



Fosroc Solutions for Rapid Return to Service

RR2S

www.fosroc.com

FOSROC



constructive solutions



ABOUT FOSROC INTERNATIONAL

Since the company's beginnings over 50 years ago, Fosroc has developed into an International leader in delivering Constructive Solutions for projects across a broad range of market segments including transport, utilities, industrial and general buildings.

Fosroc's commitment to customer service and technical support is second to none. We work closely with architects, structural engineers, contractors and owners to best understand their requirements. Together we can develop a bespoke solution for a construction project, adding value and becoming more than just a materials supplier, but a solution provider.

Fosroc has an extensive network of offices and manufacturing locations across Europe, the Middle East, India, North and South Asia, and is further represented in other regions across the world by distributor and licensee partners.

Selecting from the full portfolio of Fosroc products and services and integrating expert technical support, world class customer service and innovation, Fosroc goes beyond just product selling to ensure that we partner with our customers to deliver complete constructive solutions.

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



FOSROC DELIVER SOLUTIONS NOT JUST PRODUCTS

CAD Details

A library of standard CAD details are available, bespoke CAD details can be created for your specific project

Project Specifications

Dedicated specification managers on hand to assist with correct system choices and tailored solutions

Site Support

Expert product and application support made available from our specialist teams.

Seminar & Training

Comprehensive programme of seminars and training courses designed to expand and reinforce your knowledge.



In the modern world, industry, commerce and transport hubs often run 24 hours a day. This means that the infrastructure is not only worked harder, but also that there are often very small windows of opportunity to allow for repairs and maintenance to be undertaken.

These factors combine to create a demand for products that are high performing, but which also allow works to be executed and put back into service very quickly.

Fosroc's chemists have developed class-leading products which form the Rapid Return to Service (RR2S) range aimed at meeting the market demands to get essential work completed more quickly, without having to compromise on standards; providing a low maintenance solution with low environmental impact.



Learn more about Fosroc's range of Rapid Return to Service Solutions by viewing our webinar which is available to download from our website www.fosroc.com



Fosroc Webinar
Rapid Return to
Service





NITODEK FS PMMA SYSTEMS

- Superior performance to Epoxy and PU systems
- Flexible and crack-bridging
- Precise control over cure-time, when critical
- 30-90 min cure time, even at sub-zero degrees
- Can be over-laid or trafficked in 30 mins
- Tailored Nitodek FS system to suit your project and warranty requirements (10, 15 & 20 years)



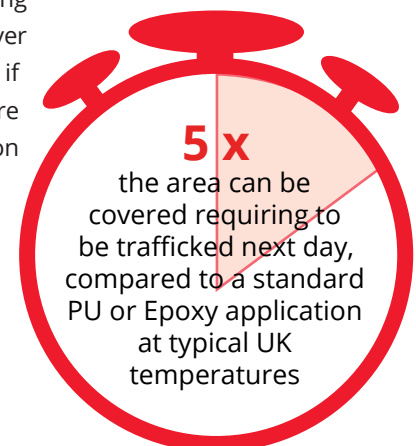
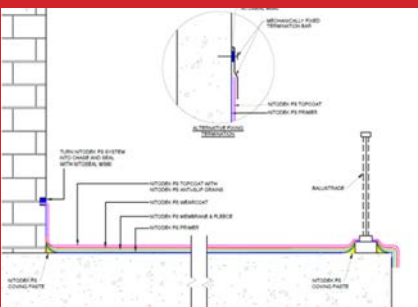
The Nitodek FS System is a high performance, multi-layer, trafficable, waterproofing system that provides a seamless, highly resistant, elastomeric, anti-slip finish.

The Nitodek FS systems are layered one on-top of the other. They are therefore classified as FeRFA Type 4 Multi-layered systems.

The system required is dictated by the perceived risk on the specific project and can be assessed as such, by Fosroc technical team.



