



Fosroc Nitoflor

High Technology Flooring Solutions

www.fosroc.com



constructive solutions

"The greatest constructions require solid foundations, the best being built on ROCK. Here is the foundation that supports FOSROC"

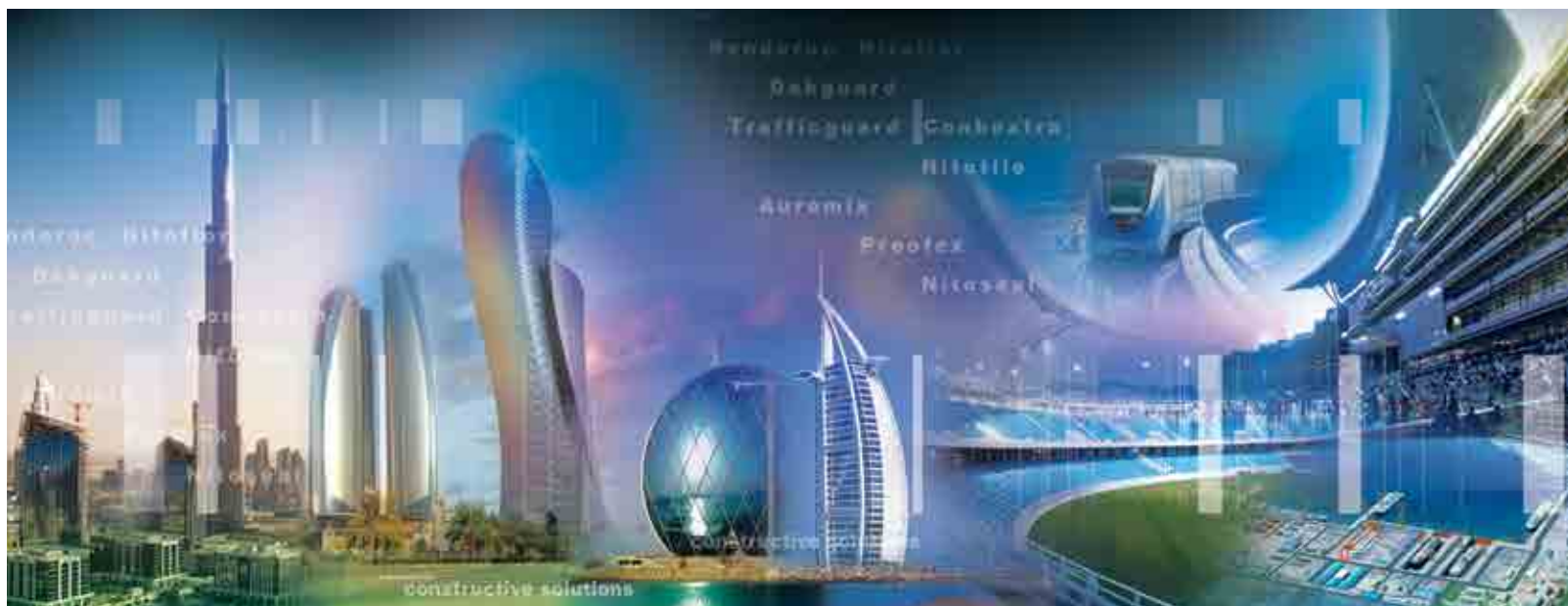
Dr. James Hay, Chairman – JMH Group

Our Profile

Fosroc commenced its Indian operations in 1981 and established a 100% subsidiary in 1999.

Fosroc has four state-of-the-art manufacturing facilities at Bengaluru, Karnataka; Ankleshwar, Gujarat; Kolkata, West Bengal and Keshwana, Rajasthan.

Fosroc Chemicals (India) Pvt. Ltd. works closely with its customers, including distribution and Applicator associates, through its well-equipped technical service department, a network of sales engineers, customer service professionals, Concrete technologist, Specification team etc. Fosroc India prides itself for the level of technical and customer support that it gives to its valued customers.



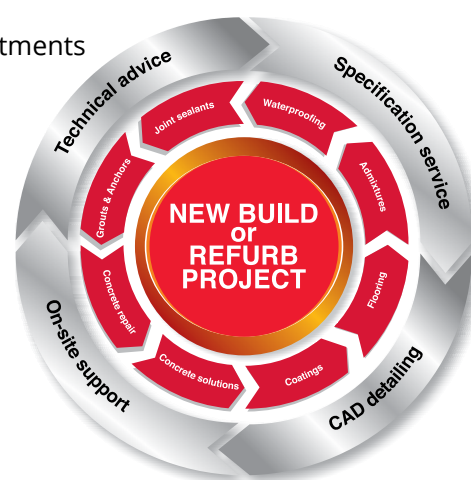
International leverage gives Fosroc the opportunity to offer tried and tested solutions from one geographical region to another with great confidence.

Fosroc Chemicals (India) Pvt. Ltd. provides time-tested solutions that include services such as:

- Diagnosis and Specification Support
- Application Support
- Distribution Support
- After-Sales Service
- Mix design support

Fosroc Chemicals (India) Pvt. Ltd. remains focused on the Industry, Infrastructure and Building Segment with a wide range of quality products.

- Admixtures and Surface Treatments
- Grouts and Anchors
- Industrial Flooring
- Concrete Repair
- Protective Coatings
- Joint Sealants and Adhesives
- Waterproofing
- Cement Additives



Flooring Introduction



The well-specified flooring products are primarily focused on the type of industry and operational exposure, substrate condition and designed life. Floor-topping specification is ideally drawn on performance requirement of the industry to deliver safe, durable, low maintenance and efficient working conditions.

Fosroc brings to the fore its knowledge and experience of over seven decades in providing solutions through best-suited high- performance products for flooring almost all types of Industries. This vast project experience coupled with innovation has lead us to understand thoroughly what chemical technology works best for a specific industry type and to determine its performance.

