

(Previously known as Emer-Seal Roadseal®)

High performance, low modulus, high joint movement accommodation, one component silicone rubber joint sealant

Uses

Sealing joints in:

- Concrete roads & pavements
- Bridge decks and car parks
- Aircraft runways and aprons

Advantages

- Ready to use - No mixing required
- Fast rate of cure
- Excellent adhesion to clean dry concrete
- Excellent weathering - UV and ozone resistant
- Dispensed from a bulk container by air powered pump
- Large joint movement accommodation

Description

Nitoseal SC800 is a one-part, gun applied, silicone rubber joint sealant utilising Roadseal® technology, designed to effectively seal joints in concrete roads, runways, carparks and pavements. The low modulus characteristics of Nitoseal SC800 allow it to accommodate cyclic joint movements of plus 100% and minus 50%.

Standards Compliance

Complies to ASTM D5893 Type NS

*Independent test report is available from the Fosroc website.

NSW RMS Bridge Decks QA Spec. B312 Ed 4/Rev 0& RMS D&C B312 -Ed 1 /Rev 2

- Type GN - Accepted for use
- Type GT - Meets performance requirements (except hardness)

NSW RMS Rigid Pavements Spec R83.4 Ed 3/Rev 0 (Section 2.9)

- Accepted for use

Properties

Property test	ASTM D5893 requirement*	Test result
Form:	n/a	Non slump, thixotropic paste
Colour:	n/a	Concrete Grey
Density (ASTM D1475):	n/a	1.355 g/ml
Slump rheology (ASTM D2202):	<8mm	Pass 0mm
Flow (ASTM D5893 (9.8)):	No flow @ 72 hours @93°C	Pass zero flow
Hardness (ASTM C661):	<25 ; Durometer A-2 @ -29°C >30 ; Durometer Type OO @23°C	Pass 24 Pass 83
Extrusion rate (ASTM C1183):	>20 mL/m	Pass 87.5 mL/m
Tooling time:	n/a	20 minutes @ 23°C
Tack free time (ASTM C679):	No transfer at 5 hours	Pass (45 - 60 minutes @ 23°C)
Cure rate @ 25°C /65% RH:	n/a	3mm in 24h, then 1mm / day after
Heat aging (ASTM C792):	<10% loss	Pass 0.4% No cracking or chalking
Bond to mortar (ASTM D5893(9.6):	Non-immersed Water immersed Oven aged	No cracking, separation or other opening No cracking, separation or other opening No cracking, separation or other opening
Ultimate Elongation (ASTM D412):	>600%	753%
Tensile stress @ 150% (ASTM D412):	<0.31 MPa	0.30 MPa
Resilience (ASTM D5893 (9.11)):	>75%	Pass 98% average
Accelerated weathering (ASTM C793):	5000 hours	Pass
Service temperature range:	n/a	-50°C to +150°C
VOC content:	n/a	52g / litre

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Chemical resistance

Nitoseal SC800 is resistant to dilute acids and alkalis. Not resistant to organic solvents.

Nitoseal SC800 is resistant to occasional spillage of Skydrol and Jet Fuel.

Contact Fosroc for specific chemical resistance advice.

Design Criteria

Nitoseal SC800 is designed for sealing movement joints between 10mm and 35mm wide however joints down to 5mm and up to 50mm wide can be sealed under suitable conditions.

The movement accommodation factor (MAF) of a joint sealant must be considered in the design width and spacing of movement joints in a structure.

The sealant Width to Depth ratio should be kept at a minimum depth of 7mm for joints <10mm wide; 10mm for joint widths between 10mm and 20mm and 2:1 for joint widths greater than 20mm.

The sealant should be applied and tooled so that the sealant surface is 3 to 5mm below the pavement surface.

For further details contact Fosroc for specific advice.

Application Instructions

Joint preparation

All concrete to which Nitoseal SC800 is to be applied must be a minimum of 14 days old. All joint surfaces must be clean, dry and free from any concrete slurry, oil, dirt or loose material, form release or curing compounds.

Saw cut joints must be thoroughly cleaned of all concrete slurry by a high pressure water wash, followed by drying with high pressure compressed air. After air blasting the surface water away, the joints must be allowed to dry normally for an additional 16 hours. Where atmospheric conditions are not conducive to good drying e.g. low temperatures, high humidity or rain; Primer 10 or Primer 13 should be used.

Where previously sealed joints are to be re-sealed, mechanically remove all of the existing sealant prior to saw cutting the joint. Care should be taken not to melt residual asphaltic sealant and spread it onto the joint faces with the hot saw blade.