In essence, there are four primary elements / layers in the Nitodek FS System that can be selected to create a bespoke solution: Primer / Flexible Membrane / Durable Wearcoat (to protect the underlying membrane) / Topcoat. The Topcoat is available in a range of colours for zone demarcation as well as providing UV resistance and functioning as a wear indicator. The membrane layer can be reinforced with a fibre fleece if required above habitable space or where there is a heightened risk of cracking on the substrate.





RR2S CASE STUDY

BRUNSHAW MAISONNETTES, BURNLEY

THE PROJECT

The existing coating needed to be removed from the balcony and access steps, and replaced with a new system which would not only provide waterproof protection, but also an anti-slip surface for the safety of residents.



THE SOLUTION

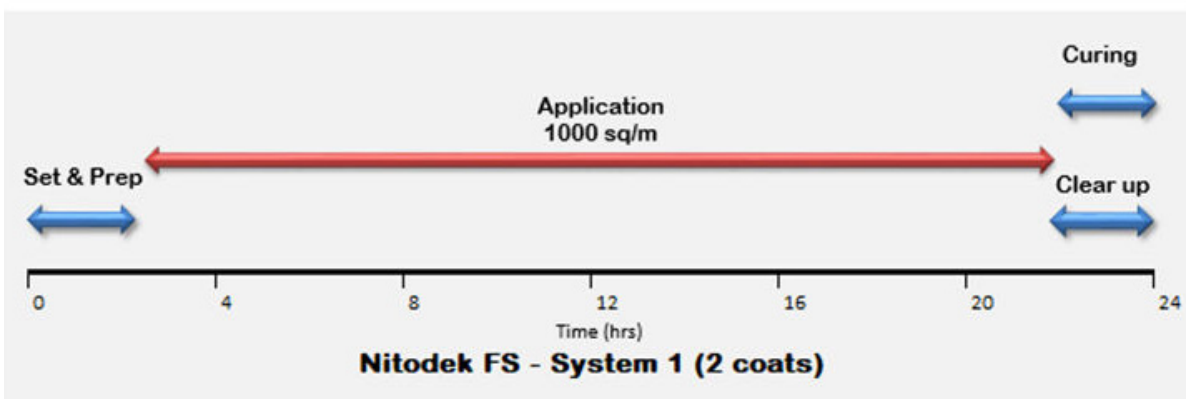
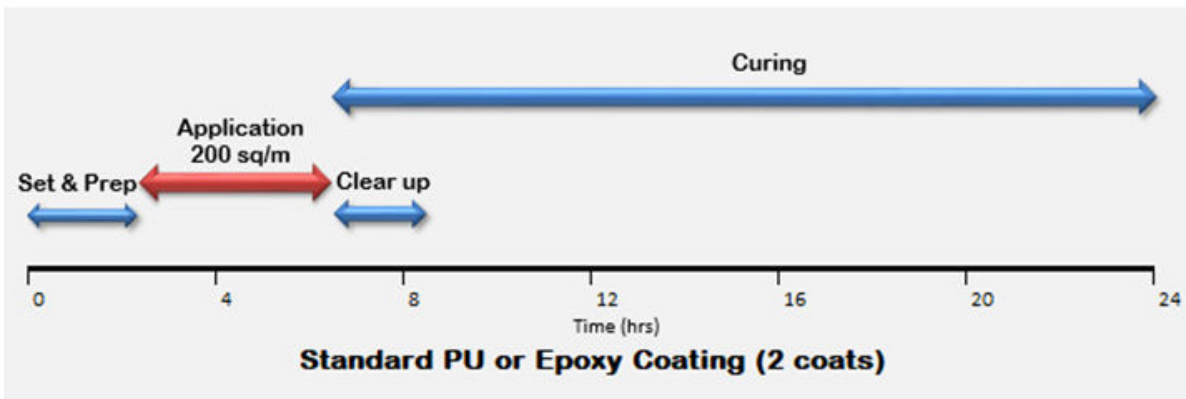
A fast setting protective system was required to provide waterproofing as well as protection against carbonation/chloride ingress. The bespoke system which was applied comprised the following component products: Nitodek FS Primer, Membrane, Fleece, Wearcoat and Topcoat.



