

ARMOFLOOR S3240

Polyurethane Flexible Protective Waterproof Traffic Deck System

Description:

ARMOFLOOR S3240, a UV stable multi-layer, heavy duty polyurethane traffic deck system designed to provide elasticity, high mechanical and chemical resistance for concrete flooring.

The system is developed based on high quality durable polyurethane resins, manufactured to deliver elasticity and high mechanical strength with various finishes, for anti-skid purposes according to the aggregate selection, within the system, if required.

ARMOFLOOR S3240 is a system based on high quality polyurethane resins recommended for indoor and outdoor applications with high stability against UV rays and direct sun light exposure.

Uses:

ARMOFLOOR S3240 is generally used for car parks and industrial flooring characterized with high mechanical and chemical resistance requiring elasticity and waterproofing features. Wider range of applications include:

- Car parks for multi store buildings
- Industrial facilities.
- Food and vegetable stores
- Poultry facilities
- Stores and warehouses flooring
- Laboratories and medical facilities
- Shopping malls and pedestrian areas

Advantages:

- High impact resistant, with excellent abrasion resistance.
- Waterproof with crack bridging ability.
- Flexible and accommodates substrate movement.
- Excellent resistance to a wide range of chemicals.
- Durable with long life span and low maintenance.

- Excellent resistance to a wide range of chemicals.
- Excellent adhesion with substrate, with bonding strength greater than concrete cohesive strength.
- Anti-slip characteristics when integrated with QUARTZ aggregates.
- UV resistant, applied both for interior and exterior applications.

Chemical Resistance:

ARMOFLOOR S3240 system is resistant to wide range of chemicals.

CHEMICAL RESISTANCE		
Material	Concentration	Resistance
Citric Acid	10%	Excellent
Sodium Hydroxide	50%	Excellent
Acetic Acid	10%	Excellent
Butanol	-	Excellent
Nitric acid	10%	Excellent
Mineral Oil	10%	Excellent
Ammonia		Excellent
Sea Water		Excellent
Jet Fuel		Excellent

ARMOFLOOR S3240 SYSTEM:

ARMOPRIME EP100	Two component solvent free low viscosity epoxy primer.
ARMOFLOOR MB4	High build elastomeric two component liquid applied waterproofing membrane.
QUARTZ	Dry, graded silica sand
ARMOFLOOR PU400	High build flexible polyurethane floor coating
ARMOFLOOR UVR	Two parts solvent based UV pigmented top coat
ARMOFLOOR LM	Line marking coating

Colors:

ARMOFLOOR S3240 system with ARMOFLOOR UVR top coat is available in various colours including: light grey, grey, dark grey, green blue, brick red, beige and light green. Refer to MATEX Flooring Colour Chart.

ARMOFLOOR S3240

Application Thickness:

ARMOFLOOR S3240 can be applied in the following thickness to achieve desired results:

PRIMER	ARMOPRIME E100	100-125 micron
Intermediate Layer	ARMOFLOOR MB4	1.5 - 2 Kg/m ²
Aggregate	QUARTZ	1.5 – 2.5 Kg/m ²
2 nd PU Layer	ARMOFLOOR PU400	250 micron
UV Protection	ARMOFLOOR UVR	100 micron
Line Marking	ARMOFLOOR LM	As per drawing

Average thickness of the above system will vary between 1.0 to 1.5 mm, depending on aggregate application.

Instructions for Use:

Surface Preparation:

All surfaces should be sound, clean, dry and free from loose material, efflorescence, laitance, curing compounds, dirt, oil and grease. Concrete floors should be fully cured.

The right surface preparation will ensure proper bonding between the screed and the substrate. It is always recommended to prepare the floor utilizing mechanical preparation method: grinding, captive blasting, sand blasting. If the substrate is restricted to access, utilise preparation by handy mechanical tools.

Remove all damaged concrete and ensure sound concrete reached, then perform repairs to cracks, levelling of floor; voids filling by means of LAVAPOXY range Epoxy based repair products, for smoothing and minor repair, apply LAVAPOXY FINISH, for more coarse repair apply the LAVAPOXY range.

Mixing:

ARMOFLOOR S3240 products are mixed mechanically with low speed drill mixer fitted with suitable paddle. To prepare the mix, add the contents of Part B (hardener) to Part A (base) container, and mix for minimum of 3 minutes till obtaining a homogeneous mix. Do not mix the base and the hardener partially. Mix the complete kit at a time.

Application:

Priming:

Apply a rich coat of ARMOPRIME EP100 to the substrate prior to application of subsequent layers; the prime can be applied in a spread rate of 8-10 m²/Ltr. depending on substrate porosity.