To name a few

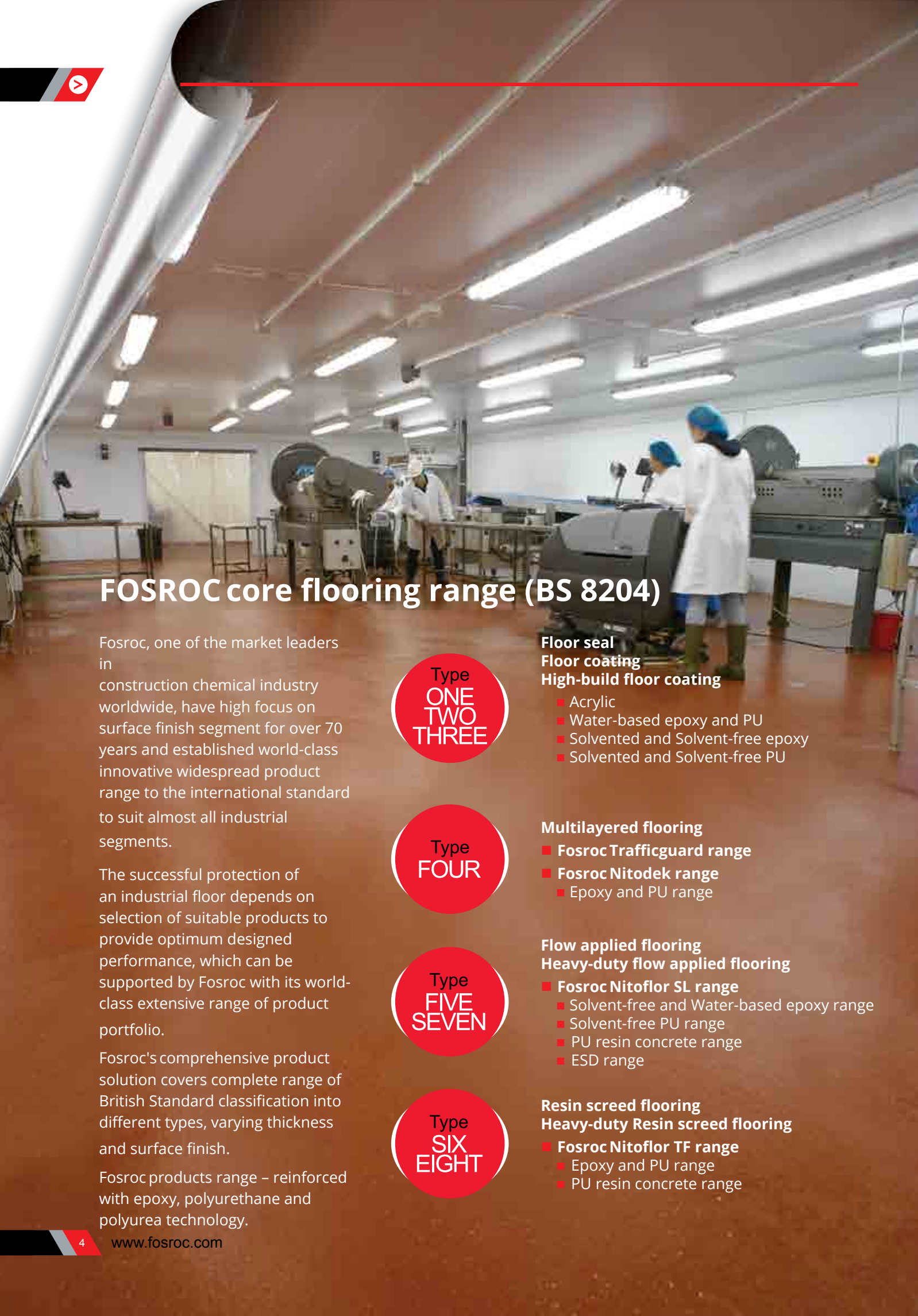
- High impact, wear and chemical resistance
- Seamless
- Hygienic
- Slip resistance in wet process
- Moisture tolerance
- Aesthetics
- ESD

- UV resistance
- Elastomeric with crack-bridging ability
- Steam cleaning

This brochure provides particulars of Fosroc's extensive product range, specific industry floor performance requirement and Fosroc product solutions.

FOSROC

- Nitoflor
- Cemtop
- Trafficguard
- Polyurea



FOSROC core flooring range (BS 8204)

Fosroc, one of the market leaders in construction chemical industry worldwide, have high focus on surface finish segment for over 70 years and established world-class innovative widespread product range to the international standard to suit almost all industrial segments.

The successful protection of an industrial floor depends on selection of suitable products to provide optimum designed performance, which can be supported by Fosroc with its world-class extensive range of product portfolio.

Fosroc's comprehensive product solution covers complete range of British Standard classification into different types, varying thickness and surface finish.

Fosroc products range – reinforced with epoxy, polyurethane and polyurea technology.

Type
ONE
TWO
THREE

Floor seal Floor coating High-build floor coating

- Acrylic
- Water-based epoxy and PU
- Solvented and Solvent-free epoxy
- Solvented and Solvent-free PU

Type
FOUR

Multilayered flooring

- Fosroc Trafficguard range
- Fosroc Nitodek range
- Epoxy and PU range

Type
FIVE
SEVEN

Flow applied flooring Heavy-duty flow applied flooring

- Fosroc Nitoflor SL range
- Solvent-free and Water-based epoxy range
- Solvent-free PU range
- PU resin concrete range
- ESD range

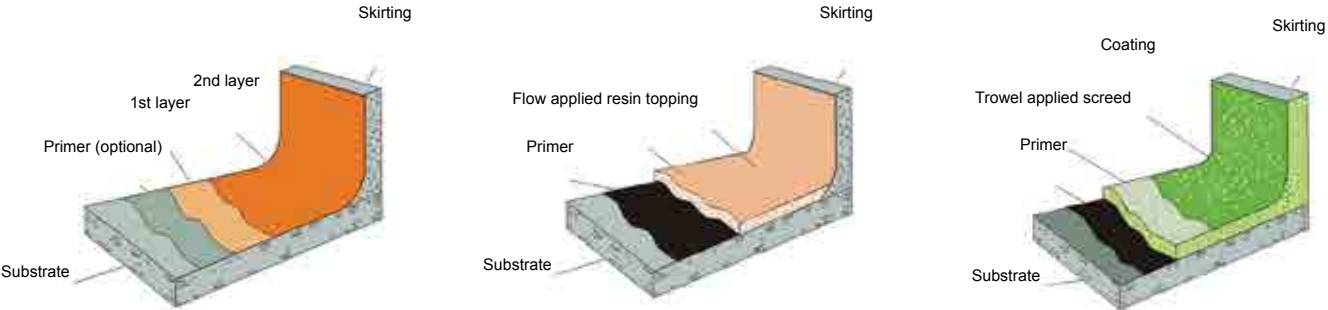
Type
SIX
EIGHT

Resin screed flooring Heavy-duty Resin screed flooring

- Fosroc Nitoflor TF range
- Epoxy and PU range
- PU resin concrete range

FOSROC flooring products spread (BS 8204)

Material Category	Sub Category	System	Description	Thickness	General applications but not limited to
Floor hardeners	Powder	Nitoflor Hardtop Series	Monolithic surface hardening compound for fresh concrete floors	NA	Manufacturing units and warehouse floors
	Liquid	Nitoflor Lithurin (M)	Sodium silicate based dust proofing membrane	NA	Laboratories. Also used as sealer coat over underlays
Floor sealer (Type 1)	Water-based damp tolerant epoxy	Nitoflor EPW100	Water-based epoxy floor coating	100 µ	Warehouses, hangars, walkways, shop floors etc. As a sealer coat for underlays like epoxy/PU/ cementitious screeds
	Solvented epoxy	Nitoflor FC140	Solvent-based, high-performance, epoxy resin coating	90 µ	
	Water-based PU	Nitoflor PUW100	Abrasion, UV resistant, water-based PU floor coating	90 µ	
Floor coating (Type 2 & 3)	Solvented epoxy	Nitoflor FC145	High-build, solvent-based, chemical-resistant epoxy resin based floor coating	300 µ	
	Solvent-free epoxy	Nitoflor FC150	High-build, solvent-free, chemical-resistant epoxy resin based floor coating	400 µ	
	Solvent-free PU blend	Nitoflor FC400 UH	High chemical resistant, solvent free, resistance to abrasion, hybrid polyurethane based resin floor topping	400 µ	
Flow applied (Type 5)	Epoxy	Nitoflor SL 1000	Flow applied epoxy resin based floor topping	0.8–1.5 mm	Engine assembly, shop floors, vehicle assembly, clean rooms, hangars, airports & dry processing area. ESD flooring used in electronic assembly areas
		Nitoflor SL 2000	Flow applied epoxy resin based floor topping	2 mm	
		Nitoflor SL 3000	Flow applied epoxy resin based floor topping	3 mm	
		Nitoflor SL 4000	Heavy duty, flow applied epoxy resin based floor topping	4 mm	
		Nitoflor SL Conductive/ Dissipative	Epoxy resin based static conductive/dissipative seamless floor toppings	2 mm	
	Water-based epoxy	Nitoflor SL 2050	Light duty to medium duty industrial usage. Flow applied, water miscible, damp-tolerant, thick epoxy resin based floor topping	2.5 mm	Warehouses, shop floors etc.
	Blended PU	Nitoflor SL 6000 UB	Heavy duty PU-based flow applied floor topping	6 mm	Food, chemical, pharmaceutical, clean rooms, dry processing areas, corridors and finished goods areas
		Nitoflor EPU2000	Self-smoothing epoxy polyurethane floor topping	2 mm	
	PU Cement	Nitoflor SL 3000 UT	Flow applied PU Cementitious based floor topping	4-6 mm	
Resin screed flooring (Type 6 & 8)	Epoxy (with sealer coat)	Nitoflor TF5000	Chemical and abrasion resistant epoxy screed	3–6 mm	Fabrication shops, loading-unloading bays, heavily trafficked areas, gangways and press shops
	Blended PU (with sealer coat)	Nitoflor TF120 UB	Heavy duty PU-based floor screed, resistant to impact, abrasion, thermal shock, steam and hot water	5–12 mm	Chemical plants, wet processing areas and loading-unloading bays
Car Park deck coating	PU-based solvented system	Trafficguard UR100	Flexible, skid-resistant car parking system for exposed and intermediate decks	2–2.5 mm (incl ASG)	Waterproof flexible protection, used in exposed car park decks, for heavily trafficked areas
		Trafficguard UR150	Hard wearing skid-resistant, flexible, protection system for car park decks	1.5 mm (incl ASG)	Flexible system for covered and uncovered parking areas
Polyurea	Spray applied Polyurea	Nitoflor FLM	Fast setting, pure polyurea elastomeric flooring	2–2.5 mm	Loading-unloading bays, fabrication areas, press shops, car park decks–exposed to UV require a coat of Nitodek UVR as top coat