THE BENEFITS

The ease of application and fast curing of the products ensured that the project could be completed quickly with minimal disruption, which was of benefit both to the client and residents.

NITODEK FS - EFFICIENCY TIMELINE





RENDEROC DSR R4 DRY SPRAY MORTAR

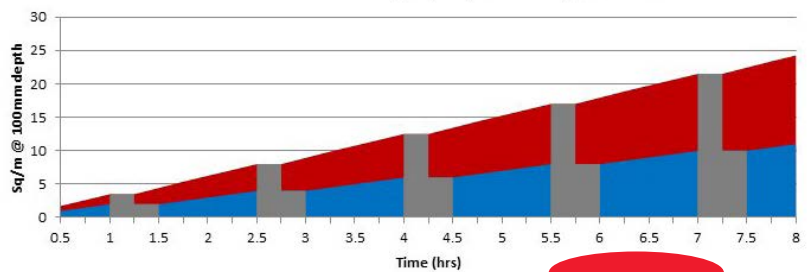
- Minimal dust during application
- Rapid early strength gain and excellent build characteristics
- Easy to finish
- Leading contractors with over 30 years experience said 'best product they had sprayed'
- Less rebound of 2-3% not only reduces cost in materials, but also in clearing-up rebound and application cost



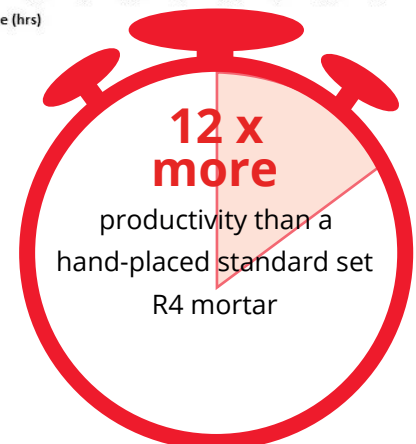
Enhanced productivity can generate a much greater reduction in the overall project cost than any potential savings in the product price. There are two important factors to consider in the dry spray process which demonstrate that applying budget dry-spray products can be a false economy. The effect of poor product adhesion has a detrimental impact on two aspects of productivity:

- Reduced rate of reinstatement (shown here in blue)
- More time spent cleaning up the rebounded material, often in very hard to access areas

Dry Spray Coverage over Time



- Renderoc DS / DSR
- Budget dry-spray
- Non Productive /Cleanup Time
- D/S Non Productive /Cleanup Time





RR2S CASE STUDY

QUEENS QUAY, EDINBURGH

THE PROJECT

The birthplace of RMS Lusitania, Queen Elizabeth and RMS QE2
Huge area of re-generation, leisure and housing

