

www.fosroc.com

FOSROC



constructive solutions

FOSROC



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Fosroc Sealant Solutions High technology joint sealants



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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Welcome to Fosroc

■ Fosroc worldwide

Fosroc has over 70 years experience of supplying specialist chemicals to the construction industry.

 In 1991 Fosroc merged with Expandite, another successful chemical company, which was established in 1934. The two companies combined to become one of the largest suppliers of construction chemicals in the world.



Service support

■ CPD seminars

We can provide CPD approved seminars on:

- waterproofing below ground structures
- the new ISO11600 classification for joint sealants
- concrete repair, including the new EN1504 specification

Contact your local Fosroc office for further details on these informative 45 minute seminars, which demonstrate how our products meet construction industry requirements.



■ On site support

Internationally and locally, Fosroc has an enviable reputation for depth of expertise and quality of service. Our UK based Specification Managers and Area Sales Managers offer site visits where required to help solve problems, check applications and product performance.

Fosroc has gained a reputation for developing innovative products in sealants, waterproofing, concrete repair, grouts and anchors, concrete admixtures and coatings. By concentrating on innovation and customer service, Fosroc leads the way in specification selling into the construction chemicals market. For further information visit our interactive web site:

www.fosroc.com

Fosroc's wealth of experience is shared by our operations throughout the world, with group companies in 16 countries and exports to a further 50 other countries.

■ CAD

Fosroc's experienced CAD detailing centre can produce standard and non-standard technical drawings giving you peace of mind when designing your watertight structure.

■ Specification service

We offer direct assistance with specifications for individual projects; we can visit your site or office, arrange a meeting at our HQ in Staffordshire, or provide you with written specifications for Fosroc products, in NBS format.

■ Technical helpline

Fosroc's technical helpline is manned by an experienced team, committed to solving construction problems. Whatever technical enquiries you may have - from waterproofing design to health and safety issues - contact us for a fast and efficient service:

01827 262222
enquiryuk@fosroc.com

worldwide success



how can we help you?



Fosroc sealant solutions



Joint sealants are used in most types of structures - from housing, offices, stadia, industrial buildings and airports, to bridges, roads, power stations and reservoirs. They enable the relative movement of the structure's components and prevent the ingress of water, wind or chemicals and also fire transmission. With such a wide range of applications many factors have to be taken into consideration when specifying a sealant to provide an effective and durable solution, (as shown on page 8).

Fosroc's years of experience in sealant technology have led to the development of a wide range of products so we can offer you the best solution for your application, designed to meet the requirements of BS EN ISO11600. This world-wide standard classifies building construction sealants according to their performance characteristics such as movement accommodation, elasticity and modulus and is supported by:

BS 6093:2006 Code of practice for designing of joints and jointing in building construction
BS 6213:2000 Comprehensive advice on the selection of a sealant for a specific application.

Our technical staff can advise you on the appropriate choice of sealant, whatever the situation in line with these current standards, while our Joint Sealant CPD seminars can help you understand all aspects of good joint design and our NBS support saves you time.

Nitoseal MS Polymer Sealants

Fosroc has gone one step further to help make joint sealant specification easier by the introduction of our Nitoseal MS range of sealants.

Nitoseal MS60 – general purpose sealant,

Nitoseal MS100 – non-staining façade sealant,

Nitoseal MS300 – high quality floor sealant,

Nitoseal MS600 - civils sealant ideal for immersed conditions.

These premium construction sealants developed from MS polymer technology, not only have an established track record but provide a cost effective solution :

- Damp tolerant during application
- 1 part package
- Compatible with residual contamination from PU, PS and silicone
- Primerless adhesion for many applications
- Consistent gunnability across wide temperature range
- Excellent UV resistance
- Isocyanate free – environmentally friendly

Fosroc are members of the British Adhesives and Sealants Association (BASA)



complete range



Certificate number FM 610



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Building Sealants

Nitoseal MS100:

- High quality façade sealant
- One part product based on the MS polymer technology
- Primerless system - speeds up application
- Excellent damp tolerance
- Will not stain the substrate unlike silicones and polyurethanes which may leach plasticisers.
- Excellent UV resistance - increases life expectancy. 20 year life expectancy depending on application
- Environmentally friendly, non-toxic product - No problems with hazardous waste disposal
- Colour range - black, grey, white, portland, rustic red and buff
- Classified to BS EN ISO 11600-F-25LM
- Compatible with silicone, polysulphide and polyurethane - can be used for remedial work
- Movement accommodation factor 25%

Hilastic LM:

- One part, low modulus, silicone rubber sealant
- Elastic low modulus seal - extremely flexible
- Good adhesive properties to most substrates
- Neutral cure system
- High movement accommodation factor of 50%
- 20 year track record - used extensively around the World
- Colour range - black, brick red, brown, buff, dark grey, portland, white, grey

Silicone Sealant 33HM:

- One part, high modulus silicone rubber sealant for tiled surfaces and sanitary ware

Nitoseal MS60:

- One part product based on MS polymer technology
- Primerless in many applications
- Good damp tolerance
- Environmentally friendly non-toxic product. Isocyanate free
- Colour range - white, grey, black, magnolia, buff, portland, rustic red, brown, anthracite
- 25% movement accommodation factor

Fire Protection Sealants

Flamex Sealants:

- Available in one or two part
- Extensively fire tested in accordance with BS476;Pt.20:1987
- Fire tested in overhead joints as well as wall joints
- Flamex One and Two intumesce under fire conditions to form foam-like structure which provides barrier to hot gas and flame
- Flamex S is non-combustible in excess of 4 and 5 hours insulation and longer integrity rating depending on joint design
- Suitable for fire stopping of joints as defined by Approved Document B of the Building Regulations
- Prevents the passage of smoke through joints under fire conditions
- Performs as normal building sealant unless in contact with fire



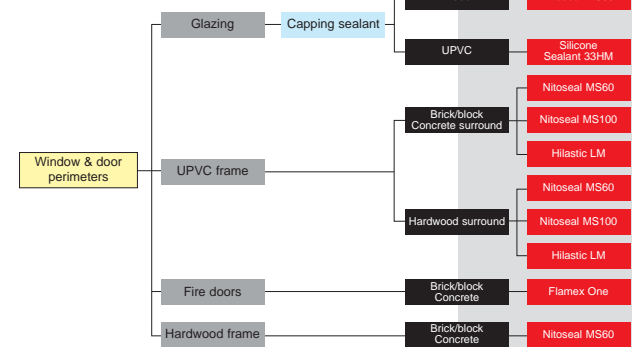
Typical Applications:

- Windows and doors
- Façade joints
- Sanitary ware
- Fire rated joints

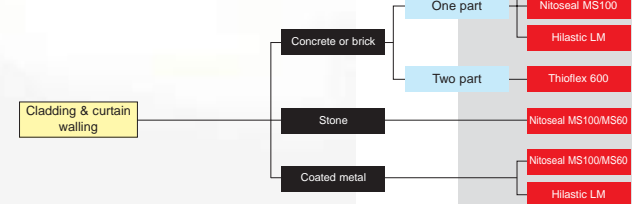
For assistance in choosing the right sealant contact the Fosroc UK Technical Department on **01827 262222**

Product Selector

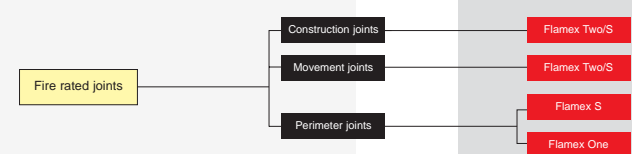
WINDOWS & DOORS



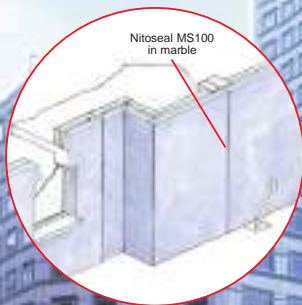
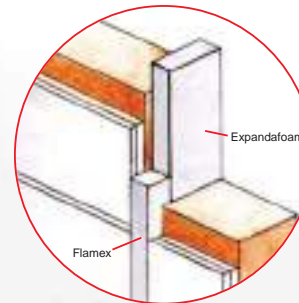
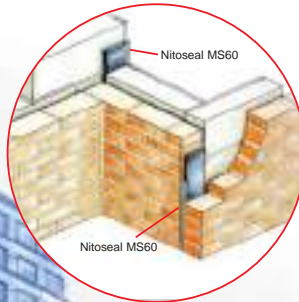
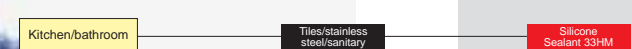
CLADDING & CURTAIN WALLING