Floor Hardener

Dry Shake On Powder Hardener

Concrete floor has limited resistance to vehicular and foot traffic prominent in industrial shop floor situations. This leads to generation of dust and wearing out of floor.

Dry shake on floor hardeners are recommended to improve the abrasion resistance and reduce floor wearing due to vehicular and foot traffic.

As floor hardeners are applied to new wet concrete so as to become an integral part of floor concrete.

- **Nonmetallic – does not rust or stain**
- **Provides hard, abrasion-resistant surface**
- **Forms monolithic bond with base concrete**
- **Easy to apply and economical**



Fosroc Product Range

Nitoflor Hardtop	Non metallic natural mineral based aggregates
Nitoflor Hardtop Std.	Non metallic quartz based aggregates

Liquid Floor Hardener

Sodium Silicate based liquid floor hardener improves the surface hardness of concrete floor and also densifies the top layer thus reduces ingress of liquids into the floor in normal industrial situations.

The brush applied Nitoflor Lithurin (M) penetrates the concrete surface and reacts with the free lime in concrete to form insoluble crystals. These crystals densify the top surface which makes the surface harder and impermeable to a certain extent.

- **Improves surface hardness of floor concrete**
- **Prevents ingress of liquids**
- **Stops dust generation**
- **Gives wet look to the floor**
- **Easy to clean**

Fosroc Product Range

Nitoflor Lithurin (M)	Sodium Silicate based liquid floor hardener
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Floor Sealers BS 8204 – Type 1

Applied in two coats to give a dry film thickness of upto 150 µ and generally solvent or water borne.

These low cost sealers form a tough durable surface film available in a range of attractive colours.

Floor sealers are generally recommended for light traffic areas. For heavy traffic areas, overcoat may be necessary within two to three years.

- **Improves abrasion resistance**
- **100% impermeable system**
- **Stops ingress of liquids**
- **Easy to clean**
- **Smooth matt finish**

Fosroc Product Range

Material Category	Sub Category	Product	Description	Dry Film Thickness
Floor Sealers Type 1	Water based damp tolerant epoxy	Nitoflor EPW100	Water based epoxy floor coating	100 µ
	Solvent based epoxy	Nitoflor FC140	Solvent based high performance epoxy	90 µ
	Water based PU	Nitoflor PUW100		90 µ



Floor Coating BS 8204 – Type 2

Floor coatings are generally applied in two or more coats in application thickness range of 150-300 µ.

These coatings are highly suitable for chemical storage areas and warehouses.

- **High abrasion & chemical resistance**
- **100% impermeable system**
- **Stops ingress of liquids**
- **Smooth matt finish & easy to clean**
- **Good aesthetics – available in a range of attractive colours**
- **Attractive - available in a wide range of colours to enhance the working environment**

Fosroc Product Range

Material Category	Sub category	Product	Description	Dry Film Thickness
Floor Coating Type 2	Solvent based epoxy	Nitoflor FC145	High build solvent based chemical resistant epoxy resin based floor coating	300 µ



High Build Floor Coating BS 8204 – Type 3

Floor coatings are generally applied in two or more coats in application thickness range of 300-1000 µ.

These coatings are highly suitable for process areas of a manufacturing industry, warehouses and chemical process areas.

- High abrasion & chemical resistance
- 100% impermeable system
- Stops ingress of liquids
- Smooth glossy finish & easy to clean
- Good aesthetics – available in a range of attractive colours

Fosroc Product Range

Material Category	Sub Category	Product	Description	Dry Film Thickness
High Build Floor Coating Type 3	Solvent free epoxy	Nitoflor FC150	High build, solvent free, chemical resistant epoxy resin based coating	400 µ
	Solvent free PU blend	Nitoflor FC 400UH	High chemical resistant, solvent free, resistant to abrasion, hybrid polyurethane based floor coating	400 µ

Multilayer Flooring System BS 8204 – Type 4

It's a multilayer flooring system constituting multiple layers of floor coatings or flow applied flooring often described as sandwich system.

This type of flooring systems generally involves aggregate dressing to give it a rough textured finish and excellent slip resistance.

Generally, the thickness of multilayer system exceeds 2 mm including aggregate dressing.

- Flexible and tear resistant
- Multipurpose
- Seamless and watertight
- Rapid application, reliable and safe

Fosroc Product Range

Material Category	Sub Category	Product	Description	Dry Film Thickness
Multilayer Flooring System Type 4	PU Based Solvented System	Trafficguard UR100	Flexible skid-resistant, car parking system for exposed and intermediate decks	2-2.5 mm
	PU based solvented system	Trafficguard UR150	Hard wearing skid-resistant, flexible, protection system for car park decks	1.5 mm

Flow Applied Flooring System BS 8204 – Type 5

Flow applied self smoothing flooring system with application thickness ranging from 2-3 mm.

These systems are generally one of the following:

- 1) Epoxy resin based
- 2) Polyurethane resin based
- 3) Blended Polyurethanes
- 4) Polyurethane cement

- Fast application - minimises downtime
- Chemically resistant - good resistance to a wide range of chemicals
- Durable - good abrasion resistance
- Hygienic - provides a dense, impervious, seamless floor surface which is easily cleaned

The system offers a smooth glossy finish which is highly suitable specifically for clean rooms in Pharma, Food & Beverage and also electronic assembly areas.

Fosroc Product Range

Material Category	Sub Category	Product	Description	Dry Film Thickness
Flow Applied Flooring System Type 5	Epoxy	Nitoflor SL1000	Flow applied epoxy resin based floor topping	0.8 -1.5 mm
	Epoxy	Nitoflor SL2000	Flow applied epoxy resin based floor topping	2 mm
	Epoxy	Nitoflor SL3000	Flow applied epoxy resin based floor topping	3 mm
	Epoxy	Nitoflor SL4000	Flow applied epoxy resin based floor topping	4 mm
	Epoxy	Nitoflor SL Conductive / Dissipative	Epoxy resin based static conductive / dissipative seamless floor topping	2 mm
	Water based epoxy	Nitoflor SL2050	Light duty to medium duty industrial usage. Flow applied, water miscible, damp-tolerant, thick epoxy resin based floor topping	2-6 mm
	Blended PU	Nitoflor SL2000 UB	PU based flow applied floor topping	2 mm
	Blended PU	Nitoflor SL6000 UB	Heavy duty PU-based flow applied floor topping	4-6 mm
	Blended PU	Nitoflor EPU2000	Self-smoothing epoxy polyurethane floor topping	2 mm
	PU Cement	Nitoflor SL3000 UT	Flow applied PU cement coating	4-6 mm



Heavy Duty Resin Screed Flooring BS 8204 – Type 6 & 8

Trowel applied screeds with thickness ranging from 4 to 12 mm. These systems can be one of the following:

- 1) Epoxy resin based
- 2) Blended Polyurethanes
- 3) Polyurethane cement

Trowel applied, heavily filled systems generally are overcoated to seal the porosities and give a smooth easily cleanable surface.

