

FOSROC



constructive solutions

Bridge Solutions

High performance systems

Dekguard
Nitoproof
Cicol
Conbextra
Cebex
Nitomortar
Colpor
Nitobond





constructive solutions

Company Profile

Fosroc is a world leader in the delivery of tailored Constructive Solutions for virtually any type of construction project, combining high quality products, expert technical support, customer service and innovation.

Fosroc's worldwide presence includes group companies in 15 countries with exports to over 70 countries.

Fosroc has over 76 years experience in supply of speciality chemicals and have gained the acknowledgement as "market leaders" in quality production and supply of the most comprehensive range of high performance construction chemicals serving the construction industries in building and civil structures above and below ground.

Global leaders in delivering Constructive Solutions



Fosroc's product range is as follows:-

- | | |
|-----------------------|----------------------|
| ■ Admixtures | ■ Grouts & Anchors |
| ■ Adhesives | ■ Joint Sealants |
| ■ Protective Coatings | ■ Surface Treatments |
| ■ Concrete Repairs | ■ Grinding Aids |
| ■ Industrial Flooring | ■ Waterproofing |



Fosroc Support

Our experienced staff will assist you with high level support in:

CAD Details
Project Specifications
Site Support
Seminars & Training



Introduction

With direct exposure to harsh atmospheric conditions, combined with cyclic loading from heavy vehicular traffic, the service conditions experienced by bridges are some of the most arduous within civil engineering. Protecting such a structure from these conditions requires novel and tailored solutions, Fosroc has developed a range of products specifically designed for such purposes.

Fosroc understands that ease and simplicity of application are as important as long term performance. All our products are supported by detailed technical literature, giving full explanations of requirements before, during and after application to ensure success. In addition, by partnering with our customers at all stages, we aim to add value and give support as well as providing a solution with long term benefits.

This brochure outlines some of the products Fosroc has tailored for bridges, along with their key advantages

Fosroc Solutions for Bridges include:-

- **Protective Coatings**
- **Deck Waterproofing**
- **Bridge Bearing Grouts**
- **Post Tensioned Cable Grouts**
- **Joint Sealants**
- **Transition Strip Filler**
- **Segmental Bonding Adhesive**
- **Curing Compounds & Foundation Waterproofing**

FOSROC



Innovation
Quality
Reliability

Note: The above product list is not comprehensive.
Please contact Al Gurg Fosroc LLC. for details of our solutions for other applications.

Fosroc Bridge Coatings

Fosroc Dekguard System

High performance protective coatings

Advantages

- **Anti chloride & Anti carbonation** - withstands long term exposure to chloride and carbon ions.
- **High performance** - comprehensive barrier against carbon dioxide, water, sulphates and chloride ions.
- **Extremely durable** - maintains performance, even after long term UV weathering.
- **Breathable** - water vapour can escape from the structure. Protection in depth - dual action system protects both the surface and the substrate.
- **Highly decorative** - wide range of colours available, with low dirt pick-up to minimise maintenance costs.



Fosroc Dekguard E2000

Description

Dekguard E2000 is an elastomeric, water-based protective coating based on a special acrylic polymer. It provides excellent elongation and recovery, resistance to atmospheric contaminants, UV light and rain. It is available in a wide range of colours.



Sharjah and Northern Emirates Road Improvements projects: Fosroc's Dekguard E2000 applied on an area of 1,36,000 SQM.

**Elastomeric
Coating System**

Fosroc Dekguard S

Description

Dekguard S is a pure aliphatic acrylate, solvent based protective coating. It is available in a wide range of colours. The complete system also includes a primer (Dekguard Primer or Dekguard Primer DG) which is supplied as a clear liquid, based on a silane-siloxane dissolved in a penetrating organic carrier.

The primer is reactive and capable of producing a chemically-bound hydrophobic barrier, thus inhibiting the passage of water and water-borne contaminants.

The Dekguard S system thus comprises a single component, penetrating silane-siloxane primer and a single component pigmented coating, both ready for immediate site use.



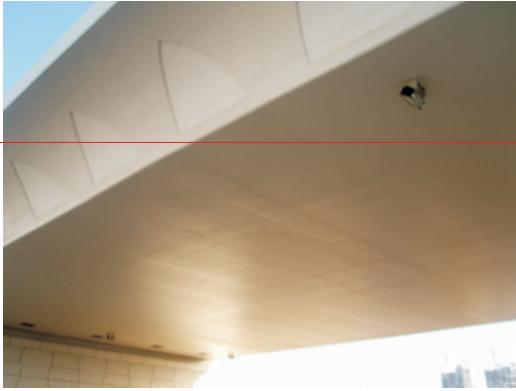
Saadiyat Link Project

Saadiyat Freeway: A 27km expressway linking the Port Zayed area with the Abu Dhabi-Dubai road through the Saadiyat and Yas Islands. For protective coatings Fosroc anticarbonation and antichloride coatings: Dekguard S, Dekguard E2000 applied over an area of 200,000 Sqm at different locations on the overall project.