Polyurethane MEMBRANE:

Within 4-24 hours from application of primer, apply a layer of ARMOFLOOR MB4 with a nominal thickness of 1 mm – 1.5 mm. The mixed material is poured onto the primed surface and spread evenly with a notched trowel. Continuous spiking with a spiked roller is to be done to remove all entrapped air. For anti-slip features, while the coat is still tacky, broadcast the QUARTZ at a rate of 1-2 Kg per square meter to achieve anti-slip properties.

PU Coat:

After 24 hours, swipe the excess aggregates and clean the surface properly. Apply second coat of epoxy ARMOFLOOR PU400 at a rate of 250 microns per sqm.

Top Coat:

Apply ARMOFLOOR UVR protective UV resistant abrasion resistant coat shall be applied in two coats with thickness of 75 - 100 microns each coat.

Allow the system to cure for at least 7 days then apply line marking to the drawings utilizing ARMOFLOOR LM.

Technical Properties:

ARMOPRIME EP100

TECHNICAL PROPERTIES	
Appearance	Liquid
Color	Transparent, pale
Density	1.05 ± 0.03 kg/lit
Viscosity at 25°C	300 – 700 cps
Dry Residual	100%
Pot-life time at 25°C	60 minutes
Hardening at 25°C recoat interval	12 hours
Completely Hardened	7 days
Bonding strength (ASTM D4541-02)	>2.0 N/mm ² (greater than cohesive strength of concrete substrate)
Compressive Strength (ASTM C579)	70 N/mm ²

ARMOFLOOR S3240

Flexural strength (ASTM C580)	15 N/mm ²
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ARMOFLOOR MB4

PHYSICAL PROPERTIES	RESULT
Color	Neutral
Density	1.45 ± 0.03 kg/lit
Pot life@25°C	30 minutes
Application Temp.	+5°C to +40°C
Touch Dry	8-12 hours
Full Dry	7 days
Adhesion to concrete (ASTM D4541)	>2.0 N/mm ²
Shore A Hardness (ASTM D2240)	50
Crack bridging (ASTM C836)	Passes 2.0 mm
Tensile strength (ASTM D412)	>5.0 N/mm ²
Elongation at Break (ASTM D412)	300 %
Tear Resistance (ASTM D624)	18 N/mm
Water vapor transmission (ASTM E96)	0.3 g/h/m ²
Service Temperature	-5°C to +80°C

ARMOFLOOR PU400

PROPERTIES	RESULTS
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
Bond Strength (ASTM D4541)	2.2 N/mm ² (Cohesive failure of concrete)
Elongation (ASTM D 412)	100%
Tensile Strength (ASTM D 412)	6.0 N/mm ²
Crack Bridging	>2 mm
Shore D Hardness	>65
Abrasion Resistance (ASTM D 4060)	<40 mg/1000 cycles
Service Temperature	-5°C to +80°C
VOC	< 10 g/Ltr.

ARMOFLOOR UVR

PROPERTIES	RESULTS
Color	Standard Matex Color Chart (further colors are available on request)
Density	1.30 ± 0.03 kg/lit
Pot-life time at 25°C	60 minutes
Drying time @23°C	Recoating: 12-24 hours Light traffic: 24-48 hours Vehicle traffic: 7 days

Dry Coat Thickness	75-100 μ
Application Temperature	+5°C to +40°C
Adhesion to Concrete (ASTM D4541)	>2 N/mm ² (Cohesive failure within concrete)
Tensile Strength (ASTM D412)	>5 N/mm ²
Abrasion Resistance (ASTM D4060)	90 mg/1000 cycles

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

Packaging:

ARMOFLOOR S3240 System is available as:

ARMOPRIME EP100	15 Liter Kit
ARMOFLOOR MB4	15 Liter Kit
QUARTZ	25 Kg Bag
ARMOFLOOR PU400	15 Liter Kit
ARMOFLOOR UVR	15 Liter Kit
ARMOFLOOR LM	20 Kg. metal pail

Storage:

Store in original packing in dry conditions away from direct sunlight with temperature between 5°C to 35°C

Shelf life:

If stored as recommended, products in the system will remain stable for 12 months from the date of manufacturing.

Cleaning:

Tools used to mix and apply ARMOFLOOR S3240 can be cleaned with ARMOSOLVENT before hardening. Hardened materials can only be removed mechanically.

Remarks:

- ARMOFLOOR S3240 should not be applied onto surfaces likely to suffer from rising dampness or moisture content.
- ARMOFLOOR S3240 should not be applied at ambient temperatures less than 5°C.
- ARMOFLOOR S3240 should not be applied to asphalt, weak or friable concrete, PVC tiles or asphalt sheet substrates.

ARMOFLOOR S3240

- ARMOFLOOR 3240 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.
- Pay attention to aggressive cleaning cycles and temperatures of both chemicals and cleaning regimes.
- Prior to application, ARMOFLOOR S3240 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 vapour or spray mist. The product is flammable, keep away from sources of ignition. DO NOT SMOKE. Take precautionary measures against static discharge.

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 individual Material Safety Data Sheet of each product in the system.

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