THE SOLUTION

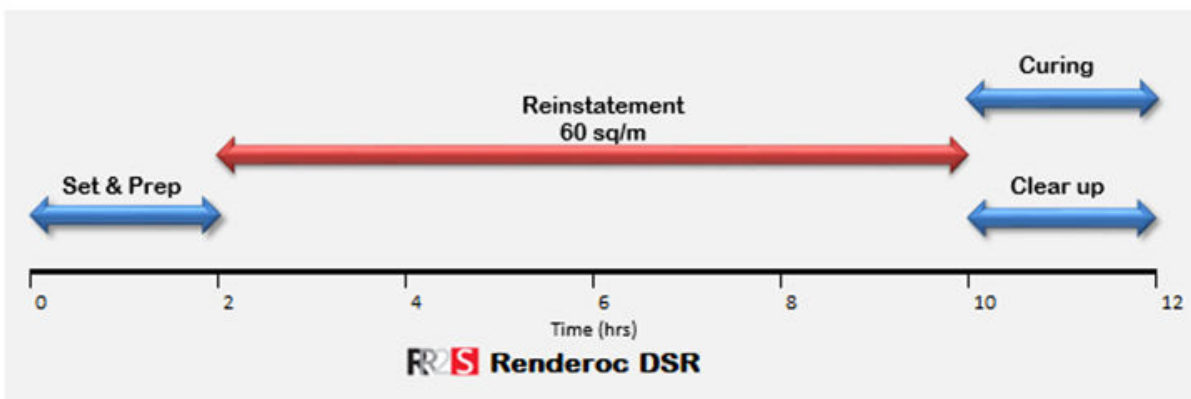
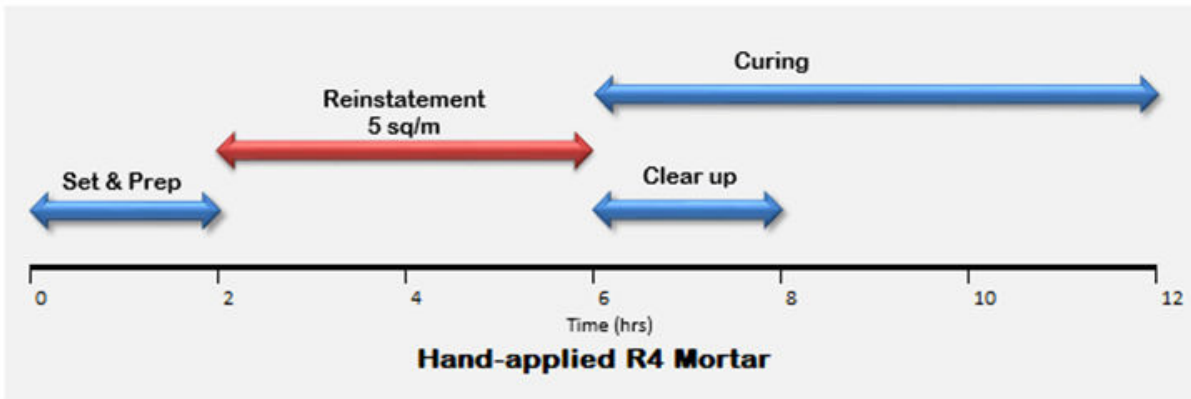
Renderoc DSR was deployed due to its very low rebound and very high speed of early strength.

THE BENEFITS

A skilled contractor and CRA member, Castle Group Scotland, undertook the works. Owing to the large areas of concrete which were perished by the elements, Renderoc DSR's efficiencies made the process of concrete reinstatement far easier and far quicker



RENDEROC DSR - EFFICIENCY TIMELINE



RR2S

- Can be placed at up to 250mm deep, yet trafficable in 4 hours
- Primerless
- Fast strength gain, but low moisture content is also critical.
- Over-coatable in 4 hrs

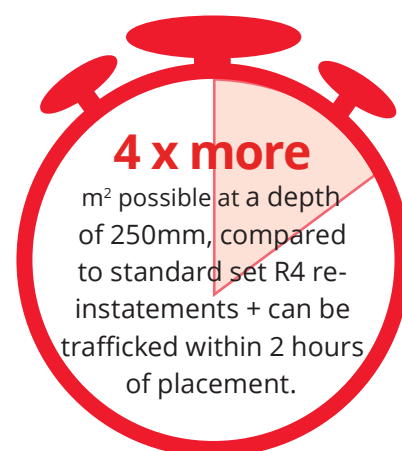
PATCHROC 250 R4 REPAIR MORTAR



Initially developed for use on highways, Patchroc 250 differs from its long established sister product Patchroc GP, in that it is capable of being placed in far greater thicknesses (up to 250mm) and still be able to withstand trafficking very soon afterwards, in severely time limited situations. After almost year of development with months of testing, Patchroc 250 was released.

It offers the versatility and speed of cure of a small patch repair mortar, but with the benefit of being able to be poured in 250mm thick sections of up to 4 m² in area, all the while still being able to be trafficked within 2 hours, having achieved 30 MPa strength. This speed of set also comes with a moisture content under 6% (by Tramex meter) in 3-4 hours, enabling most resin based surfacing materials to be safely applied with minimal risk of failure.

