

Technical Data Sheet

ARMOFLOOR EC5000

High Performance Epoxy Based Floor Screed

ARMOFLOOR EC5000 is a three-component, heavy duty epoxy floor screed system designed to provide high mechanical, and chemical industrial flooring. It is composed of epoxy base hardener in addition to specially graded filler. Once mixed it produces highly durable impact resistant, abrasion resistant floor screed that removes irregularities giving a uniform surface and accepts further finishes as part of a multi-layer system. It is normally applied for a thickness of 5-15 mm. ARMOFLOOR EC5000 can also be used as a repair epoxy mortar where high compressive strength is required.

Uses:

ARMOFLOOR EC5000 is generally used for industrial flooring characterized with high mechanical and chemical resistance. Wider range of applications include:

- Hygiene, maintenance free flooring such as food processing, dairies, etc.
- Heavy duty industrial facilities.
- Stores and warehouses flooring and loading bays.
- Mechanical and chemical workshops.
- Hangers and heavy equipment stores.
- Army vehicles hangers.
- Chemical and oil plants.
- General repairs for floors subject to heavy traffic.
- Coving filling in manholes and sewage works.

Advantages:

- High impact resistant, with excellent abrasion resistance.
- Excellent mechanical resistance with high compressive, flexural strength.
- Durable with long life span and low maintenance cost.
- Acting as waterproof layer.
- Excellent resistance to a wide range of chemicals.
- Excellent adhesion. Bonding strength with substrate is greater than concrete cohesive strength.
- Slip resistant surface for safe trafficking.

Instructions for Use:

ARMOFLOOR EC5000 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. 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, sandblasting. If the substrate is restricted to access, utilize preparation by handy mechanical tools. Perform repairs to cracks, levelling of floor; filling of voids by means of LAVAPOXY-epoxy based repair product. Remove dust thoroughly from surface, preferable using vacuum.

Apply a rich coat of ARMOPRIME EP100-solvent free epoxy primer to the substrate prior to application of the screed. Primer can be applied in a spread rate of 4 to 6 m²/Lt. depending on substrate porosity. Lightly broadcast QUARTZ No. 1 over the wet primer surface.

Mixing:

The system is supplied as a three parts kit. Mix the contents of component A (Base) with a low speed mixer for one minute to homogenize the contents of the container. Slowly add the contents of part B (Hardener) to Part A container and mix thoroughly for 2 minutes. Then slowly add the contents of Part C (Filler) while ensuring continuous mixing for an interval of 3-4 minutes confirming a homogenous, color consistent, lump free, mixture is achieved.

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It is strongly recommended to mix the contents of the kit and not to do partial mixing. Use a heavy duty low speed drill fitted with a suitable paddle for mixing.

Application:

All necessary preparations should be done before start mixing the contents of the kit. The work area should be divided into bays and governed by guides (metallic or wooden) to the desired thickness of the screed. The level required should be measured by the upper top of the guides to level the floor evenly. Once mixed, the material must be used within its pot life. Pour the mixed mortar on the floor when the primer is still in a tacky condition.

Pour the ARMOFLOOR EC5000 mixture to the floor within the work area and spread the material by trowel, after pouring the proper quantity to the governed area. Level the screed to the top level of the guides using a clean smooth metallic trowel. Apply pressure to compact the epoxy screed while leveling to avoid gaps or air pockets in the screed floor.

Smoothing the surface of the screed with a smooth trowel is essential to produce a smooth epoxy surface that can directly go into service after curing. Allow 1 day for pedestrian traffic and 7 days for heavy traffic. For decorative or marking reasons, a coat of ARMOFLOOR EP500 can be applied to color the ARMOFLOOR EC5000 screed.

Standards:

- EN 13813(SR)
- ASTM C579, C580, D4541, D4060, C307

TECHNICAL PROPERTIES	
Color	Pale grey, other colors upon request
Mixed Density	2.0 ± 0.03 kg/lit
Pot-life time at 25°C	45 minutes
Completely Hardened	7 days
Foot Traffic	After 24 hours
Vehicular Traffic	After 48 hours
Adhesion Strength (ASTM D4541-09)	2.5 N/mm ²

Compressive Strength (ASTM C579)	>85 N/mm ²
Flexural strength (BS EN 1015)	18 N/mm ²
Tensile Strength (ASTM C307)	6.0 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.

Coverage:

An ARMOFLOOR EC5000 kit achieves approx. coverage of 1.5 square meters per set @ 1.0 cm thickness.

*Coverage rate is an approximate value, and subject to actual site conditions.

Packaging:

ARMOFLOOR EC5000 is available in 30 kg set of 3 parts (two parts metal containers and a bag of filler).

Storage:

Store in original packing in dry condition away from direct sunlight in a closed warehouse.

Shelf Life:

ARMOFLOOR EC5000 can be utilized within 12 months of production date if stored in proper conditions in an unopened original packing.

Remarks:

ARMOFLOOR EC5000 should not be applied in the following situations:

- Onto surfaces likely to suffer from rising dampness or moisture content.
- When surface relative humidity level exceeds 75%.
- When temperature is below 5°C or above 40°C.
- On asphalt, weak or friable concrete, PVC tiles or sheet flooring.

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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 EC5000 Material Safety Data Sheet.

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