Technical Data Sheet

# ARMOLEVEL

## Cement Based, Self levelling, Thin layer, Underlayment

**Description:**

ARMOLEVEL is a single component, free flowing, self-leveling product specially designed for application over concrete floor as an underlayment for subsequent layer of floor coverings subject to pedestrian traffic such as PVC flooring, parquet flooring, linoleum and carpets. It is composed of selected cements, graded aggregates, modified with additives and flow agent. It is supplied as a dry powder which requires only the addition of water on site. When mixed with water it forms a free flowing mixture, self levelling, with easy application, and good adhesion to the support. ARMOLEVEL may be applied manually or by using a mixing pump.

**Uses:**

ARMOLEVEL is used internally to cast a thin smooth underlayment for a wide range of floor finishes including, tiles, parquet flooring carpets, vinyl sheeting, rubber flooring, in schools, hotel lobbies, theatres, hospitals, etc. It is produced in three different grades,

ARMOLEVEL L10: 3 to 10 mm thickness
ARMOLEVEL L25: 5 to 25 mm thickness
ARMOLEVEL L40: 10 to 40 mm thickness

**Advantages:**

- Self-levelling, minimal finishing required.
- Applicable in thicknesses from 3 mm to 40 mm.
- High bonding to substrate.
- Single component, ease of application.
- Minimal shrinkage with outstanding resistance to cracking.
- Stable - can be installed in large jointless areas.
- Ready for covering after 12 to 48 hours

**Instructions for Use:**

**Surface Preparation:**

Concrete substrate should have been placed for at least 28 days. All surfaces should be sound, clean, dry and free from loose material, efflorescence, laitance, curing compounds, dirt, oil and grease.

Contamination or excessive concrete laitance can be removed by utilizing grinding, captive blasting, sand blasting. If the substrate is restricted to access, utilise preparation by handy mechanical tools. Any necessary repairs should be carried out using one of MATEX range of concrete repair products. Consult with Technical Department for recommendation.

Apply a coat of ARMOPRIME AC-acrylic based primer/sealer to the substrate prior to application of the topping. Apply evenly with a lamb skin roller. Do not allow the primer to form puddles. A second coat may be necessary on porous, very absorbent substrates after drying. The function of the primer is to seal the substrate to prevent air release from the substrate which will create air bubbles and pinhole to the top surface of ARMOLEVEL. The primer will also act as a bonding agent between the substrate and the screed.

ARMOLEVEL can be applied for thickness from 3 up to 40 mm per coat, using the right grade. It is possible to apply flooring material on top of ARMOLEVEL (such as ceramic, carpet, etc.) after nearly 48 hours from curing the product (depending on the thickness, the supports humidity and weather conditions).

**Mixing:**

ARMOLEVEL must be mixed mechanically with low speed drill mixer (200-300 rpm) fitted with a suitable paddle. Mix the gauge water around 5.25-5.75 liter to the 25 kg content of ARMOLEVEL L10 & L25 and 5.0 to 5.25 liter of water for L40 grade, adding powder to

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water. Mix for minimum of 3 minutes. If bucket mixed, the product should be quickly transported to the work area and placed immediately. Always add the powder to the water, the temperature of the mix should not exceed 25°C.

Do not mix partially, use full bag contents. After mixing, do not add more water to the mixed material to increase workability. This will increase the water: powder ratio, and will eventually reduce the final material performance. If the mix stiffens, it should be discarded. Do not attempt to re-mix with water.

**Application**:

While ARMOPRIME AC is dry (approx. after 1 to 4 hours depending on climatic conditions) apply the mixture of ARMOLEVEL to the dry primed floor directly. Spread the material with a trowel and allow it to self-level. It is recommended to start in one corner placing a continuous stream of material along one edge of the area and back lap as soon as possible for a uniform, smooth surface. Tools such spiked rollers, notched squeegees, trowels and smoothers should be used to assist placement. Immediately after placing the material, roll the surface with a spiked roller to help the release of any trapped air. In normal conditions ARMOLEVEL does not require curing.

| TECHNICAL PROPERTIES | |
|---|---|
| Color | Cement Grey |
| Density at 25°C | 2.1 ± 0.05 Kg./Lt. |
| Application Temp. | +10°C to +35°C |
| Final Setting time | 4 hours @ +25°C |
| Pull off bond strength (ASTM C1042) | 1.0 N/mm² |
| Compressive Strength (ASTM C109) | L10: 20 N / mm²<br>L25: >20 N / mm²<br>L40: 30 N / mm² |
| Flexural Strength @ 28 days (ASTM C580) | L10: 5.0 N / mm²<br>L25: :>5.0 N / mm²<br>L40: >7.0 N / mm² |
| Drying Shrinkage @ 28 days (ASTM C157) | <0.1% |
| Time for tiles laying | 48 hours |

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

**Standards:**

- EN 13813
- ASTM C109, ASTM C580, ASTM C1042, ASTM C191

**Coverage:**

ARMOLEVEL 25 kg bag achieves coverage of 5.0 square meters @ 3 mm thickness
*Coverage rate is an approximate value, and subject to actual site conditions.

**Packaging:**

ARMOLEVEL is available in 25 Kg high quality recyclable bags.

**Storage:**

Store in original packing in dry conditions away from direct sunlight in temperature-controlled warehouse.

**Shelf Life:**

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

**Cleaning:**

Clean tools and equipment with water before material hardens. Hardened material can only be removed mechanically.

**Remarks:**

- ARMOLEVEL is designed for interior application use only.
- Do not expose the product during application and before setting to air currents. The product will lose self-leveling features and form a crust resulting in wrong application.
- During summer season or temperature higher than 35°C, working area should be covered to prevent the direct sun effects. Keep equipment cool and use cold water for mixing.

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- Make sufficient material, plant and labor available to ensure that application is a continuous process.
- Protect the freshly applied ARMOLEVEL from direct sunlight and/or strong drying wind.

**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 ARMOLEVEL Material Safety Data Sheet.

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