Technical Data Sheet

ARMOFLOOR PU400

High Build Flexible Polyurethane Floor Coating

Description:

ARMOFLOOR PU400 is a solvent free high build elastomeric, polyurethane floor coating, introduced in dual pack system, colored to choice and for mechanical and chemical protection of floors, pavements reinforced concrete and metal structures.

ARMOFLOOR PU400 adheres perfectly to a variety of supports like: concrete, metal, wood, stoneware, etc. A slip resistant texture can be provided by the use of one of anti-slip MATEX Quartz range which have been carefully graded to ensure an even texture.

Uses:

ARMOFLOOR PU400 is used as a coating or within a system at:

- Wearing course with crack bridging properties for wet working areas (food processing, poultry faculties, cold stores)
- Industrial floor in production and storage facilities, workshops, etc.
- Hospitals, clinics and laboratories.
- Car parks, decks and loading ramps.
- Decorative flooring for shops and malls.
- Metal surfaces.

Advantages:

- Solvent free, no odor during application
- Flexible and tough – elastic.
- Elastomeric flooring systems, crack bridging.
- Integrates waterproofing systems at car park decks.
- Excellent mechanical and abrasion resistant.
- Durable and low maintenance cost.
- Excellent resistance to a range of chemicals
- Excellent adhesion.
- Slip resistant - different textures available to suit conditions to avoid slipping.
- Liquid applied providing complete protection.
- Can achieve 200 microns per coat which means less labor cost.

Instructions for Use:

ARMOFLOOR PU400 should be applied by specialist contractors who must follow the Product Method Statement. Consult with MATEX Technical Department for a list of approved applicators.

Surface Preparation:
All surfaces should be sound, clean, dry and free from loose material, efflorescence, laitance, curing compounds, dirt, oil and grease. Ensure that concrete floors are fully cured and have moisture content less than 4%. Prepare surface utilizing mechanical preparation method: grinding, captive blasting, sand blasting in order to provide suitable profiled open texture surface. If the substrate is restricted to access, utilise preparation by handy mechanical tools.

All repairs to cracks, levelling of floor, voids filling should be completed by LAVAPOXY or LAVAPOXY FINISH - epoxy based repair products. Once the repair is completed allow the product to cure then thoroughly remove the dust from the surface, preferably by vacuum. Apply a rich coat of ARMOPRIME EP100 or ARMOFLOOR PU to the substrate prior to application of ARMOFLOOR PU400. The primer can be applied at a spread rate of 8 to 10 m^2/Lt depending on substrate porosity.

For applications on metal surfaces, the surface should be mechanically cleaned by sand blasting or by wire brush to remove the rust and corrosion residues. Apply the primer immediately after the cleaning to prevent oxidization process to start at surface. Wooden floors should be clear from nail heads and punch below surface. Sand the floor with a coarse abrasive first, then with a fine abrasive in the direction of the grain till a smooth surface is achieved.

Mixing:
The system consists of pre-weighed base & hardener components. Mix the contents of component A (Base) with a low speed mixer for one minute to homogenize

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the content of the container. Slowly add the contents of part B (Hardener) to Part A container and mix the materials thoroughly with low-speed mixer fitted with a suitable paddle for an interval of 2-4 minutes confirming a homogenous, color consistent, lump free mixture is reached. Transfer the contents of the mix into a separate clean container and mix for further 30 seconds.

Application:
Temperature Requirement:
Substrate Temperature: 15°C to 40°C
Material Temperature: 15°C to 25°C
Substrate temperature must be at least 3°C higher than the dew point temperature. Preconditioned materials at 20°C to 25°C will reduce possibilities of flash/slow setting and other defects.

After mixing apply two coats of ARMOFLOOR PU400 by brush, roller or spray machine. Each coat can be applied with a thickness of 200 microns DFT to reach the thickness of 400 microns DFT in two coats.

For anti-slip flooring, spread the selected size Quartz in the rate set by design while the coating is wet. Once the surface is dry (12-24 hours), remove excess silica sand and apply the second coat as required. For heavy traffic areas such as drive lanes, ramps, turn areas, or other areas subjected to high abrasive traffic, apply a third coat of ARMOFLOOR PU400. Subsequent coats of the product should be applied within a time frame of 24 hours.

Standards:

- ASTM D4541, ASTM D4060, ASTM D412, ASTM C836

TECHNICAL PROPERTIES	
Appearance	Liquid coating
Color	Matex Flooring Color Chart
Density	1.40 ± 0.03 kg/lit
Pot-life time at 25°C	30 minutes
Application Temperature	+5°C to +40°C
Full Traffic Use at 25°C	7 days
Bond Strength (ASTM D4541)	2.2 N/mm^2 (Cohesive failure of concrete)
Elongation (ASTM D412)	100%
Tensile Strength (ASTM D412)	6.0 N/mm^2
Crack Bridging (ASTM C836)	>2 mm
Shore D Hardness (ASTM D2240)	>65
Abrasion Resistance (ASTM D4060)	<40 mg/ 1000 cycles
VOC	< 10 g/Ltr.

*Values indicated may vary depending on the environment and conditions of the material. Figures given are tested according to standard laboratory conditions.

Coverage:

ARMOFLOOR PU400 achieves coverage of 4-5 square meters per liter @ 200 micron DFT (Dry film thickness) per coat.
*Coverage rate is an approximate value, and subject to actual site conditions.

Packaging:

ARMOFLOOR PU400 is available in 4 liter and 15 liter set of two parts metal containers.

Storage:

Store in original packing in dry conditions away from direct sunlight in temperature controlled warehouse. Store at +5°C to 25°C

Shelf Life:

ARMOFLOOR PU400 can be utilized within 12 months of production date if stored in proper conditions in an unopened original packing.

Cleaning:

- Clean tools with ARMOSOLVENT promptly before material hardens. Hardened materials must be mechanically removed.

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Remarks:

- ARMOFLOOR PU400 should not be applied onto surfaces likely to suffer from rising dampness or moisture content.
- ARMOFLOOR PU400 should not be applied at ambient temperature less than 5°C.
- ARMOFLOOR PU400 should not be applied to asphalt, weak or friable concrete, PVC tiles or asphalt sheet substrates.
- ARMOFLOOR PU400 should not be applied if the surface relative humidity is more than 75%.
- All existing expansion or movement joints should be followed through the new floor surface.
- ARMOFLOOR PU400 may change color or fade if exposed to sunlight but this has no effect on its performance characteristics.
- Pay attention to aggressive cleaning cycles and temperatures of both chemicals and cleaning regimes.
- Prior to application, ARMOFLOOR PU400 kits should be stored under cover in air conditioning and protected from extremes of temperature which may cause inconsistent workability, finish and cure times of the mixed material.

Health and Safety:

- Avoid contact with eyes and skin. Wear suitable protective clothing such as coveralls, goggles, dust mask and gloves. Use barrier cream. Ensure that there is adequate ventilation. Do not breathe vapor or spray mist.

FIRST AID:

Eyes:	In the event of accidental splashes, flush with warm water and seek medical advice.
Skin:	Wash skin thoroughly with soap and water
Inhalation:	Remove to fresh air, keep patient rested
Ingestion:	Do not induce vomiting. Seek immediate medical attention.

For further safety information, please refer to ARMOFLOOR PU400 Material Safety Data Sheet.

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