

Fosroc® Nitoflor PAFS (System 1)



constructive solutions

Fast cure, low odour, polyaspartic based floor coating for indoor environments, balconies and walkways

Uses

For the rapid and permanent coating of internal and external floors, balconies, and walkways. Low odour for both internal and external use. Designed for fast application where downtime must be kept to a minimum. Provides a trafficable, waterproof, and durable surface on concrete and cementitious substrates.

Nitoflor PAFS forms part of Fosroc's Rapid Return to Service (RR2S) offer.

Advantages

- Low odour
- User friendly environment during application
- Rapid return to service in 2 hours
- Easy to apply by squeegee, brush, or roller
- Flexible
- Low temperature cure
- Can be used with coloured flakes and quartz

Description

Nitoflor PAFS (System 1) is a two / three coat application comprising of:

- Nitoflor PAFS Primer
- Nitoflor PAFS Topcoat, with option of second topcoat in more heavily trafficked areas
- Anti-slip grains should be scattered on either the primer or the first of two topcoats

Nitoflor PAFS Primer is supplied as two components that are site mixed, squeegeed and back rolled, then broadcast with anti-slip grains or coloured flakes / quartz as required.

Nitoflor PAFS Topcoat is supplied as a two component pre-pigmented pack. For limited quantities a translucent topcoat with a pigmented paste as a third component is available. Site mixed and brush or roller applied.

Specification clause

The floor coating system shall be Nitoflor PAFS a two component, fast curing FeRFA Type 3 high build coating. The system comprises Nitoflor PAFS Primer and Nitoflor PAFS Topcoat. The addition of suitable anti-slip grains can be considered if required. It complies with the requirements of BS EN 1504-2 and BS EN13813.

The product shall be mixed, applied and cured in accordance with the manufacturer's written instructions to a correctly mechanically prepared substrate.



CE	
Fosroc International Limited Drayton Manor Business Park, Coleshill Road, Tamworth, Staffordshire, B78 3XN 20 DOP: UK9-215 0370-CPR-0845	
Surface protection systems methods 1.3, 2.2, 5.1, 6.1 and 8.2	
Adhesion strength by pull-off test	≥ 1.5 MPa (Flexible system with traffic)
Water vapour transmission properties	Sd < 5m
Capillary absorption and permeability to water	<0.1 kg m ⁻² h ^{-0.5}
Permeability to carbon dioxide	Sd >50m
Abrasion resistance	<3000mg
Skid resistance	Class 1 >40 Wet Tested
Impact resistance:	Class III ≥ 20 Nm
Chemical resistance:	Class 1
Dangerous substances	NPD

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Properties

Typical properties at 20°C unless otherwise noted:

Nitoflor PAFS Primer 1

Appearance	Translucent
Viscosity	150 – 180 mPa·s
Density	1.39 g/cm ³
Time to overcoat	Approx. 50 minutes

Nitoflor PAFS Topcoat

Appearance	Pigmented
Viscosity	150 – 180 mPa·s
Density (pigmented)	1.15 g/cm ³
Time to foot traffic.	Approx. 50 minutes

Standards Compliance

Essential Characteristics	Requirement	Test Method	Results
Surface Protection System for concrete		UNE-EN1504-2:2005 Part2	
Bond strength by pull-off test	≥ 2.0 MPa (rigid system with traffic)	EN 1542:1999	3.8MPa
Water vapour transmission properties	Class III (dense against water vapour) Sd >50	EN ISO 7783:2012	62m
Capillary absorption and permeability to water	<0.1 kg (m ⁻² h ^{-0.5})	EN 1062-3:2008	0.0001 kg (m ⁻² h ^{-0.5})
Permeability to carbon dioxide	Sd > 50 m	EN 1062-6:2003	156m
Abrasion resistance (Taber)	<3000mg	EN ISO 5470-1:1999	814mg
Slip Resistance	Class I >40 Wet Tested Class II >40 Dry Tested	EN 13036-4	42 85
Impact resistance	Class III ≥ 20 Nm	EN ISO 6272-1:2012	24.5Nm
Chemical resistance	Less than 50% reduction in Shore Hardness Class I: 3 days no pressure	EN ISO 13529:2005	Detergent 1% Oil 1% Bleach 3%
Dangerous substances		EN 934-2:2009	NPD
Fire classification	In accordance with procedures set out in EN 13501-1:2019	EN ISO 11925-2:2021 EN ISO 9239-1:2011	B - little or no contribution to fire S1 – insignificant or little contribution to development of smoke
Taint potential in indirect contact with food	In accordance with procedures set out by Campden BRI	Tetrad Test Method	No potential to taint
Screed material and floor screeds		UNE-EN 13813:2014	
Wear resistance-BCA,	Wear (µm) AR0.5 <50	EN 13892-4:2003	10 µm
Bond strength	B 2.0 N/m ²	EN 13892-8:2003	3.9 N/m ²
Flexural and compressive strength	Compressive (N/mm ²) C40 Flexural (N/mm ²) F 30	EN 13892-2:2003	44.4 N/m ² 34.7 N/m ²
Impact resistance At which cracks first appear	Drop height 1500mm	EN ISO 6272-1:2012	>14.7 Nm No defects
Water vapour transmission	Resistance factor µ	EN 12086:2013	38510
Density of hardened material	Density (kg/m ³)	EN 12190	1100 kg/m ³
Chemical resistance	Alcohol 1 day Olive oil 1 day Bleach 1 day	EN ISO 13529:2005	No defects