Patchroc 250 has proved to be a product which has many uses throughout the highways industry. This ability to not only reinstate within a few hours, but also in conjunction with other rapid return to service products, means that roads and concrete surfaces are not only accessible, but can be considered fully serviceable within a day.



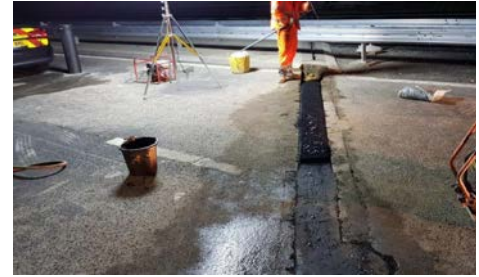


RR2S CASE STUDY

A404M CANNON LANE

THE PROJECT

Works included reconstruction of joint edges and repairing defective concrete in the bridge deck. This is a busy major route and there was a clear objective to get the works completed quickly in order to limit the closure of the road and minimise disruption to traffic.



THE SOLUTION

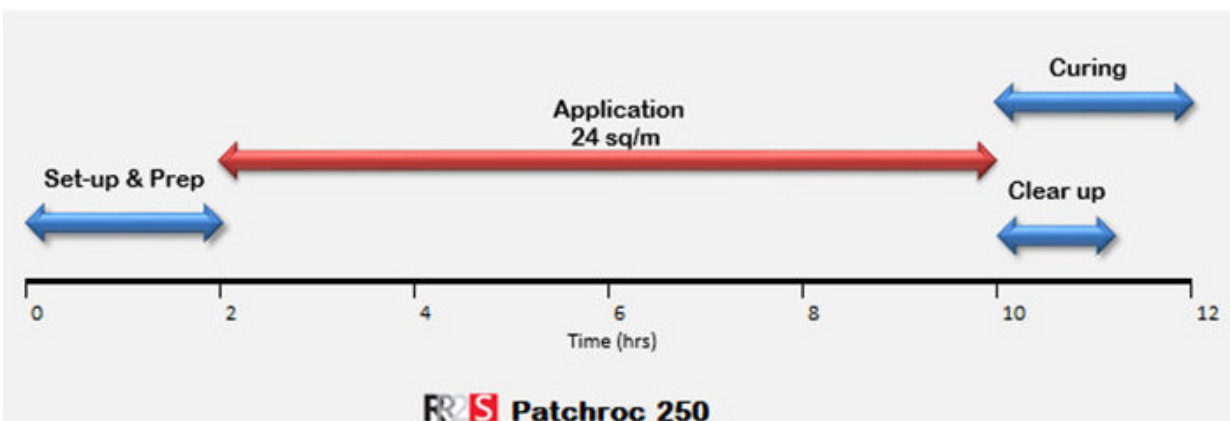
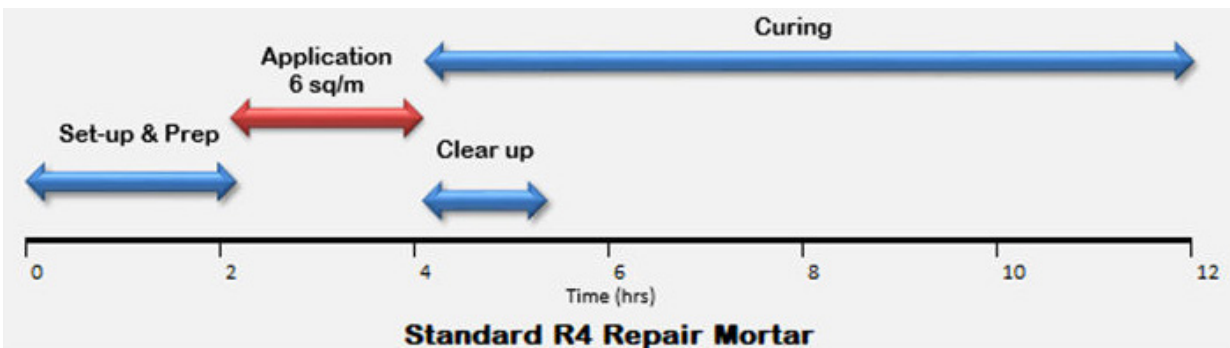
Detailed discussions were held to reach the most effective solution by selecting products which would enable the road to be returned to use as quickly as possible with Patchroc 250 was chosen as the repair solution.