- Durable - Exceptional resistance to heavy duty traffic.
- Non slip - Good gripping surface to both vehicular and pedestrian traffic
- Easily laid - Designed for easy laying to a fair finish
- Seamless - Eliminates potential sources of failure
- Colour range - Available in different colour combinations

Fosroc Product Range

Material Category	Sub Category	Product	Description	Dry Film Thickness
Resin Screed Flooring Type 6&8	Epoxy	Nitoflor TF5000	Chemical and abrasion resistant epoxy screed	3-6 mm
	Blended PU	Nitoflor TF120 UB	Heavy duty PU-based floor screed, resistant to impact, abrasion, thermal shock, steam and hot water	5-12 mm



Automobile and manufacturing industry flooring design criteria

- **Process and exposure condition**
- **Traffic and design life**
- **Substrate condition**

Automobile and mechanical manufacturing plants have various operational process areas and demands specific

performance based on operational exposure apart from common performance criteria like abrasion resistance, impervious to oil and grease, easily cleanable and slip resistant. Fosroc's high-quality flooring systems will ensure the specific performance criteria.

Automobile Industry						
Product Base	Product Name	Vehicle Assembly Lines	Shop Floors	Painting Areas	Press Shops, Loading and Unloading Areas	Spare Parts, Warehouse and Finished Goods Areas
Epoxy flow applied	Fosroc Nitoflor SL 1000/2000					
	Fosroc Nitoflor SL 3000					
	Fosroc Nitoflor SL conductive					
Epoxy trowel applied	Nitoflor TF 5000 (with sealer coat)					
Epoxy roller applied	Nitoflor FC145/150					
Floor hardener	Nitoflor Hardtop series					
	Nitoflor Lithurin					
Epoxy water-based coating	Nitoflor EPW100					
Polyurea flooring	Fosroc Polyurea FLM					
PU water-based coating	Fosroc Nitoflor PUW100					

- Floor areas at assembly shops, body shops and main gangways designed for medium to heavy duty.
- Floor areas at fabrication and press shops designed for heavy to very heavy duty where impact loads are expected.
- Floor areas at paint booth considered as fire hazard area to design with ESD flooring system.
- Floor areas in warehouse/high stack areas designed for medium to heavy duty.

Food and beverage industry floor design criteria

- **Exposure requirement like wet process, steam cleaning and taint free**
- **Traffic and design life**
- **Substrate condition**

Food and beverage plants' flooring demand specific performance based on operational exposure and to conditions like slip resistance in wet process areas, thermal shocks and very high-level

chemical resistance and cleanability etc. Fosroc's high-quality PU range flooring systems will ensure the specific performance criteria and designed life.

Food and Beverage Industry									
Product Base	Product Name	Wet Process	Dry Process	Hot Process	Deep Freezing	Chemical Storage	Main Corridors	Change Rooms	Loading and Unloading
PU blend flow applied	Fosroc Nitoflor SL 6000 UB								
PU blend roller applied	Fosroc Nitoflor FC400 UH								
PU blend trowel applied	Fosroc Nitoflor TF120 UB								
PU cement flow applied	Fosroc Nitoflor SL 3000 UT								
PU cement flow applied	Fosroc Nitoflor SL 6000 UT								

- Floor at wet process areas designed for heavy duty with antislip finish.
- Floor in sterilised areas designed with flow applied medium to heavy duty.
- Floor exposed to higher temperature designed at higher thickness according to temperature resistance required.
- Floor at deep freezing areas designed for heavy duty trowel applied floor.

Pharma floor design criteria

- **Process and exposure condition**
- **Traffic and design life**
- **Substrate condition**

Pharma plants' flooring demand specific performance based on operational exposure of clean room conditions and chemical spillages.

Fosroc's high-quality epoxy and PU range flooring systems will ensure the specific performance criteria and designed life.

Pharma Industry									
Product Base	Product Name	Wet Process	Dry Process	Hot Process	Sterilised Area	Chemical Storage	Main Corridors	Change Rooms	Loading and Unloading
Epoxy flow applied	Fosroc Nitoflor SL1000/2000								
	Fosroc Nitoflor SL3000								
Epoxy mortar for coving	Fosroc Nitomortar S								
Epoxy roller applied	Fosroc Nitoflor FC150								
PU blend flow applied	Fosroc Nitoflor SL6000 UB								
PU blend roller applied for coving	Fosroc Nitoflor FC400 UH								
PU blend trowel applied for coving	Fosroc Nitoflor TF120 UB								

- Floor exposed to higher temperature and designed at higher thickness.
- Sterilised area floors designed for medium to heavy duty traffic.

Electronic industry floor design criteria

- **ESD**
- **Traffic and design life**
- **Substrate condition**

Electronic industry floor demands specific performance like ESD, cleanroom condition and good abrasion resistance. Fosroc's high-quality product range, will ensure the specific performance criteria and designed life.

Electronic Industry Floor Systems					
Product Base	Product Name	Conductive	Dissipative	Non-ESD Production Areas	Warehouse/Stores
Epoxy flow applied ESD	Fosroc Nitoflor SL Conductive				
	Fosroc Nitoflor SL Dissipative				
Epoxy flow applied	Fosroc Nitoflor SL2000/1000				
Epoxy roller applied	Fosroc Nitoflor FC145/150				




Aircraft Hangar

- **Exposure requirements**
abrasion impact and oil spillage
- **Traffic and design life**
- **Substrate condition**

Aircraft hangar floor demands specific performance like exposure requirements abrasion impact and oil spillage.

Fosroc's high-quality product range, will ensure the specific performance criteria and designed life.

Aircraft Hangar Floor Systems				
Product Base	Product Name	Parking hangar	Maintenance hangar	
Epoxy flow applied	Fosroc Nitoflor SL2000/1000			
Solvent free Epoxy coating	Fosroc Nitoflor FC150			
Flow applied PU blend	Nitoflor SL2000 UB			

