

# Nitoflor Floorcrete PU

(Formerly known as BP Floorcrete PU)

## Polyurethane based Heavy Duty Floor Coating System

### Description

A high performance, chemically-cured, solvent-free self-leveling Pu floor coating with excellent chemical, corrosion, moisture, stain and abrasion resistance suitable for areas wherever a robust long lived floor is required.

### Benefits :

- Seamless and durable finish.
- Excellent resistance to acids and alkali.
- Easy to clean, Low maintenance requirement & very attractive look.
- High abrasion and impact resistance
- Non-skid floor
- Volatile Organic solvent free, odorless.
- Fast installation & outstanding hardness and toughness.

### Area of Usage :

To provide an easy to clean, chemical resistant and hard wearing floor finish. For use on the areas where hygienic, clean and high resistance to chemical and mechanical attack are required. Typical areas of use include food & beverage plants, pharmaceuticals, traffic aisles in factories or warehouse, hospitals, laboratories, corridors, public housing and public buildings.

### Application Areas at a Glance :

- Textile and Garments Floors
- Food and Beverage Plants
- Warehouses and Storages
- Electric Components Manufacturing Plants
- Power Plants
- Parking Areas in Basement
- Chemical Plants
- Pharmaceuticals Production Floors\*
- Hospitals and Laboratories

### Note :

- For Pharmaceutical and medical application, additional two coats (80-100 micron) of PU Finish is required over Nitoflor Floorcrete to be complaint with the hygiene requirement.
- Berger offers Nitoflor Floorcrete Flooring from wide range of RAL shade colors.

## PERFORMANCE GUIDE

### FILM PROPERTIES (Ref:LV)

Compressive Strength (DIN N ISO 604)	around 50 MPa
Flexural Strength (DIN EN ISO 178)	around 16 MPa
Bond Strength (Pull-off) (ASTM D4541)	≥ cohesive strength of concrete
Abrasion Resistance (C & CA Abrasion as per BS8204)	< 0.05mm
Taber Abrasion (CS 17 wheels)	118 mg
Impact Resistance (ASTM D2794)	Good
Coefficient of thermal expansion (ASTM C531)	Around 2.5 x10 <sup>-1</sup> /°C
Shade D Hardness	Around 83
Adhesive strength to concrete (BS6319)	Concrete failure
E-Modulus (Compression) for 4mm	2.4 x 10 <sup>3</sup> MPa
E-Modulus (Compression) for 9mm	3.5 x 10 <sup>3</sup> MPa
Density (BS 6319)	1.93 gm/cm <sup>3</sup>

### Temperature Resistance (Ref : LV)

Coating does not start to soften until temperatures above 130°C are exceeded. Specifications are available that are fully serviceable up to 130°C and resistant to occasional spillage up to 150°C. Properly applied Coating can withstand regular and routine discharges of boiling water, hot oils and fats.

### Performance Guide

R= Resistance

L= Limited Resistance

### Chemical Resistance (Ref :LV)

HCL Solution 10%	R	Acetic acid 25%	R
NaOH Solution 10%	R	Aniline	R
Salt solution	R	Phenol 5%	L
Acetone	L	Butanol, Xylene, Glycerin	R
Methanol	L	Lactic Acid 25%, Muriatic acid 36%	R
Crude Oil	L	Sulphuric acid 45%	R
Citric Acid 20%	R	Castor Oil, Milk	R
Oleic Acid	R	Fats, Beer, Urea 50%	R

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## Product Data

Composition	Pigment: Lightfast Lead Free pigments Binder : Polyol & Polyisocyanate
Solids Content	97 - 98%
VOC (gm/ltr)	< 20 gm/Ltr
Theoretical coverage	Theoretical coverage which can be achieved under normal conditions is 1.5 ft <sup>2</sup> /kg at 4mm thickness (i.e 1kg mixture of following ratio)
Shelf life	Part A, B and C - 12 months and aggregate - 6 months at 25°C unopened
Mixing ratio by weight(kg)	Part A (Base): Part B (Curing Agent): Part C (Aggregates) : Part D (Colorants) =2.58 (Base) : 3.28 (Curing agent): 13.94 (Aggregates) : 0.2 (Colorants)
Induction Time	None
Pot Life	15 to 20 minutes depends on atmospheric condition.
Pack Size	20 kgs unit comprising Base : 2.58 kg; Curing agent: 3.28kg; aggregates : 13.94kg; Colorants: 0.2kg
Colour Range	Available in Cream & Grey tones. However, subject to special requirement RAL Color shades can be provided.

## APPLICATION

Thinning	DO NOT THIN
Direction for use Priming Mixing	Use Nitoflor Floorcrete Primer and allow to dry overnight before topcoat. The product is supplied in proportionate 4-component containers. Only full containers may be mixed. Never split proportion packs. Add Colorant D to Base A container. Mix with slow speed drill and Helical spinner head for maximum 2 minutes. Transfer to large container and add Curing agent B and mix in the Aggregates C with a drill and Helical spinner or in a pan type mixer, until uniform (maximum 3 minutes). Take care to minimise the entrain air and do not add solvent or thinner.
Application	Immediately after mixing, spread the mixture using a steel trowel to the required thickness.

Curing times Initial Cure (Light Traffic)	24 hrs
Full Cure (Heavy Traffic)	3 days

## PRE-APPLICATION

Substrate	Must be of sufficient strength to support loads applied through the topping. Concrete substrate must be free from curing compound and concrete sealer. Cohesive strength/pull-off strength of concrete substrate should not be less than 1.5N/mm <sup>2</sup> . Substrate compressive strength should be 25 N/mm <sup>2</sup> . Substrate temperature should be 20°C (minimum) to 40°C (maximum)
	Proper surface preparation includes the following :
	1. Inspection of the concrete substrate
	2. Removal and replacement of non-durable concrete.
	3. Decontamination of the concrete surface
	4. Creation of surface profile
	5. Repair of surface irregularities
REQUIREMENTS	Must be free from rising damp. If moisture content is above 30% RH, use two coats of Primer. all contamination must be removed to give a clean dry textured surface.

## SURFACE PREPARATION

Old Concrete	Totally enclosed shot blasting or scari-fication. All residues must be removed to provide a dry, dust free open textured surface. all surfaces must be sound, dry, clean and free of oil grease, dirt, mildew, form release agent curing compounds, efflorescent, loose and flaking paints and other foreign substance.
	All damaged areas of floor should be made good and level before applying over the Nitoflor SLE Primer
	To level light undulations in the floor, a scratch coat of Nitoflor SLE can be applied followed by a 60 mesh sand scatter to smoothen and allowed to cure prior to application.

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NEW CONCRETE SURFACES	Set at least 30 days before painting. pH must be 10.0 or lower. Recommended moisture level is <40%. Remove laitance and roughen unusually slick pured or precast concrete by sand sweeping. Remove loose aggregate.
STEEL SURFACES	All oil, grease contaminants, loose rust, loose scale and loose paint must be removed. Best performance will be obtained by treating all surfaces with Nitoflor SLE remover followed by Rust remover, following by a high pressure water wash and allow to dry. Prime with Nitoflor SLE Primer

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## Important note :

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