Before application of the Nitoseal SC800 remove any wind blown debris from the joints with a blast of dry, oil free, compressed air.

A closed cell polyethylene backer rod or bond breaker tape must be installed into the joint before sealant application. When placing the backer rod allow for a 5 mm set down of the sealant from the pavement surface.

Priming

Priming is not normally required provided the joint faces are clean and free from any trace of laitance and surface contamination.

Primer 10 is recommended on concrete and masonry surfaces to achieve the best possible adhesion.

Primer 13 must be used in applications where Nitoseal SC800 is to be subjected to permanent water immersion.

A primer must be used if the sealant is to be submersed for long periods, such as joints in a flood crossing or where fuel or chemical spillage may occur.

Application

Nitoseal SC800 should only be applied to prepared joints when the ambient temperature is 5°C or above. The maximum application temperature is 35°C.

Nitoseal SC800 is applied from 600ml sausages or bulk containers into the joints using a suitable sealant gun. On larger projects, an air assisted gun and pump may be used allowing faster application. Within 10 minutes after application, the sealant must be tooled in order to improve contact with the joint faces, and to lower the sealant surface to a level about 5 mm below the pavement surface. Tooling is essential to force the sealant to make good contact with the joint faces and achieve good adhesion.

Equipment

Complete high volume application units include an air powered pump, follower plate, hose, gun, and applicator nozzle. The extrusion pumps are available with various output capacities. The hoses and connections must not allow moisture penetration. Teflon lined hoses are recommended because of their low moisture permeability. It should be noted that the rate of sealant delivery is affected by air pressure, hose length, hose diameter and nozzle diameter.

Clean up

Equipment may be cleaned of uncured sealant by wiping, or soaking and wiping with Fosroc Solvent 10. Any sealant allowed to cure becomes very difficult to remove and can only be removed using Fosroc Solvent 10 in combination with steel wool.

Limitations

Elastomeric sealants such as Nitoseal SC800 should not be applied in close proximity to bituminous materials as these may contain components which can migrate into the sealant and result in staining, reduced performance or a loss of adhesion.

Joints in asphalt roads should only be sealed with Nitoseal SC820, an ultra-low modulus version of Nitoseal SC800 designed for sealing sawn joints in asphalt pavements and abutment joints between concrete and asphalt.

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Where asphalt is to be applied over the concrete pavement containing the Nitoseal SC800, a non-adhesive bond breaker tape must be applied over the sealant surface to prevent direct contact with the asphalt and to prevent the asphalt bonding to the sealant surface.

Being a relatively soft material, it is recommended that when used for wide horizontal joints, Nitoseal SC800 be protected with cover plates to prevent mechanical damage.

Supply

Nitoseal SC800 is supplied in 600ml sausages in cartons of 12; 20 litre and 200 litres drums.

Nitoseal SC800:	600ml sausage:	FC920130-600ML
	20 Ltr drum (MTO):	FC920130-20L
	200 litre drum:	FC920130-200L
Primer 10:	250ml can:	FC965214-250ML
Primer 13 (250ml pack):	Base:	FC965229-125ML
	Hardener:	FC965230-125ML
Primer 13 (1 litre pack MTO):	Base:	FC965229-500ML
	Hardener:	FC965230-500ML
Fosroc Solvent 10:	4 litre:	FC600800-4L
	20 litre:	FC600800-20L

Coverage

Each 600ml sausage will seal approximately 6 metres of joint with a 10mm wide by 10mm deep sealant bead.

Each 20 litre drum will seal approximately 200 metres of joint with a 10mm wide by 10mm deep sealant bead.

Storage

Shelf life is 3 years when kept in its original, un-opened packaging and stored in dry conditions between +10°C and 25°C with 55% relative humidity, away from direct sunlight and moisture.

Important notice

A Safety Data Sheet (SDS) is available from the Fosroc website. Read the SDS and TDS carefully prior to use as application or performance data may change from time to time. In emergency, contact any Poisons Information Centre (phone 13 11 26 within Australia) or a doctor for advice.

Product disclaimer

This Technical Data Sheet (TDS) summarises our best knowledge of the product, including how to use and apply the product based on the information available at the time. You should read this TDS carefully and consider the information in the context of how the product will be used, including in conjunction with any other product and the type of surfaces to, and the manner in which, the product will be applied. Our responsibility for products sold is subject to our standard terms and conditions of sale. Parchem does not accept any liability either directly or indirectly for any losses suffered in connection with the use or application of the product whether or not in accordance with any advice, specification, recommendation or information given by it.



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