High Performance
Coating System





Dubai Business Bay Roads & Bridges: Fosroc's Dekguard S applied on an area of 45,000 SQM

Bridge Bearing Grouts

Fosroc Conbextra EPGP

Bridge bearing/Multi-purpose, epoxy resin grout

Conbextra EPGP solvent-free epoxy resin grout is designed for grouting of gap widths of 20-80 mm. It is supplied as a three component system consisting of epoxy base, epoxy hardener and specially graded aggregate. The components are supplied in the correct mix proportions designed for easy mixing at site.



Fosroc Conbextra BB80

Non-shrink cementitious bearing grout for use in a wide variety of applications

Conbextra BB80 is an exceptionally high strength grout designed for grouting beneath bridge bearings, parapet posts and flanged lighting columns and heavy stanchion base.

Advantages

- Non-shrink
- High early and ultimate compressive strengths
- Good flow, particularly at low temperatures
- Low permeability ensures durability
- Can be poured or pumped



Post Tensioned/Pre-Stressed Cable Grouts

Complying to BS EN 445 and BS EN 196.

Fosroc Cebex Cable Grout

Pre-bagged, non-shrink cementitious grout admixture for post tensioned bridge deck ducts/cables

Advantages

- Expansion system compensates for shrinkage and settlement in the plastic state
- Develops high early strength without the use of chloride additives
- High ultimate strength and low permeability ensure the durability of the hardened grout
- Compatible with ordinary Portland Cements complying to BS 12 and ASTM C150



Conbextra Cable Grout

Pre-bagged, non-shrink cementitious grout for post tensioned cables

Conbextra Cable Grout is supplied as a ready to use dry powder requiring only the addition of a controlled amount of clean water to produce a free flowing non-shrink grout.

Conbextra Cable Grout is an all fines mix based on Portland cements and additives which impart controlled expansion in the plastic state whilst minimising water demand.

The material is designed to allow uniform mixing, and eliminates unwanted segregation and bleeding.



Bridge Deck Waterproofing

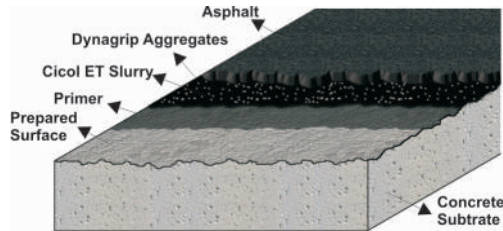
Fosroc Nitoproof ET Slurry

Formerly known as **Cicol ET Slurry**

Bridge deck waterproofing membrane/anti-slip surfacing.

Advantages

- Lightweight
- Hard wearing
- Flexible
- Excellent adhesion to steel and concrete substrates
- Non-slip, excellent grip even when wet
- Chemically resistant
- Waterproof
- Zero spread of flame



