Fosroc® Nitoseal MS300

constructive solutions

One part, floor and pavement joint sealant

Uses

Nitoseal MS300 is suitable for sealing saw-cut and movement joints in internal floors, and external joints where abrasion resistance is required. It can also be used for external facade joints where a tougher seal is required.

- Factory floors
- Sports stadia terracing
- Shopping centres
- Warehouse and distribution depots
- Concrete hardstanding areas
- Prisons

Advantages

- Suitable for forklift truck traffic
- Suitable for saw cut and perimeter joints
- Abrasion resistant
- Withstands vehicular traffic
- Single component
- Fast rate of cure
- Easy to apply at low temperature
- Can be applied to damp substrates
- Primer-less for most applications (see “Priming” section)
- Hard, but flexible sealant; resists picking and vandalism

Description

Nitoseal MS300 is a one part, high modulus sealant based on hybrid silyl modified polyether technology. It has a rapid rate of cure and forms a tough elastomer capable of supporting heavy wheel loads.

Nitoseal MS300 may be applied between 6mm and 20mm wide, for internal trafficked flush joints and up to 40mm wide, for non-trafficked / recessed trafficked joints. In most cases it is recommended to form a sealing slot with a square cross-section, subject to a minimum 10mm depth. To ensure the sealant operates within its stated movement accommodation capacity the sealing slot widths should be designed in accordance with the recommendations of BS6093.

Standard compliance

ISO11600 Type F 25HM: Classification of sealants for building construction

ASTM C920 Type S, Grade NS, Class 25

ASTM D2203-93: Standard test method for staining

BSEN 140-3:1995: Acoustics measurement of sound insulation in buildings

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Fosroc® Nitoseal MS300

EN 14188:2:2004
Sealants for concrete pavements

Extrudability @ 23°C and 5°C	> 70ml/min.
Full immersion cure	14 days
Tack free time	2-3 hours
Resistance to flow at 50°C & 5°C	≤ 2mm
Change in volume	≤ 5%
Resistance to hydrolysis	Shore A ≤ ± 50%
Resistance to flame	No flow, cracking, flaking, hardening, ignition
Adhesion/Cohesion properties at variable temperatures	No failure
Tensile properties at maintained extension	No failure at 23°C and -20°C
Elastic recovery	≥70 %
Artificial weathering by UV irradiation	≤ ±20%

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Properties

Nitoseal MS300

Form	Paste
Flash point	>65ºC
Colour (special colours available on request)	Grey
Movement accommodation factor	Butt joints 25% Lap joints 50%
Skinning time	up to 2 hours depending on ambient conditions
E-Modulus (ISO 8339)	>0.8N/mm^2
Cure rate at 20ºC, 50% RH 24 hours 48 hours 72 hours	 3 mm 6 mm 8 mm
Application temperature	5ºC to 50ºC
Typical hardness Shore “A” at 20ºC	 45
Trafficking time at 20ºC Light traffic Heavy traffic	 24 hours 4 days
Modulus	High
UV resistance	Excellent
Service temperature range	-20ºC to 70ºC
LEED EQc4.1 SCAQMD Rule 1168 BAAQMD Reg 8 Rule 51	Passes

Application instructions

Preparation

Joints in concrete should preferably be sawn. After sawing all saw slurry must be flushed away and the joint allowed to dry.

When resealing the existing sealant should be removed from the joint and the arris cleaned back to sound clean concrete. Remove all debris. The joint surfaces must be dry, clean and frost free. Remove all contaminants by rigorous wire brushing, grinding or grit blasting.

Any expansion joint filler must be checked to ensure it is tightly packed and no gaps or voids exist at the base of the sealing slot before positioning a bond breaker.

Note: The use of a bond breaker is not required in expansion joints containing Hydrocell XL cellular polyethylene expansion joint filler. For construction or contraction joints a bond breaker tape or back-up strip should be used.

Where a particularly neat finish is required, mask the face edges of the joint before priming/sealing and remove immediately after tooling is completed.

Priming

Fosroc Primer MS2 is required for joints that are to be intermittently or permanently immersed, or where the substrate is likely to be saturated (for example, externally).

When using a primer, empty the entire contents of the hardener tin into the base tin and replace the base tin lid. Mix thoroughly by shaking for at least 2 minutes. Prime the joint face using a clean, dry brush. Avoid over application of primer causing puddles in the bottom of the joint.

Nitoseal MS300 should be applied between 30 minutes and 4 hours after priming.

If a joint is left unsealed for more than 4 hours, the primer should be removed by grit blasting or grinding and the joint re-primed.

Do not split packs of Fosroc Primer MS2.

Application and finishing

Cut end off sachet and place in Fosroc GX Gun. Fit nozzle and cut at 45º to a suitable size. Extrude the sealant firmly into the joint. Tool to the required finish (flush or recessed) within 5 minutes of application to ensure good contact between the sealant and the substrate.

Cleaning

Clean tools immediately after use with Fosroc Equipment Cleaner.

Estimating

Guide to sealant and primer quantities

Joint size in mm	Litre per metre run	Metre per 600ml sachet
6 x 10	0.06	10.00
12 x 12	0.144	4.17
20 x 20	0.40	1.50
25 x 20	0.50	1.20
30 x 20	0.60	1.00
40 x 25	1.00	0.60

Guide to Nitoseal MS2 Primer coverage

Linear metres per pack of primer	
Joint depth mm	**Nitoseal MS2 Primer 0.75 litre pack**
10	500 - 600
15	333 - 400
20	250 - 300
25	200 - 240
30	166 - 200
40	125 - 150
50	100 - 120

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Packaging

Nitoseal MS300 - 600 ml sachets. 10 no. sachets per box.
Fosroc Primer MS2 – 0.75 litre packs

Limitations

- Do not apply at temperatures below 5°C.
- Not suitable for contact with bituminous materials.
- Whilst Nitoseal MS 300 has excellent adhesion to many types of residual sealant its use should not be considered a substitute for a good standard of joint preparation.
- In large joints ensure sealant is sufficiently cured before trafficking. In 40 mm joints this could be up to 10 days.
- Flush finished joints should not be used in locations where significant thermal movement may occur during service (e.g. external locations, particularly areas subject to direct sunlight) as this can result in the sealant bulging above the joint surface when the joints contract.

Storage

Shelf life of 12 months if kept in a dry store at 10 – 20°C in original unopened packaging. If stored at high temperatures and / or high humidity, the shelf life may be significantly reduced.

Precautions

Health and safety

Nitoseal MS300: This product is non-hazardous in normal use. For further infromation refer to appropriate Product Safety Data Sheet.

Fosroc Primer MS2 is highly flammable, see Product Safety Data Sheet for details.

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