New Guard Coatings Group

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Fosroc® Nitoseal MBN2 & MB77 formerly Pliastic N2 & Pliastic 77

constructive solutions

Hot-poured rubber bitumen horizontal joint sealant

Uses

For sealing movement and construction joints in pavements, floor slabs, water retaining and water excluding structures

Advantages

- An economic sealant for horizontal and inclined joints up to 1 in 20
- Resists dirt and ingress of grit associated with trafficked pavements
- Good adhesion to concrete and asphalt surfaces

Standards compliance

BS 2499 : 1993 — Nitoseal MBN2.

Description

Nitoseal hot-pour sealants are available in a choice of two grades:

Nitoseal MBN2

Complies with BS 2499 : 1993. A low extension grade for sealing joints in concrete pavements, etc.

Nitoseal MB77

A hard grade for sealing low movement joints in factory floors and areas where joints are closely spaced and resistance to grit and traffic is of prime importance.

Design criteria

Joint size

Nitoseal hot-pour compounds are suitable for joints up to 30 mm wide in trafficked surfaces, but joints up to 65 mm wide can be sealed with Nitoseal hot-pour where the joints are horizontal and are not subject to trafficking. The depth of Nitoseal hot-pour compounds should not exceed 50 mm and for most normal uses, 25 mm is recommended.

Nitoseal hot-pour can be used on inclined surfaces up to about 1 in 20. Extra care must be taken, however, when pouring. Vertical joints e.g. kerbs, upstands, etc, should be sealed with Nitoseal MB150.

Road and traffic surfaces

When sealing joints in reinforced and unreinforced concrete roads and airfield runways ensure the joint is recessed 3 to 5 mm below the traffic surface.

Water retaining structures

When sealing joints in water retaining structures all immersed joints should contain waterstops. All roof joints should also include a supplementary means of sealing.

Water excluding structures

All joints which extend below the high water table level should contain a waterstop in addition to the Nitoseal hot-pour seal.

Services and internal finishes

Nitoseal MB77 is suitable for sealing joints in factory floors other than those subjected to petrol, oils or fats. Nitoseal hot-pour softens when heated and should not be used in floors with under-floor heating or in areas where it would be subjected to heat from factory plant or steam cleaning operations.

Ensure the joint is recessed 3 to 5 mm below the traffic surface.

Properties

Form:	Plastic solid	
Flash point:	Over 65°C	
Solids contents:	100%	
Density:	1.02 kg/litre	
Colour:	Black	
Application temperature:	Over 5°C	
Product pouring temperature range:	Nitoseal MBN2: Nitoseal MB77:	175°C to 185°C 180°C to 190°C
Safe heating temperature:	Nitoseal MBN2: Nitoseal MB77:	190°C 195°C
Chemical resistance to occasional spillage:	Dilute acids: resistant Dilute alkalis: Petroleum solvents: Mineral oils: Vegetable oils: Greases:	 resistant not resistant not resistant not resistant not resistant
Movement accommodation factor:	Total joint range, butt joints: Nitoseal MBN2: Nitoseal MB77:	 12% 10%

Maintenance

No special requirement, damage should be repaired if and when it occurs.

Application instructions

Joint preparation

Ensure that the joint surfaces are completely dry, clean and frost free. Remove all contamination preferably by grit blasting or by rigorous wire brushing.

Immediately prior to priming blow out all remaining loose dust with dry, oil-free compressed air.

Where applicable, care must be taken to ensure that compressible filler, such as Fosroc Fibreboard, will provide adequate support for the Nitoseal hot-pour compound.

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Priming porous surfaces

Use Fosroc Primer B2 on concrete, stone and brick paving. Allow primer to become touch dry before sealing, normally 1 to 4 hours.

Priming non-porous surfaces

Metal surfaces do not require priming but should be warmed to ensure satisfactory adhesion. Ferrous metals should be treated with an anti-corrosion primer.