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Application Instructions

Preparation

New concrete surfaces

Surfaces should be clean, dry and free of laitance, oil, grease. The concrete should have a moisture content of <75% RH.

Existing concrete surfaces

Should be structurally sound, concrete repairs carried out using Fosroc repair products; refer to your local Fosroc office for more details. Surfaces should be clean, dry, and free of laitance, oil and grease. The concrete should have a moisture content of <75% RH.

Steel surfaces

Must be of first-class quality and must not have been allowed to rust more than corresponding to grade B of ISO 8501- 1:

Any laminations must be removed. Blast cleaning to SA 2½. (ISO 8501-1:2007). Roughness: using abrasives suitable to achieve a coarse surface of Grade Medium G (50-85µm, Ry5) (ISO 8503-2). For other substrates please contact the Fosroc Technical Department.

Treatment of cracks / joints / day-joints / up -stands

Consult Fosroc Technical Help Desk for details of treatment.

Application Temperature

Normal application temperature range is 5-30°C. For application temperatures below 5°C or above 30°C, contact the Fosroc Technical Help Desk.

Nitoflor PAFS Topcoat must be applied only to the cured primer, evenly and without leaving puddles by means of a squeegee, paint roller or brush. If rubber blades are used, the surface must always be rolled with a paint roller afterwards. Allow Nitoflor PAFS Topcoat to properly cure before opening to traffic.

Pre-Application Check

Before starting works, the user should check:

Moisture content of concrete is <75% RH,

Patch-apply Nitoflor PAFS Primer to ensure no inhibition of cure or bond from substrate contaminants. Mode of failure is either cohesive substrate or coating-to-substrate >1.5N/mm²

Mixing

Nitoflor PAFS Primer 1: Add the contents of the Hardener can to the Base can, ensuring the sides are scraped clean. Using a slow speed drill and paddle, mix for 3-4 minutes, stopping halfway to scrape the sides and bottom of the can.

Nitoflor PAFS Topcoat

Once the Primer coat has cured, follow the same mixing

procedure for the Topcoat. If the Topcoat is supplied as a pre-pigmented base, gently stir the Base component before mixing to ensure no settlement. If the Topcoat has a third component colour pack, ensure its container is scraped clean into the Base can and fully dispersed before adding the Hardener.

Application

Nitoflor PAFS Primer must be applied first, evenly and without leaving puddles, by means of a squeegee and back rolled. If rubber blades are used, the surface must always be rolled with a paint roller afterwards. Heavily absorbent patches must be re-primed wet-into-wet before hardening until the pores are closed.

Nitoflor PAFS Primer must be allowed to properly cure before over-coating

Cleaning

Tools and equipment can be cleaned immediately after use with Fosroc Equipment Cleaner.

Supply

Nitoflor PAFS Primer is supplied in 4.89kg (3.5L) units
Nitoflor PAFS Topcoat is supplied in 4.94kg (4.5L) units.

Nitoflor PAFS Topcoat White and Yellow are also supplied in 2kg packs for line-marking

Colours: Dark Grey, Mid-Grey, Light Grey, Blue, Green, Red, Yellow, Black, White, Translucent,

Special colours on request

Yield / Estimating

One pack of Nitoflor PAFS Primer, applied at 0.5kg/m², will cover approximately 10m².

One pack of Nitoflor PAFS Topcoat, applied at 0.4kg/m², will cover approximately 12m².

Limitations

Nitoflor PAFS (System 1) products should not be applied below 5°C or above 30°C. For advice on other application temperatures please contact the Fosroc Technical Help Desk.

Do not apply to wet or damp surfaces as the bond strength will be reduced. Protect from rain until cured. If in any doubt concerning substrate condition or application temperature consult the local Fosroc office.

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Storage

Store all materials in dry conditions away from sources of heat and naked flames. All products have a shelf life of 12 months if stored in the unopened original container in a cool, dry and frost-free location. Do not expose to direct sunlight.

Precautions

Health and safety

For further information refer to the appropriate Product Safety Data Sheet available from www.fosroc.com.

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Important note

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