THE BENEFITS

Speed of reinstatement and return to use was achieved using Patchroc 250 which complies with and exceeds the requirements of BS EN1504 and Highways England, providing reassurance in the quality of this repair system.

PATCHROC 250 - EFFICIENCY TIMELINE





THIOFLEX 555 JOINT SEALANT

- Machine grade (400L) – Ultra fast setting (30 min return to service)
- Hand Grade (5L) – Fast setting (4 hour return to service)
- Cold weather tolerant
- No change when tested for resistance to Hydrolysis – EN14188-2
- Zero drop in shore hardness
- Exceeds the EN test requirement



It is vital that the operational activity at a busy commercial airport is not compromised by infrastructure maintenance work. Fosroc has used its experience in fast cure joint sealants to formulate a new sealant which significantly raises the bar for both installation and service performance. Thioflex 555 enables many more metres of joint to be sealed and returned to service during the brief access period and also significantly increases the service life of the installed sealant.

Evidence of the service life performance is demonstrated by the class leading test results as determined by EN14188-2 Specification for Cold-Applied Joint Sealants to which the product has been extensively and thoroughly tested. An example of this is the Resistance to Hydrolysis test which subjects the sealant to a temperature 70°C and 100% humidity for 14 days replicating the hot humid environment found in tropical locations. Thioflex 555 achieved a zero drop in shore hardness (no loss of performance), which exceeds the EN test requirement. In contrast, a competitor polyurethane sealant (also promoted for use in the airfield sector) shown top left shows a complete breakdown to a sticky paste after only half the EN test duration. This enables Fosroc to confidently offer the product for application in all climates as the product can be pre-heated for installation in cold temperatures.

To achieve maximum productivity and a minimum cure period Thioflex 555 is usually machine applied. However, a smaller handy sized pack has been developed for smaller projects where a fuel resistant, high movement elastomeric sealant is required and a slightly longer cure period can be accommodated.



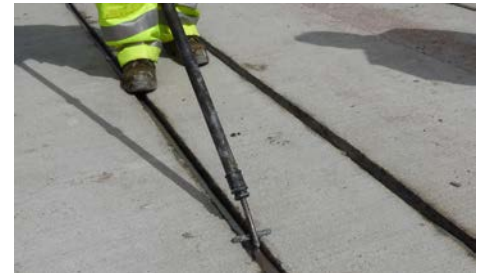


RR2S CASE STUDY

DUBLIN AIRPORT

THE PROJECT

At Dublin Airport there is a continuous programme of maintenance work on runways and aprons to repair the seals between large concrete slabs. In order to avoid disruption to flights a rapid solution was required. The client also sought a robust and long term solution to reduce the need to reinstate old movement joints.