FOSROC



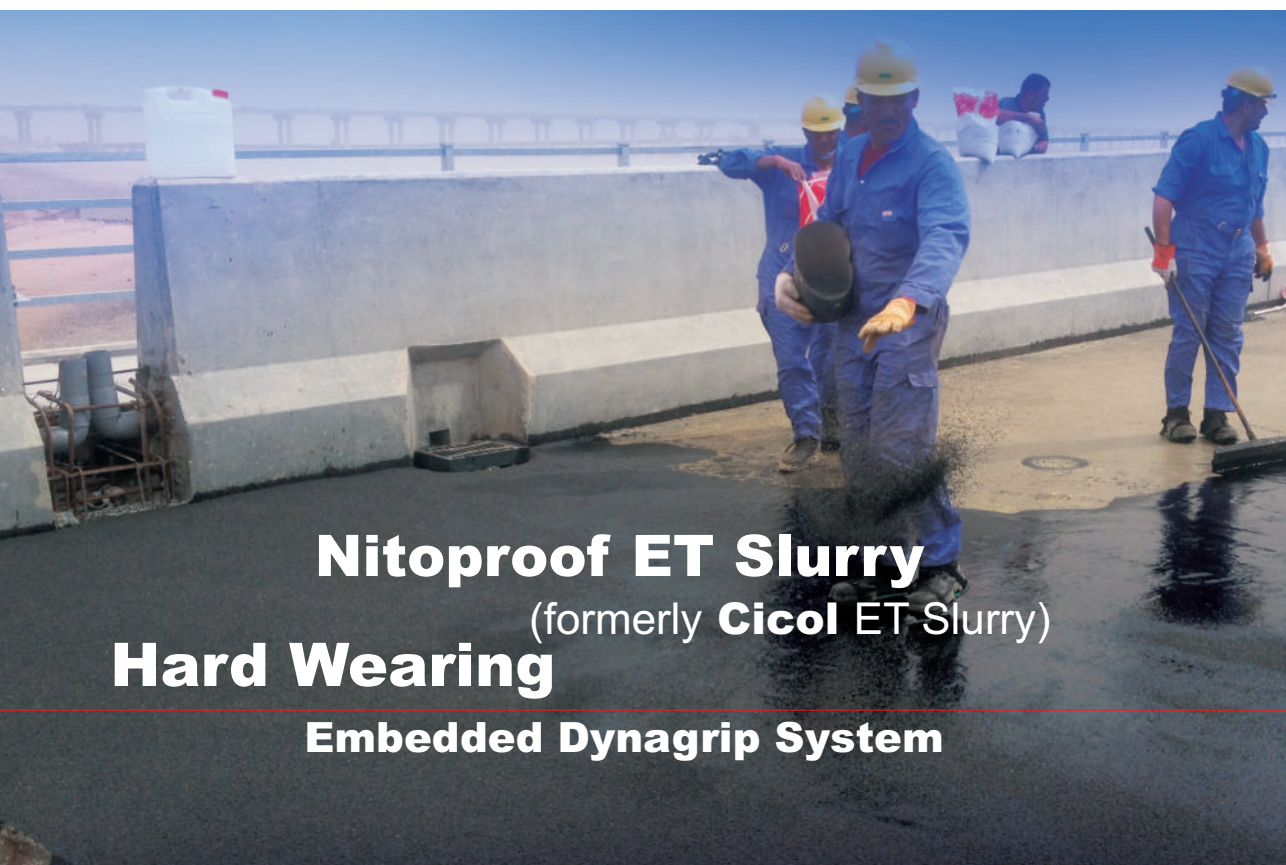
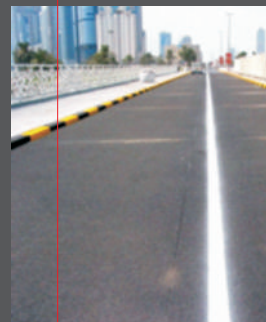
Description

Nitoproof ET Slurry (formerly **Cicol ET Slurry**) is a three component system based upon solvent free, coal tar modified epoxy resins, amine curing agents and chemically inert, graded silica fillers which when mixed forms a fluid, homogeneous slurry. Specially selected Dynagrip aggregates are broadcast onto this slurry whilst it is still wet to provide a lightweight, flexible durable membrane to receive asphalt on top without the use of tack coats. Alternatively, due to its excellent abrasion and slip resistance, it can be left exposed as the final wearing surface.

Boubyan Seaport Bridge: Fosroc's Nitoproof ET Slurry (formerly **Cicol ET Slurry**) was applied as bridge deck waterproofing on a total area of area : 1,20,000 SQM.

First floating bridge in Dubai: Fosroc's Nitoproof ET Slurry (formerly **Cicol ET Slurry**) was applied on the decks total of area : 4,000 SQM.

**Excellent
Crack
Bridging**



Nitoproof ET Slurry

(formerly **Cicol ET Slurry**)

Hard Wearing

Embedded Dynagrip System

Pedestrian Bridges: Application of Nitoproof ET Slurry (formerly **Cicol ET Slurry**) on pedestrian bridges in Dubai.



Fosroc Polyurea WPE

Fast setting, pure polyurea elastomeric bridge/bridge deck waterproof membrane

Fosroc Polyurea WPE is a spray-applied, 100% solids, flexible, two-component, rapid curing pure Polyurea system, designed as a waterproofing membrane and protective coating. It combines the advantages of seamless coating with very long life cycles and high durability.

Advantages

- Environment friendly - zero VOC
- Excellent chemical resistance, thermal stability and UV Resistance *
- Very fast turn-around time. The coated substrate can be put into service within an hour
- Excellent impact, abrasion and puncture resistance
- Seamless and monolithic, including field joints
- Significantly enhances the durability of reinforced concrete
- Low permeability values
- Can be applied at ambient temperatures from -30°C to $+70^{\circ}\text{C}$
- Designed for service temperatures from -30°C to $+135^{\circ}\text{C}$



Fast Setting



Bridge Transition Strip Filler

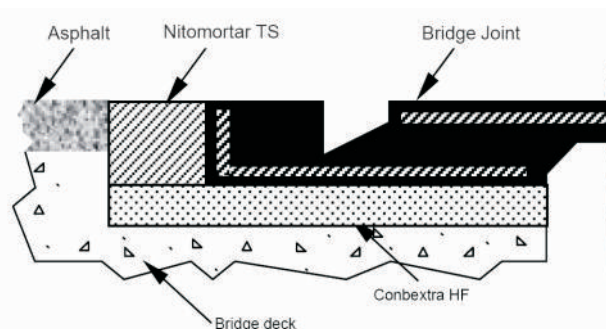
Fosroc Nitomortar TS

Epoxy mortar for transition strip on bridge deck joints

- Fast curing with outstanding adhesion.
- Good mechanical properties with elastic characteristics.
- Hard wearing and abrasion resistant.