Product anticipated service life

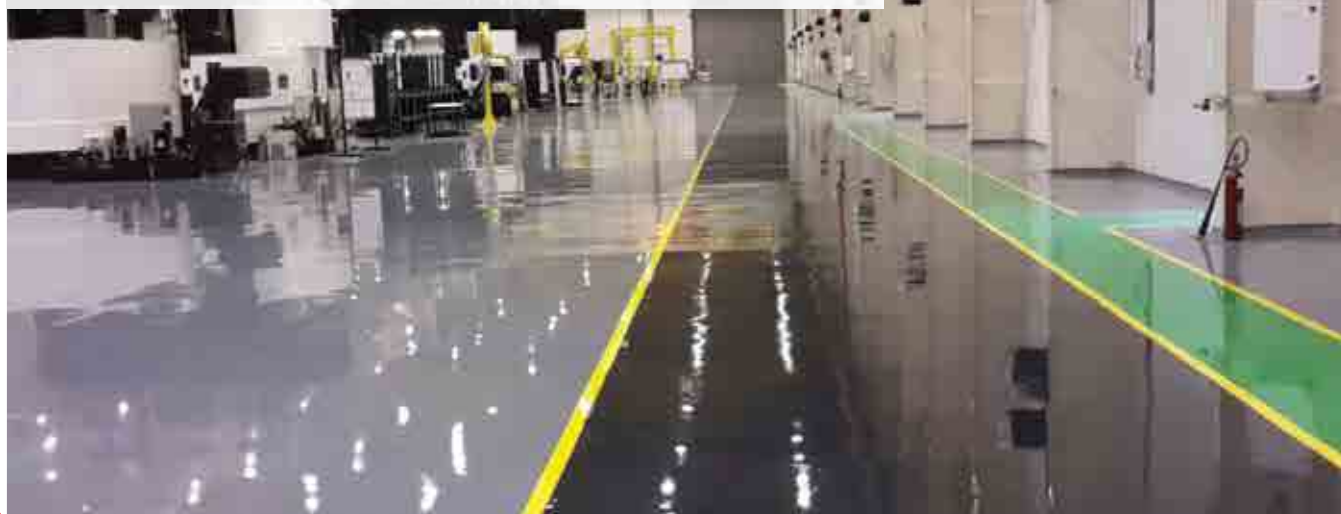
Product Segment	Thickness	Traffic	Anticipated Life*	Product Range	Intended use but not limited to
Floor Sealer Acrylic, Epoxy and PU	Type 1: <150 µ	LD	1–2 year maintenance coat may be required for localised areas	Nitoflor FC100/FC130/FC140/EPW100/FC110	Foot traffic areas and sealer coat for underlays
Floor coating Epoxy, EPU and PU	Type 2 & 3: 200 to 500 µ	MD	2–3 years maintenance coat may be required for localised areas for extended life	Nitoflor FC145/150 400UH	Storage rooms, warehouse, shop floors, laboratories, light assembly areas, chemical resistance areas and as sealer coat for underlays
Flow applied Epoxy, EPU and PU	Type 4 & 5: 2–3 mm	MD to HD	4–6 years	Nitoflor SL 1000/EPU2000/Nitoflor SL 2000/SL 3000U/Conductive and Dissipative/SL 2050 Nitoflor SL 2000	Clean rooms, hygienic floors, engine assembly, workshops, dry processing areas, shop floors, food process taint-free floors, ESD flooring, and chemical-resistant areas etc.
Flow applied Epoxy, EPU and PU	Type 7: 4–6 mm	MD to HD	6–8 years	Nitoflor SL 4000/SL 6000 UB	Same as above
Trowel applied Epoxy, PU blend and PU	Type 6: 4–5 mm	HD	10–12 years maintenance sealer coat may be required for localised areas	Nitoflor TF5000	Loading and unloading bays, fabrication shops, shop floors, workshop floors etc.
	Type 8: 6–9 mm	VHD	10–12 years maintenance sealer coat may be required for localised areas	Nitoflor TF5000/TF120 UB	Wet process areas, deep-freezing areas, loading and unloading bays, fabrication shop etc.

* Actual life will depend on product thickness, quality of the substrate and service conditions. Includes severity of traffic, frequency and efficiency of cleaning, mechanical handling abuse and impact.

LD (Light Duty) – Light foot traffic, occasional rubber-tyred vehicles
MD (Medium Duty) – Regular foot traffic, frequent fork lift truck traffic, occasional hard plastic-wheeled trolleys
HD (Heavy Duty) – Constant fork lift truck traffic, hard plastic wheeled trolleys

References – BS8204-6:2008 Synthetic resin flooring – Code of Practice
FeRFA – Guide to the specification and application of synthetic resin flooring

Above products/systems can be used in combination also.



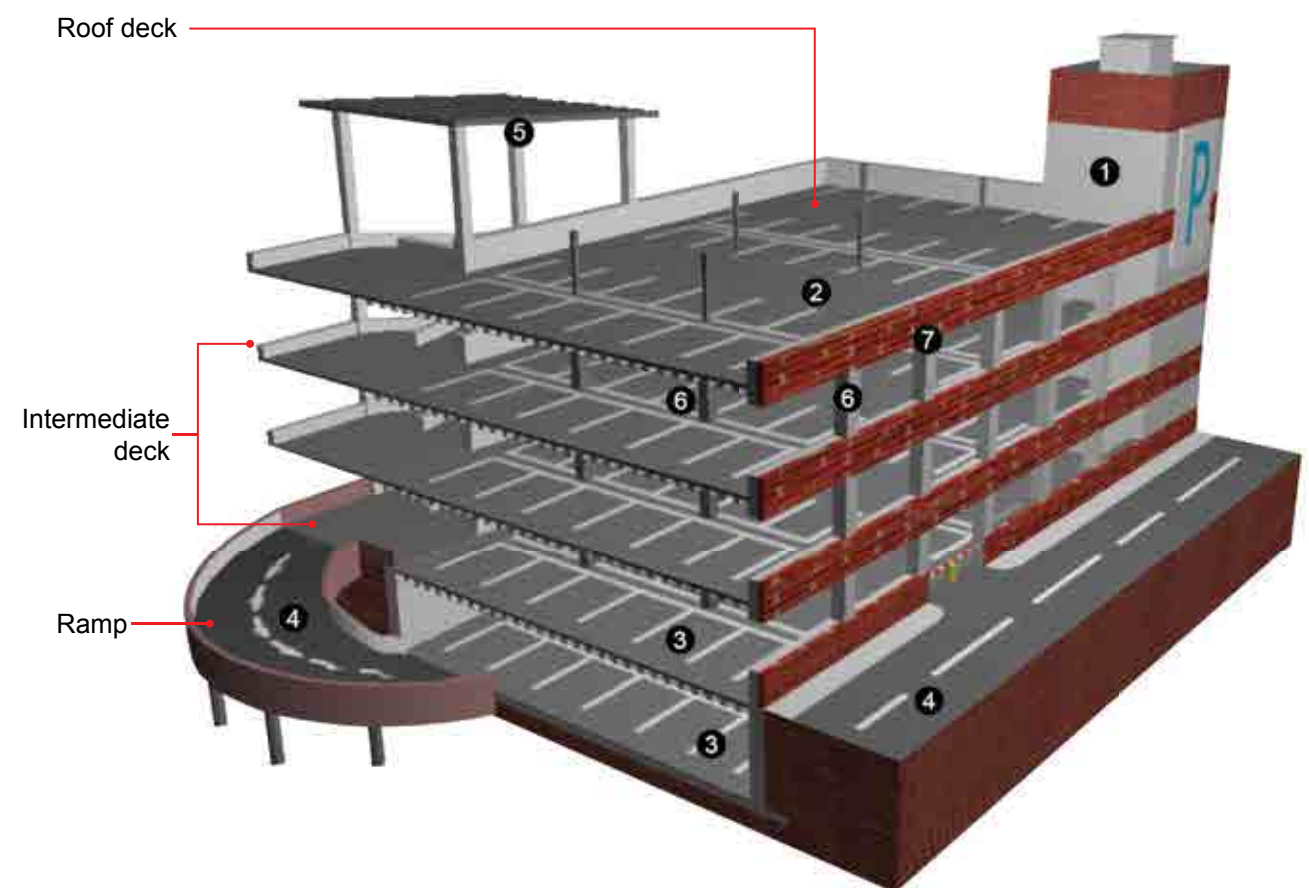
Fosroc Car Park Deck Solutions

- Roof decks
- Intermediate decks
- Basement car park
- Ramps

The successful protection of a car park structure depends on selection of suitable products to provide the optimally designed performance, which can be supported by Fosroc with its world-class extensive range of product portfolio.

Right specification needs to address the performance

requirements of specific areas to balance durability and downtime against cost. Fosroc brings to the fore its knowledge and experience of over seven decades in providing solutions through best-suited high performance products for car park deck solutions.

