

High performance joint overbanding system

Uses

For protecting joints in tunnels, sewage treatment works, water tanks and basements. May also be used, subject to suitable design, in buried bridge deck and car park joints.

Joints with extreme movements or where varying settlement levels are expected.

Reinstatement of leaking joint sealing system.

Advantages

- Easy to install
- Rot resistance
- Sewage resistance
- Good resistance to many chemicals
- Versatile system suitable for various difficult situations

Description

Expoband One is a high performance joint sealing membrane with excellent weather resistance properties. The system is based on flexible polymers and epoxy resin adhesive. When fixed to a joint, it allows considerable movement whilst maintaining a high-quality seal.

Properties

Specific Gravity	:	0.98
ASTM D412		
Tensile Strength	:	Long 6.3N/10mm
ASTM D412		Trans 8.5 N/10mm
Elongation	:	Long 1,450%
ASTM D412		Trans 1,200%
Tear Strength	:	Long 4.14
ASTM D624		Trans 4.91

Instructions for use

Surface Preparation

Concrete surfaces onto which the membrane is to be applied must be sound, smooth, dry and dust free. New concrete should be fully cured, with any residual traces of curing compounds being mechanically removed.

Any traces of dust, dirt and laitence should be removed by grinding, or similar mechanical methods. Any spalling or honeycombing must be repaired using Nitomortar S*† or Nitomortar HB*†, and allowed to cure completely prior to application of the Expoband One system.

All traces of dampness must be removed from the substrate by drying gently with a gas torch or hot air blower. The substrate shall be considered dry enough when dampness does not reappear within 15 minutes.

Priming

Priming is not normally required.

Mixing and application of the adhesive

Equipment required

Slow speed drill
Adhesive spreader with 3 mm serrations
Hot air welding machine

Application

The 'hardener' and 'base' components of the Nitomortar FC(B)*† should be stirred thoroughly with a slow speed drill in order to disperse any settlement before mixing them together. The entire contents of the 'hardener' should be emptied into the 'base' container and the components mixed together, using the slow speed drill plus mixing paddle attachment, until a uniform grey colour and consistency is obtained. Under no circumstances should part packs be used, or part mixing be attempted.

The surface must be clean and wiped with Fosroc Solvent 102* prior to application.

Apply the mixed Nitomortar FC(B) with an adhesive spreader to the prepared substrate each side of the joint or crack. Depending on the surface condition Nitomortar FC(B) can be applied with a spatula, notched trowel or similar until a layer of 1-2 mm has been achieved. The width of application is dependent on the width of Expoband One membrane used but a minimum of 50-60 mm each side of the joint/crack is recommended.

Bed the Expoband One membrane firmly into the Nitomortar FC(B), then use a rubber or metal hand roller to achieve contact between the materials.

Immediately apply a second layer, 1-2mm thick, over the edges of the Expoband One.

Jointing instructions

Expoband One may be hot air welded to produce further continuous runs or "X", "T" or "L" junctions as required.

For heat welding joints an 80 mm overlap should be used.

Welding is carried out using a proprietary wide slot nozzle hot air welding tool.

Expoband One*

The tool should be set to the correct heat output by trial to achieve satisfactory weld.

The faces of the overlap are heated by moving the welding tool along with joint and simultaneously, pressure should be rolled to the heated overlap to ensure that the faces are fused together.

Technical support

Fosroc offers a comprehensive technical support service to specifiers, end users and contractors. It is also able to offer on-site technical assistance, an AutoCAD facility and dedicated specification assistance in locations all over the world.

Estimating

Supply

Expoband One	:	150mm wide, 25 metre rolls
		200mm wide, 25 metre rolls
		250mm wide, 25 metre rolls

Coverage

Nitomortar FC(B)	:	1.00 m ² /lit/1 mm thickness
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Coverage of Nitomortar FC(B) is wholly dependant upon surface conditions, site trials are therefore recommended to ascertain actual usage on uneven substrates.

Storage

Expoband One is an inert material, and thus has an indefinite shelf life.

Nitomortar FC(B) can be stored for up to 12 months; if kept in its original, unopened containers, in warehouse conditions away from direct sunlight. If stored at high temperatures the shelf life may be reduced to 4 to 6 months.

Precautions

Health and safety

Expoband One is hazard-free under normal use.

Nitomortar FC(B) and Fosroc Solvent 102 should not come in contact with skin or eyes, or be swallowed. Ensure adequate ventilation and avoid inhalation of vapours. Some people are sensitive to resins, hardeners and solvents. Wear suitable protective clothing, gloves and eye/face protection.

If working in confined areas, suitable respiratory protective equipment must be used. The use of barrier creams provides additional skin protection. Should accidental skin contact occur, remove immediately with a resin removing cream followed by soap and water. Do not use solvent. In case of contact with eye, rinse immediately with plenty of clean water and seek medical advice. If swallowed seek medical attention immediately - do not induce vomiting.

Fire

Expoband One and Nitomortar FC(B) are non-flammable.

Fosroc Solvent 102 is flammable. Keep away from sources of ignition. No smoking. In the event of fire extinguish with CO₂ or foam. Do not use a water jet.

Flash points

Fosroc Solvent 102	:	33°C
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For further information, refer to the product materials safety data sheet.

* Denotes the trademark of Fosroc International Limited

† See separate data sheet



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