



Nitoflor® PU250

Pigmented high build polyurethane floor coating

Uses

Nitoflor PU250 provides a high build, hardwearing, chemical and abrasion resistant floor finish.

It can be used as slip resistant coating in wet areas where a high degree of chemical resistance is required eg. breweries, dairies, soft drinks production etc.

Advantages

- **Hardwearing** - Durable, low maintenance cost.
- **Chemical resistant** - Proven against a wide range of industrial chemicals.
- **Solvent free** - No odour during application.
- **Slip resistant** - Different textures available to suit conditions.
- **Seamless** - Liquid applied giving complete protection
- **Attractive** - Available in a wide range of colours to improve the working environment and identify the slip hazard areas.

Description

Nitoflor PU250 is a solvent free two part polyurethane system possessing excellent chemical resistance. It comprises inert graded silica and powder polymers which provide excellent abrasion resistance. It has excellent adhesion to cementitious surfaces and when cured, forms a semi-gloss flexible film. It penetrates the surface to bind together the particles to produce a hardwearing and impermeable surface. It is supplied in pre-weighed packs which requires mixing on site.

Technical Support

Fosroc provides a free technical advisory service supported by a team of specialists in the field.

Properties

Recommended thickness per coat:

| | |
|--|--------------------|
| DFT | - 250 microns |
| Number of coatings recommended | - 1-2 |
| Pot life | - 30 min @ 25°C |
| Recoatable | - 6-8 hours @ 30°C |
| Full cure | - 7 days @ 30°C |
| Minimum Application temperature | - 15°C |

| | |
|-----------------------------|------------------------|
| Tensile strength* | - 4.3N/mm ² |
| Elongation at break* | - 77.7% |
| Tensile modulus* | - 27.9 |

* as per ASTM D412

Chemical Resistance

Nitoflor PU250 floor coating is resistant to chemical attack at ambient temperature, under the following exposure conditions:

| | |
|-----------------------------|--------------------|
| Hydrochloric acid (35%) | Occasional contact |
| Nitric acid (15%) | Occasional contact |
| Sulphuric acid (10%) | Occasional contact |
| Citric acid (10%) | Occasional contact |
| Sodium hydroxide (50%) | Occasional contact |
| Ammonia (10%) solution | Occasional contact |
| Bleach concentrate | Occasional contact |
| Urea (saturated) | Regular contact |
| Sugar (saturated) | Regular contact |
| Sodium Chloride (saturated) | Regular contact |
| Methanol | Occasional contact |
| Butanol | Occasional contact |
| Mineral spirits | Regular contact |
| Xylene | Occasional contact |
| Lubrication oil | Regular contact |
| Gasoline | Occasional contact |

At elevated temperature or where mixtures of chemicals are involved, the effects may be different than the above result, Fosroc shall be contacted for advice.

Application Instructions

Surface preparation

The long term durability of any resin floor system is determined by the adhesive bond achieved between the flooring material and the substrates. It is most important therefore, that substrates are correctly prepared prior to application.

New Concrete Floors

The floor concrete should be at least 28 days old and give a hygrometer reading not exceeding 75% RH., when tested in accordance with BS8203 Appendix A. It should be sound and free from contamination such as oil and grease, mortar and paint splashes or curing compound residues. Laitence should be removed by light mechanical scabbling, grinding or grit blasting. Light laitence can be removed by acid etching with Reebaklens followed by thorough washing with clean water, vacuum cleaning and then allowing the surface to dry.

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Old concrete floors

Where deep seated contamination has occurred, mechanical methods such as blasting, grinding or scabbling should be used to provide a suitable clean surface.

Priming

Only surfaces which are very porous and those subjected to acid attack should be primed with Nitoprime 34 primer.

Nitoprime 34 primer should be mixed in the proportions supplied. Add the entire contents of the hardener Can to the base Can. After thorough mixing, preferably using a slow speed drill with paddle, the primer should be applied in a thin, continuous film using a roller or stiff brush. Work the primer well into the surface of the concrete taking care to avoid puddling or over application.

Mixing

In a separate mixing vessel, use a slow speed drill with paddle to mix the base and hardener of Nitoflor PU250 for at least 3 minutes (until an even color is obtained). Mix these components in the quantities supplied taking care to ensure all containers are scrapped clean. Do not add solvent / thinners at any time.

Laying

Using a good quality nylon brush or a medium 3/8' pile roller applying the mixed material on the floor surface until an even coverage is obtained. Ensure the loose pile on the roller are removed before use. The second coat can be applied when the first coat is tack free.

For slip resistance, immediately after first coat, sprinkle Nitoflor antislip grains to completely cover the base coat i.e., sprinkle excess dressing aggregate to completely obliterate the base coating.

Alternatively, the aggregate can be broadcast in a light random dressing to provide a less dense finish.

When the base coat has reached initial cure, after 12 hrs. at 30°C, the excess aggregate should be vacuum cleaned from the surface.

The top coat can now be applied by a medium pile roller. Care should be taken to ensure that continuous film is achieved and rough surface caused by the aggregate is completely sealed.

This top coat must be applied within 36 hours @ 30°C of the application of the resin base coat.

Expansion Joints

Expansion joints in the existing substrate must be retained and continued through the Nitoflor PU250 coating.

Cleaning

Tools and equipment should be cleaned with Nitoflor Sol immediately after use. Spillage should be absorbed with sand or sawdust and disposed off in accordance with local regulations.

Estimating

Packaging

| | |
|--------------------------|--------------------|
| Nitoflor PU250 | 5kg. (3.8 L) pack. |
| Nitoprime 34 | 1 & 3 ltr. packs |
| Nitoflor Antislip grains | 25 kg. bag |

Coverage

| | |
|--------------------------|--|
| Nitoflor PU250 | 14-16m ² per pack of 5kg. per coat @ 250 microns dft. |
| Nitoprime 34 | 6-8 m ² /Ltr. |
| Nitoflor Antislip Grains | 12m ² /bag gross 6 m ² /bag net |

However, the practical coverage depends on texture and porosity of the surface and may be lower than theoretical coverage.

Alternatively, aggregates to give a finer and coarser texture are available on request.

Storage

Shelf Life

| | |
|----------------|----------|
| Nitoflor PU250 | 6 months |
| Nitoprime 34 | 6 months |

Nitoflor PU250 floor coating should be stored in accordance with the statutory regulations with regard to highly flammable liquids and gases. Store in cool, dry place as material is very sensitive to moisture.



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Precautions

Health and safety instructions

Gloves and goggles should be worn while handling the materials. If contact with skin occurs, washing with detergent and water is suggested. Solvent should not be used. Direct contact with eyes will cause irritation and may cause serious damage if left untreated. Any eye contamination should be washed thoroughly with plenty of water and immediate medical treatment sought.

Fire

Nitoflor PU250 floor coating and Nitoprime 34 primer are flammable. Adequate ventilation should be ensured and should be used near a naked flame. Smoking is prohibited during handling / application of the product.

Additional Information

Fosroc manufactures a wide range of products which includes admixtures, surface treatments, grouts, anchors, repair mortars, fluid micro concretes, chemical resistant epoxy mortars in addition to comprehensive range of protective coatings. In addition, a wide range of complementary products are available. This includes joint sealants, waterproofing members and adhesives.

Separate datasheets are available on these products.



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Important note :

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INDIA/2005/0609/A