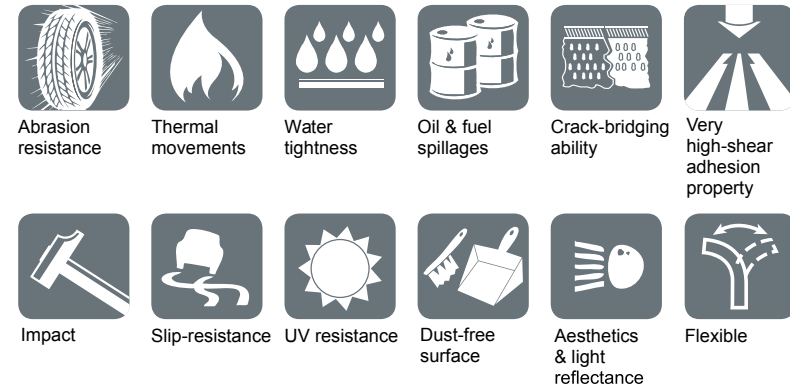


1. Dekguard E2000 – elastomeric, water-based protective coating.
2. Fosroc polyurea FLM or Trafficguard UR100.
3. Nitoflor FC150 system with or without underlay Nitoflor EU5 Nitoflor Hardtop with Nitoflor PUW100/Nitoflor FC150.
4. Trafficguard UR100 or Nitoflor TF5000 with Trafficguard WC or Nitoflor FC150 (covered areas).
5. Brushbond series/Proofex series/Fosroc Polyurea waterproofing system.
6. Nitowrap system for structural strengthening and increasing load-bearing capacity.
7. Nitoseal/Thioflex – MS, PU and polysulphide-based sealants.

Roof decks

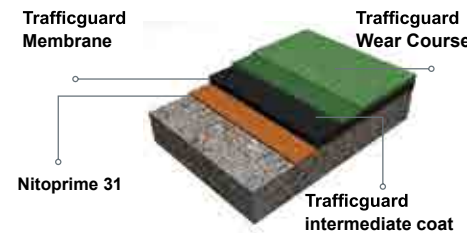
Roof car park deck protection designed with flexible system to protect against ingress of water, withstand thermal movements, UV resistance, high-abrasion and slip-resistance for safe vehicular traffic movements.

Performance criteria



Fosroc Polyurethane system - Trafficguard UR100*

Roof decks	Primer/Body coats	Top coat	Particulars
Trafficguard UR100 system Flexible, waterproof, crack bridging, slip and wear-resistant PU system. Service temp: 0°C TO 50°C	Nitoprime 31 Solvent free - Epoxy primer Trafficguard Membrane Roller applied PU waterproofing membrane 1 to 1.5 mm thick	Trafficguard intermediate coat PU blend flexible coating 0.4 mm Trafficguard Wear Course Aliphatic PU top coating 0.3 to 0.4 mm	<ul style="list-style-type: none"> • Anti-slip grain finish • 2.0 to 2.5 mm thick • Parking space and carriage way



*Tested as per ASTM standards

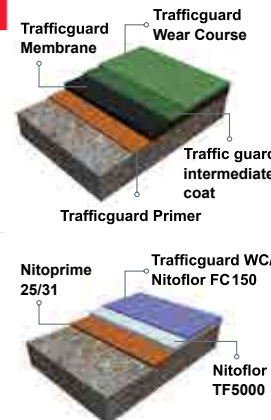
Ramps

Ramp areas need to be designed against skidding with high-abrasion resistance for the safety and durability of the vehicle movements on ramps while entering or exiting the parking areas.

Fosroc systems

- **Trafficguard UR100** – PU-based multi-layer system
- **Nitoflor TF5000 with sealer coat Trafficguard WC/Nitoflor FC150** – Epoxy high-strength trowel applied screed over coated with aliphatic PU/Epoxy coating

Ramp coating system	Underlay/Primer	Top coat	Particulars
Trafficguard UR100 Flexible, slip and wear-resistant PU system	Nitoprime31 Solvent free - Epoxy primer Trafficguard Membrane Roller applied PU waterproofing membrane 1 to 1.5 mm thick	Trafficguard intermediate coat High build PU blend flexible coating 0.4 mm Trafficguard Wear Course PU top coating 0.3 to 0.4 mm	<ul style="list-style-type: none"> • Antislip Aggregate Finish • 2.0 to 2.5 mm thick • Ramp coating
Nitoflor TF5000 with sealer coat Non-Flexible, Impervious, slip and wear resistant epoxy trowel applied screed system	Nitoprime 25/31 Solvent-free or solvent-based epoxy primer Nitoflor TF5000 Heavy duty 5mm thick, abrasion resistant epoxy floor screed	Trafficguard WC Roller applied aliphatic PU coating at 0.3 to 0.5 mm thick or Nitoflor FC150 Solvent-free high-build roller applied coating 0.5 mm	<ul style="list-style-type: none"> • Anti-slip aggregates finish • 5.3 to 5.5 mm thick • Covered ramp areas



Intermediate deck and basement car park

Enclosed intermediate deck and basement car park are generally not exposed to aggressive corrosive environment and stresses, although they still need protection against Slip, Abrasion, Dust Generations imperviousness to oil & fuel spillages. Supplementary features like aesthetics better light reflectance.

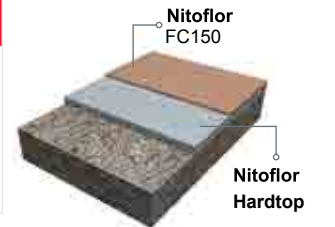
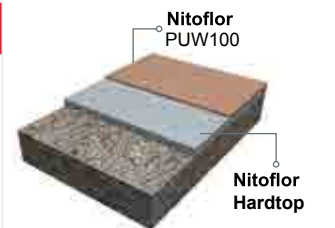
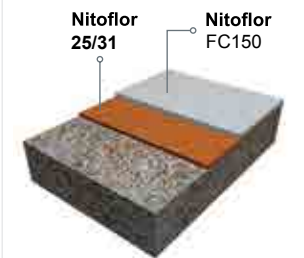
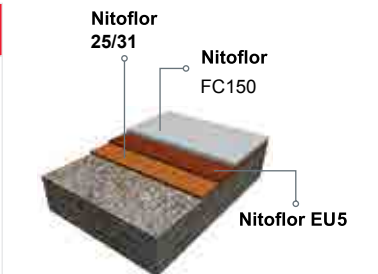
Performance criteria



Fosroc systems

Epoxy Underlay: Nitoflor EU5 | Epoxy Top Coat: Nitoflor FC150 | Fosroc PU Top Coat: Nitoflor PUW100

Intermediate deck and Basement car park	Underlay/Primer	Top coat	Particulars
Nitoflor150 with Nitoflor EU 5 underlay system Non-flexible, Impervious, slip and wear-resistant epoxy system	Nitoprime 25/31 Solvent or solvent-free epoxy primer Nitoflor EU5 Self-smoothing epoxy underlay 2.0 to 3.0 mm	Nitoflor FC150 Solvent-free, high-build roller applied coating 0.4 mm	<ul style="list-style-type: none"> • Smooth finish • 2.5 to 3.5 mm thick • Parking space and carriage way • Anti-slip aggregates finish • 2.4 to 3.4 mm thick • Parking space and carriage way
Nitoflor FC150 system	Nitoprime 25/31 Solvent or solvent-free epoxy primer	Nitoflor FC150 T Solvent-free, high-build roller applied coating 1 mm Nitoflor FC150 Solvent-free, high-build roller applied coating 0.4 mm	<ul style="list-style-type: none"> • Textured roller finish or Anti-slip aggregates finish • 1 mm thick • Parking space and carriage way • Anti-slip aggregates finish • 0.4 mm thick • Parking space and carriage way
Intermediate deck and Basement car park	Floor hardener	Top coat	Particulars
Nitoflor Hardtop/Hardtop with PU Nitoflor roller coat system PU-based floor sealer dust free coating in conjunction with powder floor hardener system	Nitoflor Hardtop Metallic floor hardeners or Nitoflor Hardtop Non-metallic floor hardeners	Nitoflor PUW100 Water-based PU matt finish coating 0.1 mm thick	<ul style="list-style-type: none"> • Matt finish coating • Parking space and carriage way • Colour stable • Dust free • Impervious • Economical
Intermediate deck and Basement car park	Floor hardener	Top coat	Particulars
Nitoflor Hardtop/Hardtop with epoxy Nitoflor FC150 roller coat system Epoxy based floor coating in conjunction with powder floor hardener system	Nitoflor Hardtop Metallic floor hardeners or Nitoflor Hardtop Non-metallic floor hardeners	Nitoflor FC150 Solvent-free high-build roller applied coating 0.4 mm	<ul style="list-style-type: none"> • Anti-slip aggregates finish • 0.4 mm thick • Parking space and carriage way



