



# Nitoflor Levelcrete\*

## Cementitious floor leveling compound

### Uses

A thick bed self leveling, cementitious floor reprofiling & leveling product suitable for use under a variety of floor finishes, such as: forklift trafficked & light industrial floors, car parks, garages & workshops, high bay warehousing floors, underlayment for vinyl sheet, tiles, carpets etc.

### Advantages

- Can be used on in situ or precast floors to provide level surfaces without screeding
- Quick easy laying and fast hardening
- One pack product - simply mixed with water on site

### Specification

Nitoflor Levelcrete shall be capable of sustaining foot traffic within 10 hours, when applied at an ambient temp. of 35°C. It shall further show an indentation of less than 3 mm at 28 days, when tested in accordance with BRE Screed Test.

### Description

Nitoflor Levelcrete is a blend of specially selected cements, graded aggregates, polymers and additives. It is supplied as a dry, grey powder which requires only the addition of water to produce a free fluid material. This provides an ideal leveling material for leveling uneven, in-situ or precast concrete floors. It has been specifically formulated to enable it to be applied at temperatures up to 40°C.

### Properties

The test results below were determined on laboratory specimens and may vary from those obtained under site conditions. Results obtained using 100 mm cubes air cured @ 35°C. Tests using different cube moulds or lower curing temperatures will give different results.

<b>BRE Screed Test (BS 8204, Part 1) : Category "A" pass</b>	
<b>Compressive strength @ 35°C</b>	: 1 day 10 N/mm <sup>2</sup>
	: 28 days 40 N/mm <sup>2</sup>
<b>Foot traffic</b>	: 16 hours @ 20°C
	: 10 hours @ 35°C

### Instructions for use

#### Preparation

New concrete should be at least 21 days old. The substrate should be clean, sound and free from loose material and contamination such as plaster, oil, paint and grease. Excess laitance should be removed by light scabbling, blasting or grinding and vacuuming to remove dust debris. Light oil and grease staining can be removed with proprietary chemical degreaser, followed by washing with clean water.

#### Priming

The purpose of priming is to seal the substrate, to prevent air release from forming bubbles and pinholes in the surface of Nitoflor Levelcrete. The substrate should be primed using a 1:1 mix of water and Nitobond PVA\*†, which should be brushed into the substrate using a stiff brush and allowed to dry before the application of Nitoflor Levelcrete. Extremely porous substrates will require at least two priming coats. In this case, allow the previous coat to dry before applying the subsequent coats. The surface substrate should be pre-soaked with wet hessian for several hours prior to priming.

#### Mixing

Nitoflor Levelcrete should be mixed in a forced action mixer or by a heavy duty drill (1 kW motor) fitted with a Fosroc MR3 mixing paddle. It is essential that any mixer employed imparts high shear to the mix. Water addition for Nitoflor Levelcrete is 4 litres of cold water. Best results are obtained by using this mixing procedure:

- Add the water to the mixing vessel
- Slowly add the Nitoflor Levelcrete whilst mixing
- Mix for a further five minutes at high shear

Do not mix more Nitoflor Levelcrete than can be laid within the product flow time, i.e. 10 minutes at 35°C. Mixing is to be planned to ensure that pouring of the product on the floor is a continuous process. Nitoflor Levelcrete may be applied in a range of thicknesses as follows:

- 10 - 30 mm
- 30 - 45 mm where a single layer of 10 mm Fosroc Base Aggregate has first been applied @ 2 kg/m<sup>2</sup> to a primed substrate
- 45 - 80 mm where a single layer of 20 mm Fosroc Base Aggregate has first been applied @ 3 kg/m<sup>2</sup> to a primed substrate

#### Application

Good site organization is essential - the required thickness must be achieved in one application. Best results are achieved when the pouring and leveling is a continuous process until the designated area is completely leveled. Due to the thickness of application, it may be necessary to use formwork in certain situations. Pour the mixed material onto the primed substrate and allow to level. The material can then be finished with a steel trowel. If high spots or splashes occur these can be scraped off with the edge of a trowel after initial set.

#### Curing

Nitoflor Levelcrete should be cured for two days by covering with a polythene sheet immediately the product has achieved final set.

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**Points to note:** Ground floor slabs on a sloping gradient must incorporate a damp proof membrane in the subfloor. Cool water is advised for mixing (temperature around 20°C or less). Freshly laid Nitoflor Levelcrete should be protected from direct sunlight and/or strong drying winds until the material is hard (16 - 24 hours).

## Floor adhesives

Proprietary floor adhesives may be applied at a minimum 48 hours after application of Nitoflor Levelcrete.

## Sampling

All sampling procedures for Nitoflor Levelcrete are to be conducted within the confines of a temperature controlled laboratory. The reactive agents with Nitoflor Levelcrete do not permit site sampling and transport. The procedure for sampling is as follows:

- A full, unopened bag of Nitoflor Levelcrete should be selected from the batch allocated for site use and dispatched to the testing laboratory
- The Nitoflor Levelcrete should be mixed in the laboratory following the instructions as listed earlier
- Nitoflor Levelcrete should be mixed carefully as per steps listed under "Instructions for use"
- All sampling shall be conducted using 100 mm cube moulds (with acceptable size tolerance); the use of 150 mm cube moulds is prohibited
- The cube moulds should be treated with release agent prior to filling. Fill three 100 mm cube moulds for each curing time interval specified (e.g. 1 and 28 days)
- When mixed, the Nitoflor Levelcrete shall be placed into the 100 mm cube moulds. The Nitoflor Levelcrete should not be tamped, insert a palette knife into the material to aid the release of air that may have been entrapped. Finish the top surface with a trowel. Ensure that the mould filling is completed within 10 minutes from the end of the mixing cycle
- After initial set (around 30 minutes at 35°C) the filled moulds should be placed in a polythene bag and sealed properly in order to prevent the loss of moisture
- The cubes should be stored at 35°C ± 2°C for 24 hours in the laboratory. After 24 hours the cubes are to be demoulded and placed in a polythene bag and continue to cure at 35°C
- Cubes are to be crushed in calibrated compression testing apparatus, with a rate of loading not exceeding 180 KN per minute. Types of cube fracture are to be recorded. Three cubes are to be crushed for each curing time interval specified, and the results are to be issued as an average of the three



### 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.

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Cert No. THR2004006

## Limitations

Application should not commence if substrate temperature is below 5°C. Nitoflor Levelcrete should not be used on floors known to suffer from rising damp, unless treated with a suitable damp proof membrane. Ensure adequate cover is taken to avoid exposing the material to a "wind tunnel" effect. Minimum application thickness of 10 mm is advised to sustain standard physical performance of product.

## Estimating

### Supply

<b>Nitoflor Levelcrete</b>	: 20 kg bags
<b>Nitobond PVA</b>	: 20 & 210 litre drums
<b>Fosroc Acid Etch</b>	: 4 & 20 kg cans

### Coverage

<b>Nitoflor Levelcrete</b>	: 11 litre per bag
<b>Nitobond PVA</b>	: Approx. 10 m <sup>2</sup> /litre when diluted 1:1 water: Nitobond PVA, actual coverage may vary depending on the porosity of the surface to be primed.

## 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 & fire

Nitoflor Levelcrete range is non-toxic but is mildly alkaline. Gloves should be worn during use. Splashes to the skin should be washed with clean water. Accidental splashes to the eyes should also be washed with water but should prolonged irritation occur medical advice should be sought. Nitoflor Levelcrete range is non-flammable.

### Cleaning and disposal

All tools and equipment should be cleaned with water.

\* Denotes the trademark of Fosroc International Ltd.  
↑ See separate data sheet