Stripping of sacks

Lay sack on flat surface and cut bottom seam with a sharp knife. Tear away outer layers and then strip off inner layer of paper, working from the bottom of the sack. No paper should be put into the heater. The inner polythene layer cannot be removed and is included with the compound.

Heating

The use of a heating vessel with an oil jacket and fitted with stirrer and thermometer is essential.

Cut the compound into small pieces, melt a few pieces then gradually add more pieces to the molten material, stirring continuously. Heat until the compound reaches correct pouring temperature.

Pouring temperatures:
Nitoseal MBN2: 175°C to 185°C.
Nitoseal MB77: 180°C to 190°C.

Do not overheat. Use as soon as possible after heating, preferably within 2 hours.

Safe heating temperatures:
Nitoseal MBN2: 190°C.
Nitoseal MB77: 195°C.

Caution: Heating of compound should be carried out in well ventilated areas.

Extra care should be taken in cold weather. The cold surfaces of the joints may cause rapid chilling of the compound. To help compensate for this, the compound should be poured at the top limit of the pouring temperature range. Frost may give concrete a deceptively dry appearance.

Compound which has been heated and then allowed to cool below 95°C must be scrapped. It must not be remelted for use. In expansion joints, Nitoseal hot-pour should be poured to a level 3 to 5 mm below the traffic surface to allow for upward displacement when the joints close.

Note: For small jobs, Nitoseal MB77 may be used with a small, directly heated vessel, but great care must be taken to avoid over-heating the compound. In such cases limited quantities of the material should be cut up into small lumps and melted by gradually adding the pieces to the molten mass whilst continually stirring.

Application

Joints should be filled to the surface of the concrete or to the level specified. Joint seals in carriageways are normally recessed 3 to 5 mm to avoid extrusion. A concave finish due to shrinkage on cooling is normal but in a deep or narrow joint the compound may be poured in two layers to produce a uniform finish.

Cleaning

Equipment should be emptied immediately after use. Compound which has been heated and allowed to cool completely must be scrapped.

Estimating

Packaging

Nitoseal MBN2 and Nitoseal MB77 are supplied in the UK in paper sacks containing 15 kg.

Guide to Nitoseal MBN2 and MB77 quantities

Joint size in mm	Kg per metre run	Metre per 15 kg sack
10 x 20	0.20	76
25	0.25	61
30	0.29	51
40	0.39	38
15 x 20	0.29	51
25	0.37	41
30	0.44	34
40	0.59	26
50	0.74	20
20 x 20	0.39	38
25	0.49	31
30	0.59	26
40	0.78	19
30 x 25	0.74	20
30	0.88	17
40	1.18	13
50	1.47	10
40 x 25	0.98	15
40	1.57	10
50	1.96	8

Guide to Fosroc Primer B2 coverage

Joint depth	Meters of joint/5 litres of primer
15mm	1000 - 1333
20mm	750 - 1000
25mm	600-800
30mm	500-667

Fosroc Primer B2 is supplied in 5 litre cans covering 30-40m2.

These are theoretical yields without allowance for joint size, variaiton or wastage.

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Limitations

Nitoseal hot-pour compounds are suitable for sealing against bituminous asphalt surfaces. Nitoseal hot-pour compounds do not comply with the fuel resistant requirements of BS 2499 : 1993 and should not be used in airfield hardstandings, cargo handling areas, garage forecourts or other paved areas subject to fuel and oil spillage. For these applications Colpor 200PF should be used.

Water excluding substructures

Nitoseal hot-pourcompounds are suitable for use in joints in building basements, subways, etc. All joints which extend below the high water table level should contain waterstops in addition to the Nitoseal hot-pour seal.

Storage

Nitoseal hot-pour must be stacked flat not more than nine high and covered if stored outside.

Storage life is 2 years if kept in the above conditions.

Fosroc Primer B2 must be stored in accordance with the Highly Flammable Liquids and Liquefied Petroleum Gases Regulations 1972.

Precautions

Health and safety

For further information refer to appropriate Product Safety Data Sheet.

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