FIRE RATED JOINTS



SANITARY



Civil Engineering Sealants

Nitoseal MS600:

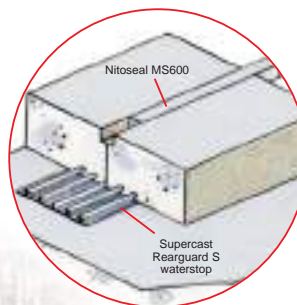
- One part product based on MS polymer technology
- BS EN ISO 11600 classified
- Cures to tough, elastic rubber seal
- Water Regulations Advisory Scheme approved for use in contact with potable water
- Resistant to aerobic and anaerobic bacterial attack in sewage and wastewater works
- 25% movement accommodation factor
- Used in reservoirs, sewage tanks, basements, bridges and superstructures.
- Highly versatile, including immersed joints
- Excellent adhesion

Nitoseal 12:

- Two part biodegradation resistant sealant
- Used in water retaining structures, sewage treatment works and sea defences
- Excellent adhesion under immersed conditions
- Accelerator available for rapid curing eg. in tidal areas

Thioflex 600:

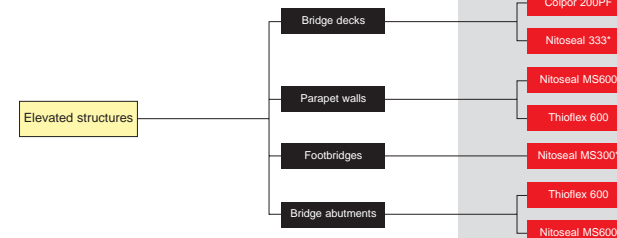
- Two part polysulphide sealant. Proven track record
- Cures to tough rubber like seal
- BS EN ISO11600 classified
- Available in gun and pouring grade
- Used in superstructures, floors, basements and subways
- 25% movement accommodation factor



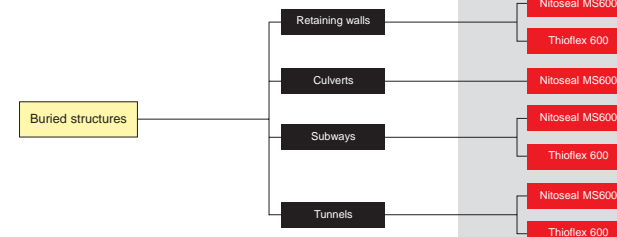
- Typical Applications:**
- Roads
 - Bridges
 - Reservoirs
 - Sewage treatment works
 - Sea walls
 - Below ground structures
- For assistance in choosing the right sealant contact the Fosroc UK Technical Department on **01827 262222**

Product Selector

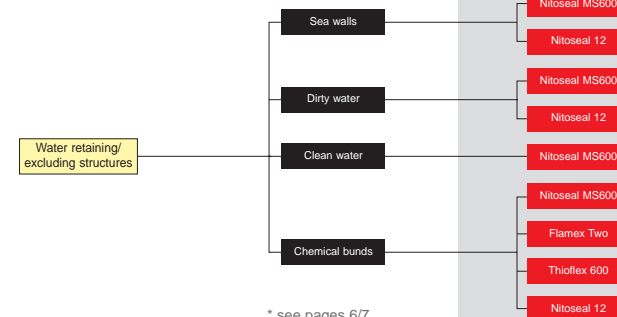
ELEVATED STRUCTURES



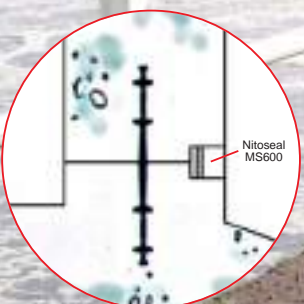
BURIED STRUCTURES



WATER RETAINING / EXCLUDING STRUCTURES



* see pages 6/7



Pavement/Floor Sealants

Colpor 200PF:

- A market leader in pavement joint sealants around the world
- Cold applied, pitch free, high performance pavement joint sealant
- Resistant to fuel and oil spillage in areas such as aircraft fuelling areas, oil terminals, garage forecourts, parking and cargo areas
- Can be trafficked after 16 hours
- 25% movement accommodation factor
- Conforms to BS EN 14188:2004, CE marked

Nitoseal 333:

- Hot poured N1 polymer modified bitumen sealant
- Complies with the Department of Transport Specification for Highway Works clauses 1016 and 1017
- Resists dirt and ingress of grit associated with trafficked pavements
- Excellent adhesion to both concrete and asphalt
- Complies to BS2499:1993 Type N1
- 25% movement accommodation factor in butt joints

Nitoseal 555 & 888:

- Machine applied, high performance, elastomeric joint pavement sealants
 - Fuel and oil resistant
 - High durability and long life service
- ## Nitoseal 878:
- Pourable, high performance, elastomeric joint sealant
 - Fuel and oil resistant
 - Suitable for joint maintenance

Nitoseal MS300:

- One part high quality floor sealant
- Tough yet flexible - shore A 45
- Can uniquely be used in sawn joints as well as perimeter joints
- Excellent damp tolerance - joints do not need to be 100% dry prior to application
- Available in grey
- Primerless system in many applications - speeds up application
- Resistant to occasional chemical spillage
- Good adhesion to silicone/PU/polysulphide contaminant. Ideal for re-sealing applications
- 25% movement accommodation factor
- Used in stadia in conjunction with Flamex S to provide a trafficked, fire rated joint

Expoflex 800:

- Tough epoxy polyurethane sealant for heavy trafficked floor joints in factories and warehouses

Pliastic N2 & 77:

- Hot poured rubber bitumen horizontal joint sealants for joints in water retaining and excluding structures, pavements and slabs where there is low movement



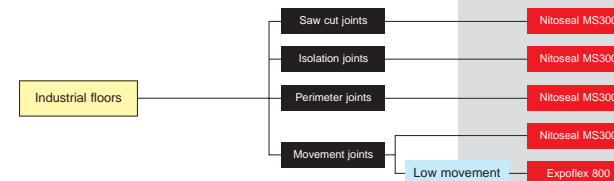
Typical Applications:

- Airfield hardstandings
- Warehouse floors
- Factory floors
- Shopping centres

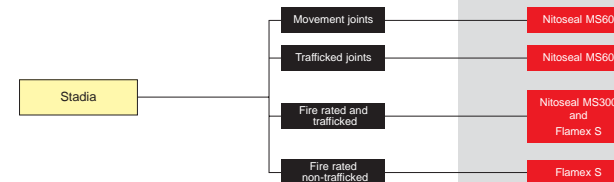
For assistance in choosing the right sealant contact the Fosroc UK Technical Department on **01827 262222**

Product Selector

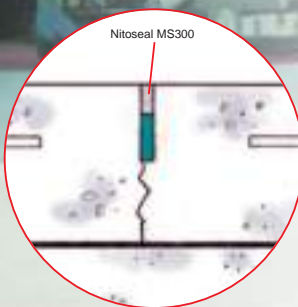
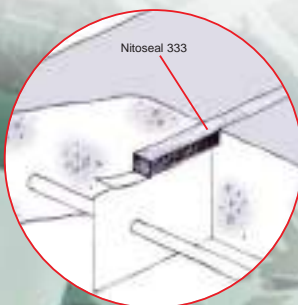
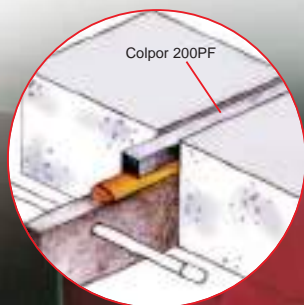
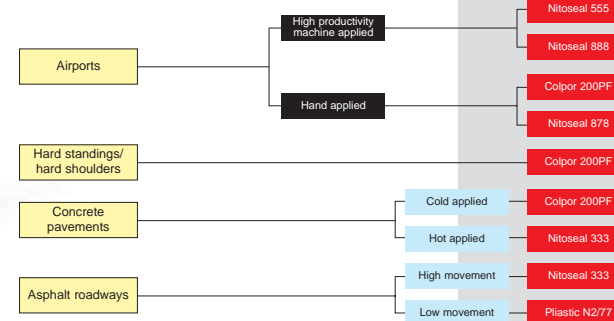
INDUSTRIAL FLOORS



