Fosroc Nitoflor Conductive

constructive solutions

Epoxy resin static conductive floor with resistance between $5x10^4$ and $1x10^6$ ohms

Uses

Nitoflor Conductive is suitable for use in areas where a static conductive floor with a resistance between $5x10^4$ and $1x10^6$ ohms is required as a measure to control static electricity, such as:

- Electronic manufactire and assembly
- hospital operation theatre
- hazardous dust and chemical environments
- clean rooms etc.

Advantages

- Static control - provides static electricity with an effective passage to earth.
- Seamless - smooth, hygienic surface which is easily cleaned, unlike vinyl tiles which are not seamless.
- Durable - long term performance, accepts fork lift traffic, more durable than vinyl tiles.
- Attractive - wide range of colours enhances working environment.
- Resists most chemical spillage.

Description

Nitoflor Conductive is a 2mm thick epoxy resin floor topping with controlled conductive properties.

The system comprises an epoxy primer, conductive epoxy undercoat and a 2mm thick epoxy top coat. It is available in a wide range of attractive colours and provides a highly durable, chemically resistant seamless floor.

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.

Specification

The designated floor areas shall be surfaced with Nitoflor Conductive, a 2mm thick flow-applied epoxy resin floor topping. The topping shall provide a surface and bulk resistance between 5x104 and 1x106 ohms when tested to DIN 51953 and ASTM F150-78 respectively.

Properties

The test results below were determined on laboratory specimens and may vary from those obtained under site conditions.

Electrical Properties			
Surface resistance (ASTM F150-78)	:	$5x10^4$ to $1x10^6$ ohms	
Bulk resistance			
(DIN 51953)	:	$5x10^4$ to $1x10^6$ ohms	
(ASTM F150-78)		$5x10^4$ to $1x10^6$ ohms	
Charge decay (Fed. Spec. 101C Method 4046)	:	5000v to zero in less than 0.1 seconds	
Body voltage decay (Stephen Halperin & Associate Ltd.)	:	5000v to zero in 0.4 seconds using conductive heel straps or shoes.	
Physical properties			
Compressive strength (BS6319)	:	60 N/mm²	
Flexural strength (BS6319)	:	40 N/mm²	
Tensile strength (BS6319)	:	18 N/mm²	
Abrasion resistance			
Fed. Spec. 141A (CS17 wheel,1000g, 1000cycles)		97mg weight loss 0.03mm depth of water	
Impact resistance (BS8204 Pt.1)	:	0.2mm indentation	
Cure time		20°C	35°C
Foot traffic		24 hours	18 hours
Vehicular traffic		48 hours	36 hours

Chemical properties

Nitoflor Conductive provides excellent resistance to a wide range of industrial chemicals.

Design Criteria

Nitoflor Conductive is designed for application at a nominal thickness of 2mm. It should be installed where a static conductive floor with resistance between 5x104 and 1x106 ohms is required.

Nitoflor Conductive is designed to dissipate static electricity away from the source to earth.

Substrates should be dry and not suffer, or be likely to suffer, from rising damp. If necessary, suitable damp-proof membranes should be installed to prevent this. Substrates should not have a relateive humidity greater than 75% at the time of installation.

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Instructions for use

Nitoflor Conductive should be installed by specialist applicators who must follow the proceedures laid down in the Method Statement. Please contact your local Fosroc representative to obtain the Method Statement for correct application of Nitoflor Conductive.

Limitations

- Application should not commence if the temperature of the substrate is below 10°C.
- Nitoflor Conductive should not be used on floors known to suffer from rising damp or have a relative humidity greater than 75% when measured in accrdance with BS 8203:87, appendix A or by a Vaisala thermohygrometer type 131.
- Ensure adequate cover is taken to avoid exposing the material to a “wind tunnel” effect.
- Nitoflor Conductive shoud not be applied to asphalt, unmodified sand/cement screeds, PVC tiles or vinyl.

Estimating

Supply

Nitoflor Conductive	:	15 litre
Nitoflor Conductive U/C	:	4.5 litre
Nitoprime 31	:	1 & 4 lt can
Fosroc Solvent 102	:	5 litre pails

Coverage/Yield

Nitoflor Conductive	:	7 to 7.5m² / 15 litre
Nitoflor Conductive U/C	:	15-20m²/ 4.5 litre
Nitoprime 31	:	4-5m²/litre

Storage

All products above have a shelf life of 12 months if kept in a dry store in their original unopened packages.

Store in cool, dry conditions in original unopened packs. If stored at high temperature and/or high humidity conditions, the shelf life will be reduced.

Precautions

Health and safety

Nitoflor Conductive, Nitoflor Conductive undercoat, Nitoprime 31 and Fosroc Solvent 102 should not come in contact with skind and eyes, or be swallowed. Ensure adequate ventiallation and avoid inhalation of vapours. Some people are sensitive to resins, hardeners and solvents. Wear suitable protective clothing, gloves and eye protection. If working in confined areas, suitable respiratory protective equipment must be used. The use of a barrier cream provide addtional skin protection. In case of contact with skin, rinse with plenty of clean water, then cleanse with 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 vomitting.

Fire

Nitoflor Conductive base component, Nitoflor Conductive undercoat and Nitoprime 31 are non-flammable.

Nitoprime Conductive Hardener component,and Fosroc Solvent 102 are flammable.

Flash points

Nitoflor Conductive hardener	:	**39°C**
Fosroc Solvent 102	:	**33°C**

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† **See separate data sheet**

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 latest version.**

Al Gurg Fosroc LLC

Post Box 657, Dubai
United Arab Emirates

www.fosroc.com

Head Office
telephone: (+9714) 2039699 **fax:** (+9714) 2859649 **email:** agf@fosroc.com

Regional offices

Abu Dhabi, Al Gurg Fosroc	**telephone:** 673 1779	**fax:** 673 1449	**email:** abudhabi@fosroc.com
Bahrain, YBA Kanoo	**telephone:** 17738200	**fax:** 17732828	**email:** bahrain@fosroc.com
Kuwait, Boodai	**telephone:** 4817618	**fax:** 4832124	**email:** kuwait@fosroc.com
Oman, Al Amana	**telephone:** 24815080	**fax:** 24817554	**email:** oman@fosroc.com
Qatar, Tadmur	**telephone:** 4432365	**fax:** 4419517	**email:** qatar@fosroc.com

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