Description

Nitomortar TS is a three-component epoxy-tar based engineering mortar formulated to possess good workability and can be casted or trowelled to a fine, accurate surface. Example of bridge deck expansion joint and Nitomortar TS is shown in fig.



Bridge Joint Sealants

Fosroc Colpor 200

Cold applied, high performance, hydrocarbon resistant, polyurethane pavement joint sealant

(Complies with U.S. Federal Specification SSS-200E:1984 and British Standard 5212:1990 - types N, F and FB.)

Advantages

- Cold applied - no heating equipment required
- Fuel, oil and hydraulic fluid resistant
- Self-levelling
- Tough rubbery seal
- High performance - less maintenance

Description

Fosroc Colpor 200 cold applied, two part polyurethane sealant is designed for joints in concrete and asphalt paved areas. It is also used for filling bolt holes in bridge deck transition joints. The capability of accommodating cyclic movements is retained by Colpor 200 throughout extremes of temperature conditions.

Colpor 200 is resistant to fuel, oil and hydraulic fluid spillage, will not harden in cold weather nor become excessively soft or pick up in hot conditions. Colpor 200 has high durability and long service life which significantly reduces maintenance costs.



Bridge Segmental Bonding Adhesive

Fosroc Nitobond SBA

Epoxy adhesive for segmental bridge bonding

A two component, solvent free epoxy resin system consisting of base resin and hardener in pre-measured quantities for easy on-site mixing.

(Complies to Federation of International Prestressing (FIP))

Advantages

- Excellent adhesion to concrete, steel and most construction materials
- High strength
- Moisture tolerant, can be applied to damp surfaces, free from standing water
- Easy to apply, non-sag at recommended application thickness
- Overlapping temperature grades to suit varying environmental conditions
- Long Pot Life and Open Time to minimize wastage



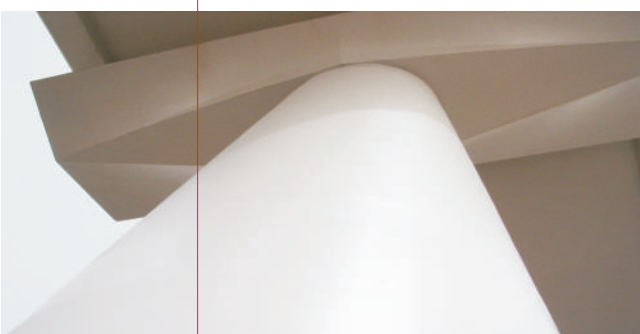
Foundation Waterproofing & Curing Compounds

Fosroc Nitoproof/Proofex Range

Liquid/Sheet applied single component elastomeric waterproofing membranes

Advantages

- Impervious - outstanding barrier properties ensure protection against corrosive soil conditions
- Thermally stable - irreversible chemical cure eliminates melting and flow at high temperature
- Excellent resistance to oxidation and embrittlement



Fosroc Concure Range

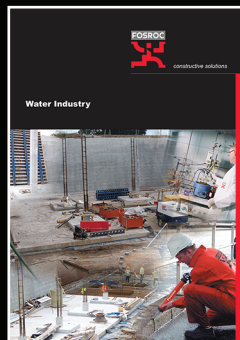
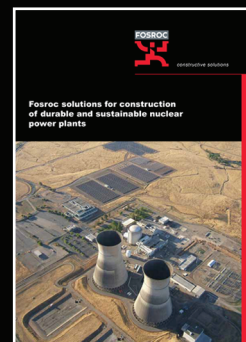
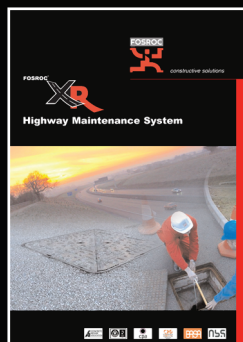
Concrete curing compound

Advantages

- Eliminates the need for water, wet hessian or plastic sheets to cure concrete
- High curing efficiency ensures good water retention and thus hydration and strength gain
- Certain grades do not require removal before application of subsequent coatings

www.fosroc.com

Fosroc offers a full range of construction solutions, helping to protect structures throughout the world. Please refer to our other brochures, which include:



Details of your local Fosroc office can be found at
www.fosroc.com

Important Note

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