STADIA



PAVEMENTS

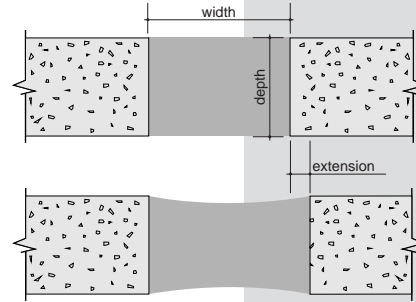


Design Considerations

There are 2 main factors to take into account when selecting a joint sealant:

1. Width / Depth ratio

Generally the accepted width:depth ratio for a good joint sealant performance will fall between 1:1 and 2:1. 2:1 is the optimum to aim for with façade joints 1:1 is for trafficked/hydrostatic joints



2. Movement Accommodation Factor

The MAF is the most important sealant property when specifying a sealant: it allows the joint dimensions to be calculated.

The Movement Accommodation Factor (MAF) is the total movement range between the maximum compression and the maximum extension that the sealant will accommodate. MAF is expressed as a percentage of the minimum design joint width.

A sealant with a 25% MAF in a 20mm wide joint will have a total movement capacity of 5mm.



Summary of movement calculations

In order to ensure the correct choice of sealant, a designer must do the following calculations:

Calculate maximum potential movement in the structure from all sources.

Decide the location of movement joints.

Calculate maximum movement at each joint.

Select a possible sealant and from its MAF calculate minimum theoretical joint width.

If the joint is too wide reconsider sealants with a higher MAF or relocate joints closer together.

Other considerations

Other factors that need to be considered:

Will staining be a problem?

Will the sealant be immersed in water?

Are joints to be fire-rated?

What is the sealant's environment - ie UV exposure, fuel/chemical contact, trafficked?

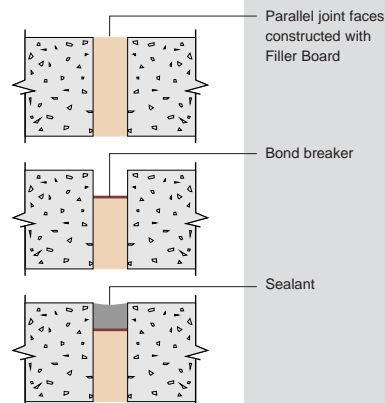
Joint configuration

Joint faces should be parallel

Sealant should not be allowed to bond to the base.

External pavement joints should be recessed 2-3mm.

Warehouse and non-trafficked joints should be sealed flush.



Joint Fillers

Expandafoam:

- Low density closed cell polyethylene joint filler, backup strips and cord
- Low load transfer
- Used in bridge decks, abutments, pier hinge joints
- Also for brick and blockwork in building superstructures

Hydrocell XL:

- Medium density cross linked, non-absorbent, closed-cell polyethylene joint filler
- DTP Specification for Highway Works
- No bond breaker required between Hydrocell and sealant - one less process.
- Low load transfer - will not set up stresses in surrounding substrate
- Rot proof, non-tainting - will not disintegrate over time
- Will not extrude under compression
- Excellent support for sealants subject to hydrostatic pressure
- Recommended for water retaining/excluding structures

Fosroc Fibreboard:

- Easy to handle, cut and tamp
- Resilient
- Will not extrude under compression
- 40+ year track record
- Suitable for forming joints between in-situ and pre-cast concrete components

low load transfer



up-to-date technical information

Contact Fosroc...

All the products featured in this brochure are available either direct from Fosroc or from one of our specialist construction chemical distributors.

Our full product range also includes :

- Concrete repair mortars
- Protective coatings
- Waterstops – hydrophilic and PVC
- Waterproofing membranes
- Grouts and anchors
- Concrete admixtures

If you require further information on any of our products, please contact us:

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Alternatively, up-to-date technical information is available on our website at:

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