

Fosroc Nitocote EPS

Chemical resistant epoxy polysulphide elastomeric coating

Uses

Protective coating against a wide range of aggressive chemicals, oils, fuels, sea water and sewage.

Typical application includes:

- Intake channels, culverts and canals.
- Silos & tanks.
- Sewage & sludge aeration & sedimentation tanks.
- Concrete & steel protective coating.
- Industrial flooring areas including warehouses, food processing area, paper-mills and car parking.
- Roofing applications and sub-structural waterproofing.

Advantages

- Easy to apply, can be applied using roller, brush, and airless spray.
- Excellent chemical resistance.
- Excellent abrasion and impact resistance.
- Excellent bond to a variety of substrates and building materials.
- UV and weather resistant.
- High solid content.
- Flexible with crack bridging ability up to 2 mm.
- Primer less.

Description

Nitocote EPS is a two component epoxy polysulphide based coating, combining the desirable properties of both epoxies and polysulphides to give unique physical properties. The material cures to form a tough yet flexible seamless water proofing membrane that is chemical and abrasion resistant.

Design criteria

To achieve the correct protective properties, Nitocote EPS must be applied in a minimum total dry film thickness (DFT) of 500 microns. Higher builds are achievable in layers and by the use of airless spray equipment. Please contact your local Fosroc office for more details on different methods of application of Nitocote EPS.

Technical support

Fosroc offers a comprehensive range of high performance, high quality products suitable for use within all aspects of the concrete repair and protection industry. In addition, the company offers a technical support package to specifiers, end users and contractors, as well as on-site assistance.

Properties

Specific Gravity:		1.50 ± 0.05
Pot life:	@ 25 °C	3 hours
	@ 35 °C	1 hour 45 minutes
Tack free time:	@ 25 °C	6 hours
	@ 35 °C	3 hours
Full cure:	@ 25 °C	7 days
	@ 35 °C	3 days
Time between coats:	@ 25 °C	24 hours
	@ 35 °C	12 hours
Tensile Strength (ASTM D 412):		6 N/mm ²
Elongation (ASTM D 412):		45 %
Tear Strength (ASTM D 624):		15 N/mm ²
Hardness (ASTM D 2240):		80 ± 5 Shore A
Service temperature:		-30 to 70 °C
UV resistance (ASTM G53-91):		Resistant
Bond Strength	Concrete	> 1.5 Mpa
	Steel	> 3.5 MPa
Chemical resistance:		(ASTM D543)
Engine oil		Excellent
Petrol, Diesel		Excellent
Skydrol, Citric acid 10%		Excellent
Ethylene glycol		Very Good
Acetic acid 10%		Very Good
Bleach 5%		Very Good
Urea (Saturated)		Excellent
Diluted mineral acids		Excellent
Sodium hydroxide 50%		Excellent
Potassium hydroxide 50%		Excellent
Sulphuric Acid 50%		Good
Nitric Acid 25%		Good
Hydrochloric Acid 50%		Discoloured, Good

The local Fosroc office should be consulted for resistance to specific chemicals and conditions.

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Application instructions

Preparation

Concrete surfaces

All surfaces, that are to receive the coating, must be dry, smooth, sound and free from debris and loose material.

Surfaces must be free from contamination such as oil, grease, wax, dirt or any other forms of foreign matter which might affect adhesion.

All blowholes and imperfections should be filled with Nitomortar FC (see separate data sheet).

Steel surfaces

All surfaces should be grit blasted to meet the requirements of SA 2½, First Quality or equivalent.

The lining work should be programmed so that newly cleaned steel is coated as soon as possible before the formation of rust or scale.

Priming

Priming is not normally required provided the substrate is sound, untreated and good quality non porous concrete. If any doubts exist of the quality of the concrete, or if it is porous it should be primed with Nitoprime SP*. Contact the local Fosroc office for advise.

Nitoprime SP should be mixed in the proportions supplied. Add the entire contents of the hardener can into the base can. When thoroughly mixed, preferably using a slow speed drill and paddle, the primer should be applied in a thin continuous film, using rollers or stiff brushes. Work the primer well into the surface of the concrete taking care to avoid ponding or over application.

The primer should be left to achieve a tack-free condition before applying the top coat. A second coat of primer may be required if the substrate is excessively porous.

Mixing

The entire contents of the hardener can should be added to the base container and mixed thoroughly until a uniform colour and consistency are obtained, taking particular care to scrape the sides and bottom of the container. It is recommended that mechanical mixing be employed using a Jiffy mixer or a slow speed electrical drill.

Application

Once mixed, Nitocote EPS should be immediately applied to surface ensuring a continuous coating of uniform thickness is obtained.

Stiff nylon brush or short nap roller is recommended for such application.

Faster rates of application are possible using airless spray equipment.

Cleaning

Nitocote EPS should be removed from tools and equipment with Fosroc Solvent 102* immediately after use. Cured material can only be removed mechanically.

Estimating

Supply

Nitocote EPS:	10 litre packs
Nitoprime SP:	4 & 8 litre packs
Fosroc Solvent 102:	4 litre cans

Coverage

Nitocote EPS:	2 m ² /Litre per 500 microns DFT
Nitoprime SP:	8m ² /litre

The coverage figure is theoretical.

Storage

Shelf life

Nitocote EPS has a shelf life of 12 months if kept in a dry store between 5°C and 30°C in the original, unopened containers.

Storage conditions

Store in dry conditions at temperatures between 5°C and 30°C in the original, unopened containers. If stored at high temperatures the shelf life may be reduced.



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Precautions

Health and Safety

Nitocote EPS and Fosroc Solvent 102 should not come in contact with skin and eyes, or be swallowed.

Ensure adequate ventilation and avoid inhalation of vapour. Some people are sensitive to resins and solvents. Wear suitable protective clothing, gloves and eye/face protection. Barrier creams provide 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 eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately **do not** induce vomiting.

Fire

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

Nitocote EPS:	Non-flammable
Nitoprime SP:	57 °C
Fosroc Solvent 102:	32°C

For further information, refer to the Product Material Safety Data Sheet.

Additional Information

Fosroc manufactures a wide range of complementary products which include :

- Waterproofing membranes & waterstops
- Joint sealants & filler boards
- Cementitious & epoxy grouts
- Specialised flooring materials

Fosroc additionally offers a comprehensive package of products specifically designed for the repair and refurbishment of damaged concrete. Fosroc's 'Systematic Approach' to concrete repair features the following:

- Hand-placed repair mortars
- Spray grade repair mortars
- Fluid micro-concretes
- Chemically resistant epoxy mortars
- Anti-carbonation/anti-chloride protective coatings
- Chemical and abrasion resistant coatings

For further information on any of the above, please consult your local Fosroc office - as below.



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 Service. **All Fosroc datasheets are updated on a regular basis. It is the user's responsibility to obtain the recent version.**

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