

Nitobond SBA

Epoxy adhesive for segmental bridge bonding and general purpose bonding adhesive for concrete substrate

Uses

Nitobond SBA is used for bonding precast concrete bridge segments to provide a structural and waterproof joint. Nitobond SBA is also suitable as a gap filling paste and for grouting of starter bars, holding down bolts, fixing wheel stoppers in car parks, etc, where a paste consistency material is required.

Advantages

- Excellent adhesion to concrete, steel and most construction materials
- High strength
- Moisture tolerant, can be applied to damp surfaces, free from standing water
- Easy to apply, non-sag at recommended application thickness
- Overlapping temperature grades to suit varying environmental conditions
- Long Pot Life and Open Time to minimize wastage

Standards Compliance

Nitobond SBA Complies to:

- Federation of International Pre-stressing (FIP)- Standard for Epoxy Bonding Agents for Segmental Construction

Description

A two component, solvent free epoxy resin system consisting of base resin and black hardener in pre-measured quantities for easy on-site mixing. Nitobond SBA has been specially formulated to meet the requirements for bonding prefabricated concrete bridge segments.

Physical Properties

Colour (Mixed)	Grey	
Specific Gravity (Mixed)	1.80 ± 0.1	
Consistency	Soft, non-sag paste	
Application Temperature Range	25°C to 40°C.	
Sag Flow ASTM D2730-80	9.5mm non sagging	
Angle of internal friction (Squeezability) FIP / 9 / 2 :1978 , Clause 5.4	0.15 KN	>7,000 sq.mm
	2 KN	>13,000 sq.mm
	4 KN	>14,000 sq.mm
Modulust of Elasticity in Compression at 7 days age FIP / 9 / 2 :1978 , Clause 5.13	Instant	>8,000 N/mm ²
	Deferred	>7,000 N/mm ²
Shear Modulus in Com- pression FIP / 9 / 2 :1978 , Clause 5.16	Instant	>2,000 N/mm ²
	Deferred	>1,400 N/mm ²
Slant Shear Adhesion (Bonding Strength) FIP / 9 / 2 :1978 , Clause 5.15	1 day	>25 Mpa
	3 days	>30 Mpa
	7 days	>35 Mpa
Heat resistance	55°C	
Shrinkage FIP / 9 / 2 :1978 , Clause 5.7	<0.03%	
Pot Life ASTM D2471-99	75 minutes	
Open Time FIP / 9 / 2 March 1978, Clause 5.2 and 5.14	>75 minutes	
	12 hrs	>35 Mpa
Compressive strength ASTM D695-15	1 day	>65 Mpa
	7 days	>75 Mpa
Tensile Bending Strength (MOR) FIP / 9 / 2 :1978 , Clause 5.14	>6.0 Mpa	

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Application Instructions

The appropriate grade of Nitobond SBA should be selected according to the expected ambient application temperature.

Surface Preparation

It is essential that Nitobond SBA is applied to sound, clean surfaces in order that maximum bond strength is achieved. Concrete should be free from contamination such as free water, mould oil or greases, laitance or dust. The use of Preco Hydrotard surface retarder is recommended during precast operation to provide a suitable surface for application of Nitobond SBA. If Preco Hydrotard is not used, grit blasting or mechanical scabbling is recommended.

Mixing

Nitobond SBA is supplied in pre measured quantities with a total volume of 7 litres. Add the entire contents of the hardener (black) to the resin (white) and mix thoroughly with a Fosroc MR4 spiral mixing paddle attached to a heavy duty electric drill operating at not more than 450 rpm to avoid entrapping air. Mixing should be continued until an even grey colour, free from streaks is obtained. Mixing time should be 3 and 5 minutes. Ensure that the side and bottom of the container are scraped down thoroughly.

Application

The mixed adhesive should be applied by gloved hand or trowel, at a thickness of 2-3 mm.

The mixed epoxy should be applied immediately after mix-ing and application must be completed within its specified Pot Life. Mating surfaces must be brought together with stress applied temporarily within the Open Time of the ad-hesive.

Note :The mixed Nitobond SBA will heat up and cure very rapidly if held for any length of time in the mixing container, particularly at the upper application temperature range of the epoxy.

Cleaning

All tools and equipment should be cleaned immediately after use with Fosroc Solvent 102 before hardening of the adhesive. Hardened adhesive can only be removed mechanically.

Estimating

Supply

Nitobond SBA 25-40	: 7 Ltrs
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Coverage

Nitobond SBA 25-40	: 1m ² /Ltr @ 1 mm thickness
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Technical Service

Fosroc provides a technical advisory service supported by a team of specialists in the field.

Precautions

Health and Safety

Prolonged and repeated skin contact with epoxy resins and curing agents may cause dermatitis to persons sensitive to these products.

Gloves, barrier creams, protective clothing and eye protection should be worn when handling these products.

If accidental contact with epoxy occurs, it should be removed immediately with resin removal cream followed by cleaning with soap and water. **DO NOT USE SOLVENTS.**

Solvents promote penetration of the epoxy into the pores of the skin. Should eye contamination occur then wash with plenty of water and seek immediate medical attention. Ensure good ventilation and do not smoke during use.

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Fire

Nitobond SBA is non-flammable.

Fosroc Solvent 102 is flammable.

Ensure adequate ventilation. Do not smoke or use near a naked flame.

Flash Point

Fosroc Solvent 102: 33°C

Storage

Shelf life at least 12 months when stored in dry place below 25°C in unopened containers.

Additional Information

Nitobond SBA is the generic name for Fosroc's segmental bridge bonding adhesive. It has previously been marketed under the product names Nitobond PCA, Nitobond PC and Nitobond ECP. As per the product re-branding protocol, the product will only be marketed in future as Nitobond SBA.

Nitobond SBA is available with different service temperature grades upon request

In case of high temperature grade 35 - 55, a tolerance of + or - 5°C temperature at both ends does not alter product performance.



Important note

Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard Conditions for the Supply of Goods and Services, copies of which may be obtained on request. Whilst Fosroc endeavours to ensure that any advice, recommendation, specification of 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 of information given by it.

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