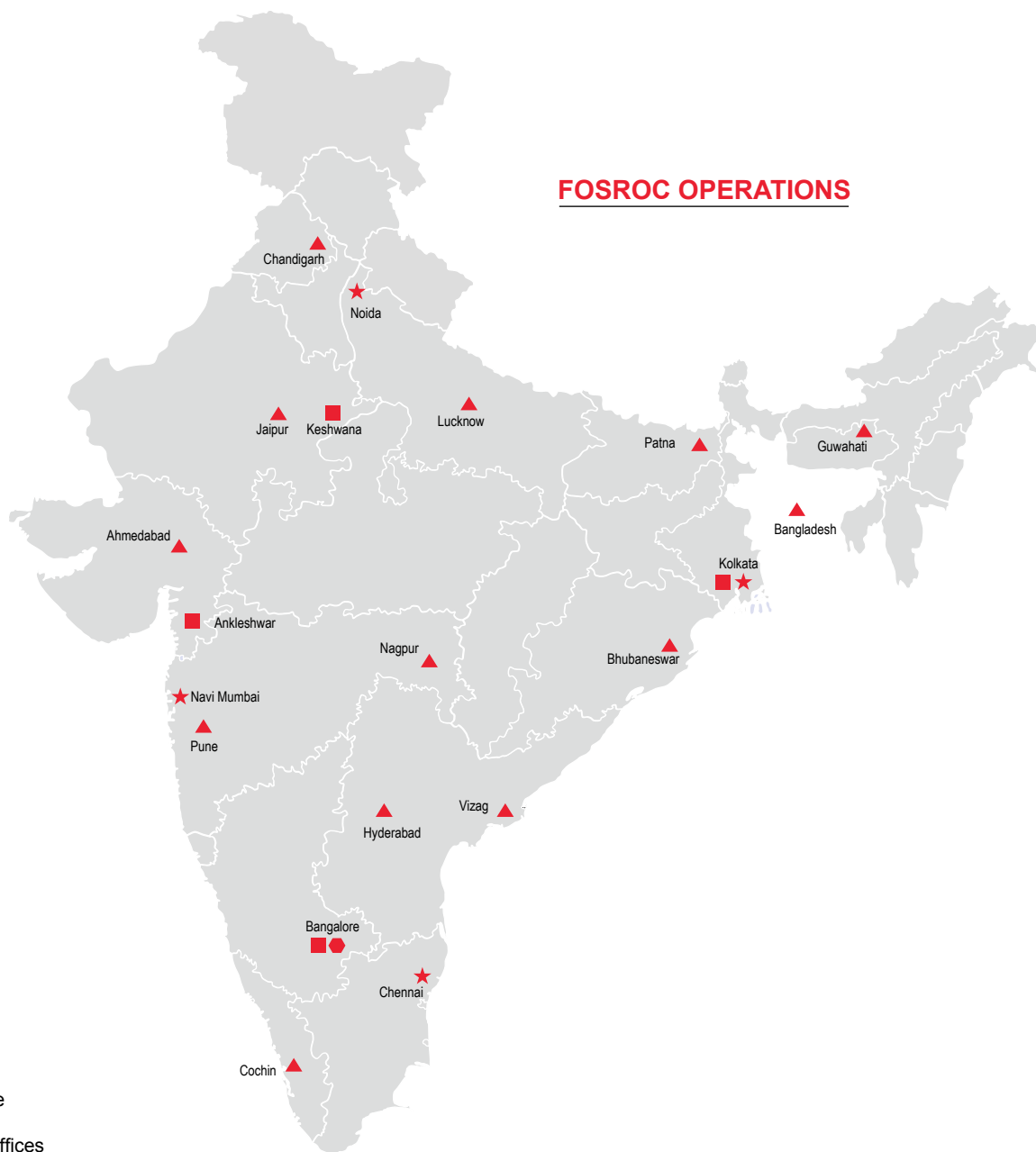
## Dirty water - product selector

Dirty water product selector	Internal coating	Nitocote EP405	Epoxy waterproof coating
		Polyurea WPE	Spray applied polyurea coating
	Surface repairs	Nitomortar range	Resin repair mortars
	External waterproof membranes	Proofex Self Adhesive	Self Adhesive waterproof membrane
		Nitocote CM210	Flexible cementitious coating
	Waterstops	Supercast PVC	PVC waterstops for expansion joints
		Supercast SW	Hydrophilic waterstop
	Drainage membranes	Proofex Sheetdrain	High density drainage membrane
	Joint sealants	Nitoseal MS600	One part flexible sealant
	Expansion joint filler boards	Hydrocell XL	Non-absorbent polyethylene joint filler





## FOSROC OPERATIONS



- Head Office
- Plant
- ★ Regional Offices
- ▲ Branch Offices

### Fosroc Chemicals (India) Pvt Limited

#### Head Office

Embassy Point, No. 150, 2nd Floor, Infantry Road, Bangalore - 560 001, Karnataka

Phone : +91 80 4252 1900

Fax: +91 80 2228 1510

#### Regional Offices

<b>WEST</b>	: Thane (West) – 400 615, Maharashtra	Phone : (022) 6229 6800
<b>NORTH</b>	: Noida – 201 309, Uttar Pradesh	Phone : (0120) 4270620/1/3
<b>EAST</b>	: Kolkata – 700 068, West Bengal	Phone : (033) 6534 3188
<b>SOUTH</b>	: Chennai – 600 028, Tamil Nadu	Phone : (044) 2489 9994

#### Branch Offices

Ahmedabad	- (079)	4005 2800, 4005 2801	Nagpur	-	+91 9561001353
Bhubaneswar	-	+91 97770 49670 / +91 99370 28267	Jaipur	-	+91 9784007155
Chandigarh	- (0172)	263 6855	Patna	-	+91 9771495335
Cochin	- (0484)	234 7465	Pune	-	+91 8600149216
Guwahati	- (0361)	234 2866 / +91 88110 14878	Vizag	-	+91 99594 88807 / (0891) 6635637
Hyderabad	- (040)	6456 0505 / 4007 2529 / 6460 0407	Bangladesh	-	+88 01734 675252
Lucknow	-	+91 738808880			

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*constructive solutions*

[www.fosroc.com](http://www.fosroc.com)

E-mail: [enquiry.india@fosroc.com](mailto:enquiry.india@fosroc.com)

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