THE PRODUCT

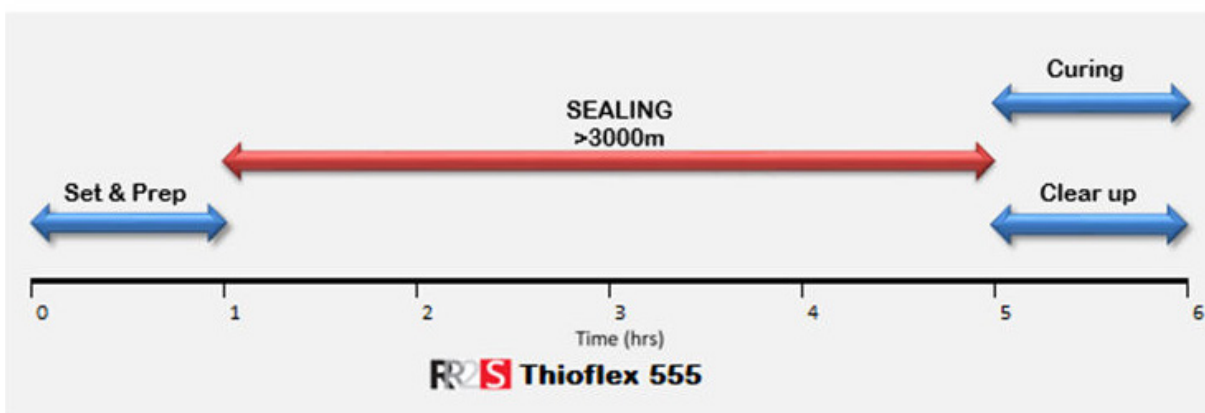
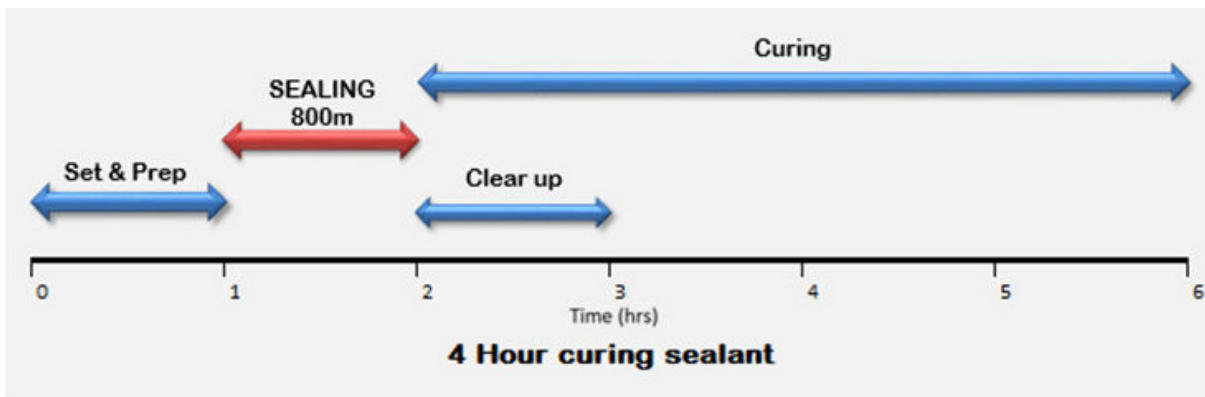
Fosroc proposed Thioflex 555 joint sealant, based on Fosroc's proven Polysulphide technology and track record. It delivers a rapid return to service and is fully compatible with Fosroc's joint filler boards and repair materials.

THE SOLUTION

The sealant which has CE certification to EN14188-2 and is also BS5212 certified, offers durable, long term performance, thus reducing maintenance costs.



THIOFLEX 555 - EFFICIENCY TIMELINE





NITODEK FS

- PMMA Resins are completely inert once cured
- Can be refurbished without need for removal
- Much reduced carbon-footprint compared with rival asphalt systems
- Solvent-free technology



THIOFLEX 555

- Far less packaging waste than gun applied systems (2 x reusable 200l drums = 1052 large plastic 380ml cartridges)
- Conforms to EN141882 Product will not degrade from hydrolysis with reduced risk of chemicals leaching into water courses.



PATCHROC 250

- Major projects supplied from 1 tonne bulk-bags, instead of 25kg bags
- Prolongs the life of structures which would otherwise need to be demolished and re-built