Fosroc polyurethane systems – Trafficguard UR150

Intermediate deck and basement car park	Underlay/Primer	Top coat	Particulars
Trafficguard UR150 system Flexible, waterproof, static crack bridging, slip- and wear-resistant PU system. Service temp: 0° C to 80° C	Nitoprime 25/31 Solvent free - Epoxy primer	Trafficguard intermediate coat High-build PU flexible coating 0.4 mm Trafficguard Wear Course PU top coating 0.3 to 0.4 mm	<ul style="list-style-type: none"> • Anti-slip aggregates finish • 1 mm thick • Parking space and carriage way



Nitoflor PU cementitious solutions

Nitoflor SL3000UT

PU cementitious flow applied flooring

Designed to exceed the specifier essential performance in flow applied PU cementitious self-smoothing product

- Wide temperature service range (-10°C to +70°C)
- Chemical resistance to Organic/Inorganic acids & Aromatic/Aliphatic solvents
- Slip resistance
- Clean & hygienic with taint free property
- Excellent mechanical properties
- High residual moisture tolerant



Typical Installation

FOOD PROCESSING

Dairy (milk), Chocolates, Bakeries, Meat processing, Sauces, Cold storage, Airline catering, Soft drink

DRINKS & BEVERAGES

Breweries and Distilleries, Soft drinks and fruit juice, mineral water, bottling and canning

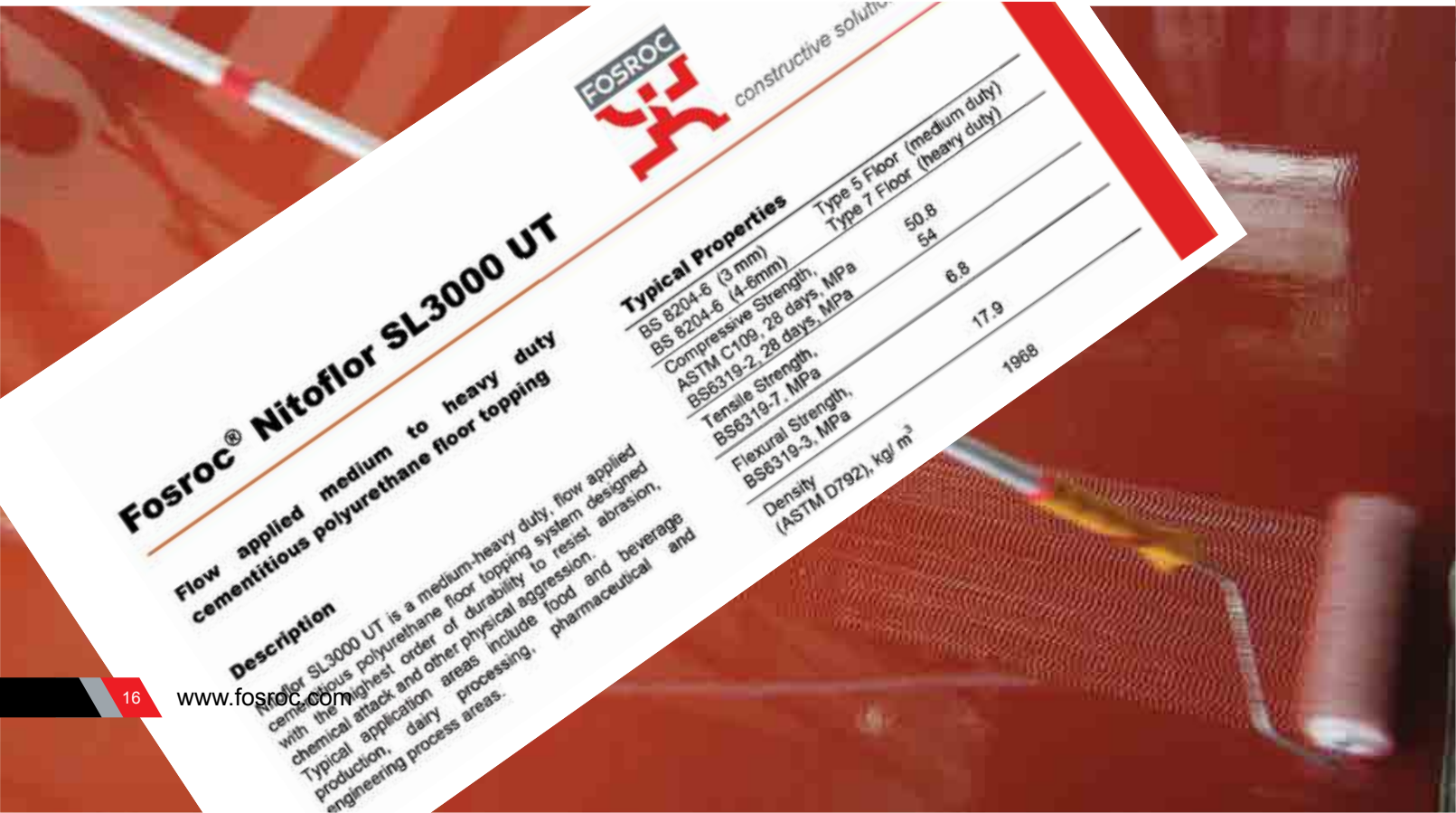
PHARMACEUTICAL

Primary and secondary manufacture, R&D, Clean rooms and Sterilised area

ENGINEERING

Plating and printing industries

CHEMICAL PROCESS AND STORAGE



Product	Surface finish	Thickness	Service temp	Traffic	Slip resistance (Dry Surface)
Nitoflor SL3000 UT	Smooth Matt finish	4 mm 6 mm	-5°C to 60°C -10°C to 70°C	MD MD	Pass Pass
Nitoflor Coving UT	Mortar smooth finish	-	15°C to 120°C	MD	Pass
Nitoflor HB200 UT	High build coating	0.4 mm	-10°C to 70°C	MD	Pass

MD: (Medium Duty) regular foot traffic, frequent fork lift traffic, occasional hard plastic - wheeled trolleys

HD: (Heavy Duty) constant fork lift movement, hard plastic wheeled trolleys, some

impact **VHD:** (Very Heavy Duty) severe heavily loaded traffic and impact

Fosroc cementitious flooring solutions

Cemtop 250T

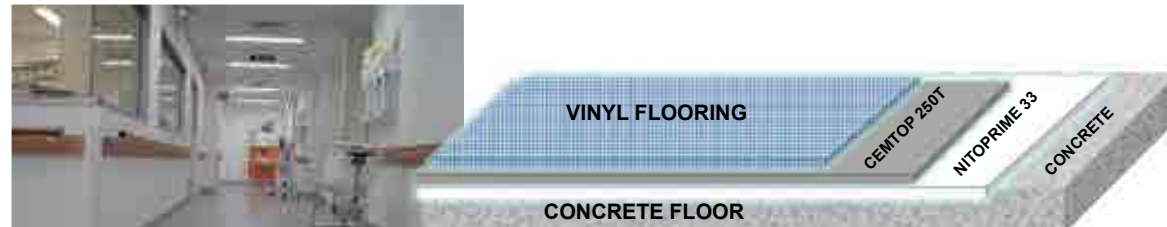
3-6 mm thick cementitious self levelling compound

