Nitoseal® MS600

constructive solutions

One part, civil engineering sealant for immersed conditions

Uses

Nitoseal MS600 is suitable for sealing movement joints in buildings and civil engineering structures including joints that will be subject to intermittent or permanent immersion.

Typical applications include:

- Reservoirs
- Sewage tanks
- Sea walls
- Basements
- Subways
- Parapets
- Bridges
- Superstructures
- Swimming pools

Advantages

- Approved for use in contact with potable water
- Meets key international standards
- Resistant to aerobic and anaerobic bacteriological attack
- Exhibits excellent water resistance
- Excellent resistance to dilute acids and alkalis
- Cures to a tough, elastic rubber seal
- Accommodates continuous and pronounced cyclic movement
- High resistance to ageing, reduces physical damage due to climatic extremes
- Single component yet fast rate of cure
- Can be applied to damp substrates
- Isocyanate free technology

Description

Nitoseal MS600 is a one part medium modulus sealant based on hybrid silyl modified polyether technology. It has a fast rate of cure and forms a tough, highly durable and water resistant elastomer. Conforms to the DWI Water Quality Regulations 25(1)(b) for products having a small surface area in contact with water for public supply.

Properties

Form	:	Smooth, non-slumping paste
Solids content	:	100%
Colour	:	Grey, Portland stone For other colours contact Fosroc for further Information
MAF (Movement	:	25% butt joints 50% lap joints
Skinning time at 20 C / 50% RH	:	30 minutes
Cure rate at 20 C / 50% RH	:	24 hours: 3mm 48 hours: 6mm 72 hours: 8mm
Application Temperature	:	5°C to 50°C
Service temperature	:	Dry : –30°C to +80°C Wet: up to 60°C
Hardness shore'A' (@ 20°C)	:	32
Chemical resistance	:	Resistant to occasional spillage many chemicals.
Biological resistance	:	Nitoseal MS600 has been evaluated in microbiologically active situations and has been shown to have resistance to aerobic and anaerobic conditions
UV resistance	:	Excellent

Nitoseal® MS600

Standards compliance

Nitoseal MS600 is approved for use in contact with potable water and meets the requirements of BS6920.

Conforms with the performance criteria of BS4254 (1991) and ASTM C920-94:type S, grade NS, Class 25 and ASTM C793 after accelerated weathering.

Nitoseal MS a name you'll want to stick with.

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Design criteria

Nitoseal MS600 should be applied to joints between 5 and 35mm wide. Joints which are expected to experience cyclic movements should be designed to an optimum width : depth ratio of 2:1, subject to the overriding recommended minimum sealant depths set out below: 5mm for metals, glass and other non-porous surfaces; 8mm for all porous surfaces; 20mm for joints subject to hydrostatic pressure.

To ensure that the sealant remains within its stated movement capacity (25% MAF), sealing slot widths should be designed in accordance with the recommendations of BS 6093.1993. The Movement Accommodation Factor is a figure quoted indicating the ability of a sealant to accommodate joint movement throughout the service life of that sealant, expressed as a percentage of the joint width at time of sealing.

To calculate the theoretical minimum joint width knowing the expected maximum working movement of the joint:

$$W = \frac{M}{MAF/100} + M$$

W = Joint width
M = Expected maximum working movement of joint
MAF = Movement Accommodation Factor of that sealant

Instructions to use

Preparation

Joint surfaces must be clean, dry and free from frost. Remove all dirt, laitance, loose material and foreign matter. Remove all rust, scale and protective lacquers from metal surfaces. Removal can be achieved by rigorous wire brushing, grinding or grit blasting.

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. All debris should be removed.

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.

The use of a bond breaker is not required in expansion joints containing cellular polyethylene joint filler such as Hydrocell XL or Expandafoam. 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 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 satuated.

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.

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Nitoseal MS600 should be applied between 30 minutes and 2 hours after priming.

If a joint is left unsealed for more than 2 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 the end off the sachet and place in the Fosroc GX gun. Fit the nozzle and cut at 45 degrees at a suitable size for sealing the joint.

Extrude the sealant firmly in to the joint. Tool flush 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. Clean hands with a proprietary hand cleaner.

Limitations

- Should not be applied at temperatures below 5°C
- Not suitable for contact with bituminous materials
- Not suitable for contact with solvents, oil or petrol
- Whilst Nitoseal MS600 has excellent adhesion to many types of residual sealant, its use should not be considered a substitute for a good standard of joint preparation
- Should be fully cured prior to immersion.

Estimating

Supply

Nitoseal MS600	:	10 no x 600ml sachets per box
Fosroc Primer MS2	:	200 ml packs

Guide to quantities

Joint size	Litres per metre run	Metre run per 600 ml sachet
6 x 10	0.06	10.00
12 x 10	0.12	5.00
20 x 20	0.40	1.50
25 x 12	0.30	2.00
30 x 15	0.45	1.33

0.2 litres of Fosroc Primer MS2 will be sufficient for 25m of joint. No allowance has been made for joint size or wastage.

Precautions

Health and safety

Nitoseal MS600 is considered safe in normal use. However, as with any material, good hygiene practices should be followed i.e. keep out of eyes, do not consume, keep away from children and pets and wash hands thoroughly after use.

Storage

Shelf life 12 months.

Storage conditions

Store in original packaging in cool, dry conditions. Storage outside of these conditions may reduce shelf life.

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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