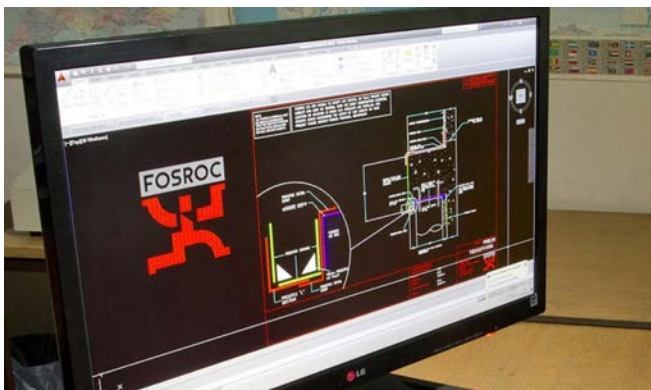
RENDEROC DSR

- Major projects supplied from 1 tonne bulk-bags, instead of 25kg units
- Class-leading low levels of rebound, meaning less product needs to go to landfill or entering water-courses
- Minimal dust during application

FOSROC TECHNICAL SUPPORT

TECHNICAL EXPERTISE

Fosroc is renowned for its technical support which is provided right from the early stages of a project, through to specification and installation of products. Benefiting from technical expertise in the UK and globally, Fosroc is able to provide bespoke solutions to meet clients' needs for both new build and refurbishment projects.



DESIGN/DETAILING CAD/BIM

Our CAD/BIM design centre is able to produce detailed drawings to assist at the design stage in developing the best solution for any project. This aids architects and specifiers in planning and ensures problems are highlighted and resolved before construction starts.

SPECIFICATION

Our experienced specification managers are familiar with construction techniques and pitfalls and are available to provide advice, enabling the smooth running of the project from start to finish. Correct specification is often critical and their knowledge across a range of products and applications, including protective coatings, concrete repair, waterproofing and sealants enables them to provide bespoke solutions saving time and cost.



QUALITY

Customers can be assured that Fosroc products meet all relevant performance standards being manufactured under quality management systems certified to ISO 9001 and the environmental standard 14001. Where relevant harmonised EU standards exist products are tested against the standard to achieve CE marking.



HELP DESK

Fosroc's Technical Help Desk is available to customers to help with any queries arising during construction projects. Their wealth of knowledge and experience enables our Technical Team to advise on effective solutions or resolutions to problems

ON SITE SUPPORT

Fosroc recognises that not all problems can be solved over the phone. With some of the most complex problems it is necessary to conduct a site visit to see the issue at first hand. While our Specification Managers can deal with most site problems, our Technical team can be called upon to provide additional support.

PARTNERSHIPS & SUPPORT

Fosroc can provide presentations, seminars and product demonstrations for our car park protection systems.

PRODUCT TRAINING

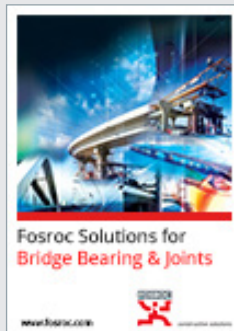
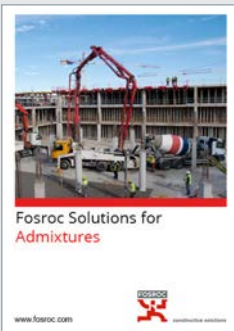
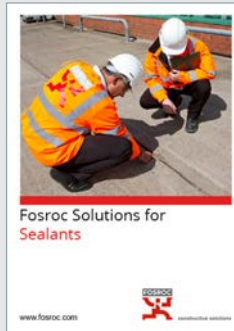
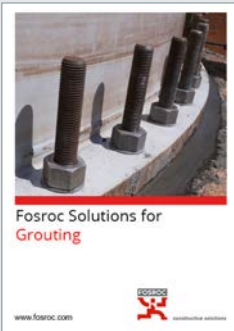
Knowledge and understanding of how products should be used and applied ensures errors are minimised, saving both time and money. Fosroc is able to offer product and application training to contractors to ensure the efficient and correct installation of products. Training can be conducted on site or if appropriate at the company's Tamworth Training Centre.

WARRANTIES

Where products have been correctly specified and applied in accordance with Fosroc application information, product warranties can be supplied.



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



Fosroc International Limited

Drayton Manor Business Park
Coleshill Road, Tamworth,
Staffordshire
B78 3XN

Tel: 01827 262222

enquiryuk@fosroc.com

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.



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