- Self levelling consistency
- High impact resistance
- Excellent levelling properties
- Sufficient working time
- Pumpable

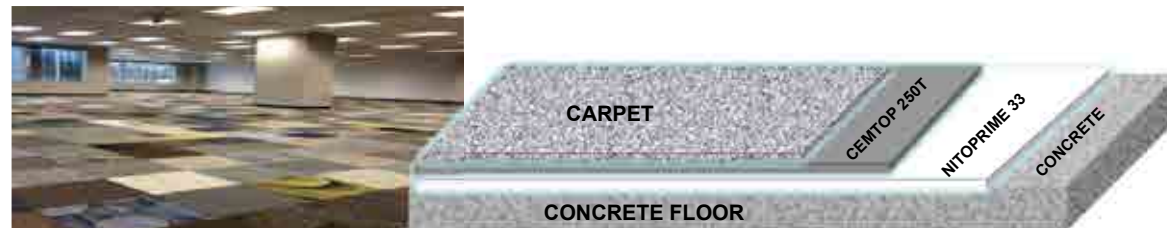
Markets / Target Customers

- Hospitals
- Commercial Complexes
- Hotels
- IT Infrastructure
- Office Space

Underlay for soft flooring like Vinyl, Linoleum



Underlay for carpet flooring



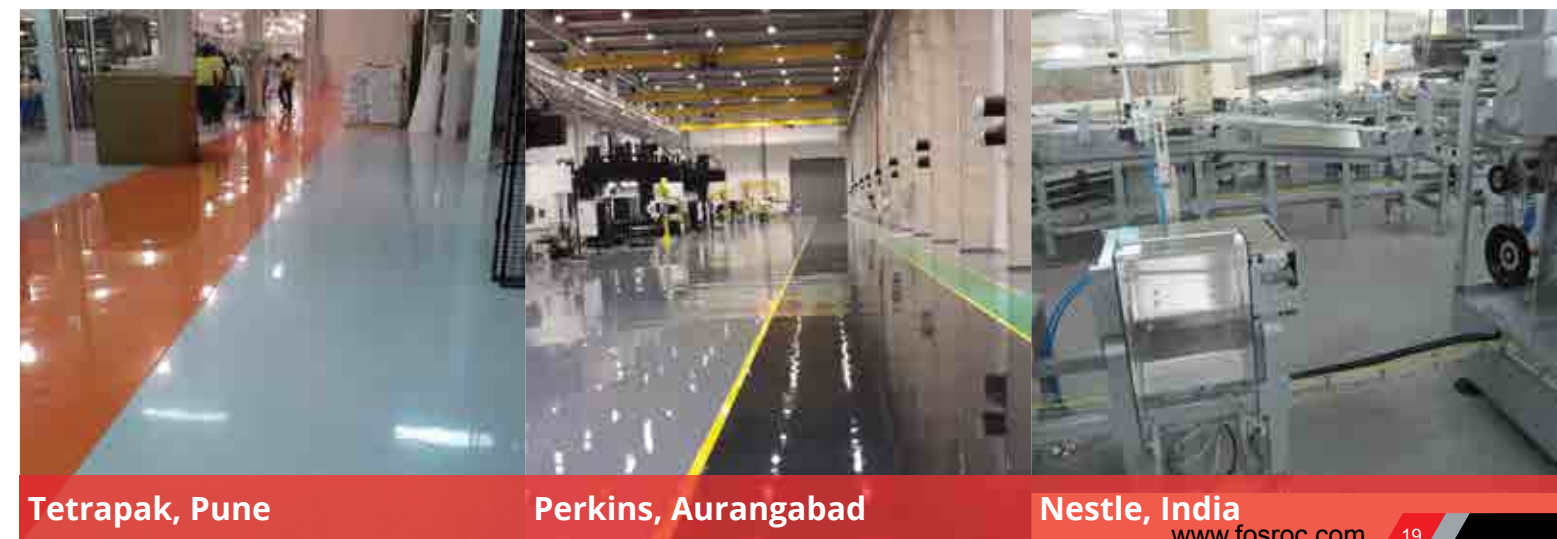
Underlay for wooden flooring



Cemtop 250T system

SYSTEM		RECOMMENDED THICKNESS	CONSUMPTION / SQM
PRIMER	Nitoprime 33	NIL	10-15 sqm per litre after dilution with water in ratio 1:5
TOPCOAT	CEM TOP 250T	3-6 mm	5 kgs/sqm in 3 mm thickness

Project References



Substrate and Application Guidelines

Properties of the substrate

The functioning and resistant qualities of a floor treatment are partly dependent on the properties of the substance. It is therefore important to be familiar with the specific features of the different industrial substrates. In this brochure we leave aside traditional substrates such as concrete slabs, with or without a finishing layer. Floor treatments may also be laid over tiles, wood, steel and bituminous covering. In these situations we advise you to consult the relevant supplier or manufacturer since they are in a position to suggest appropriate solutions.

Compressive strength

If a substrate does not have enough resistance, shocks and impacts can lead to the floor treatment coming loose as a result of damage to the substrate. As a rule, a substrate must have a compressive strength of at least 25 MPa. If this is not the case, special solutions will have to be looked for in an industrial environment.

Moisture

Most floor treatments are not water vapour permeable and act as a barrier to rising damp. This pressure results in the systematic destruction of the treatment. It is therefore necessary to protect the substrate against rising damp. If moisture is present in the substrate and cannot be prevented, then a system must be chosen that is water vapour permeable (cementitious system or a water-based coating).

Surface preparation

To ensure proper adhesion of a floor treatment to the substrate, it is necessary for the substrate to be sound, dry and clean. Existing substrates are often contaminated with oil or chemicals and new substrate always has laitance over its surface. Whatever the state of the substrate, proper surface preparation is required to obtain proper adhesion between the substrate and the floor treatment. There are various methods of surface preparation. Those most frequently used include:

(a) Captive shot blasting

This is the most usual method. It consists of pressure-spraying the substrate with metal particles which are then sucked up again in closed circuit. This system has been developed to meet the growing demand for a dust proof surface preparation.

(b) Scarification

Scarification is used primarily for the removal of concrete, brittle coatings and polymer overlays. A scarifier may also be used to profile concrete surfaces for the application of self-levelling systems, broadcast systems and overlays. In scarifying, rotating cutters mounted to the perimeter of a drum impact the substrate surface at a high rate of speed. The impact of the rotating cutters fractures and pulverizes the substrate, creating a surface profile. It helps to remove oil and contaminants, mill scale and rust, glues and adhesives.



(c) Grinding

Grinding is used to remove coatings, thin polymers overlays and deposits. It may also be used to create or eliminate concrete profiling. In grinding, rotating abrasive stones or discs impact the surface at a high rate of speed. The grinding stone or a disc is applied under pressure and moved across the surface until the desired effect is achieved. The grinder is guided in a circular overlapping paths producing little if any pattern. It removes coatings or adhesive residues, smoothing or flattening concrete slabs and helps in removing surface imperfections and contaminants.



(d) Flatness and roughness of the substrate

The condition of the substrate is very important in the selection of surface preparation. If the substrate is not level or if the floor has to be made with a slope, then a system has to be chosen that has enough layer thickness to meet the requirements. If the substrate is too rough for the floor treatment selected then a scrape layer must be laid first. This scrape layer usually consists of a resin with the same properties as the final treatment, for instance an epoxy scrape layer for an epoxy treatment.



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