Shieldfloor CML10

Self-levelling, Cement-based Underlayment for Thicknesses (1 – 10) mm

TECHNICAL DATA SHEET

Description

Shieldfloor CML10 is a single-component, self-leveling, cement-based underlayment, that consists of a blend of specially selected types of cement, graded aggregates, polymers, and additives. It is supplied as a dry, grey powder, and only requires the addition of clean water on site. **Shieldfloor CML10** is designed to eliminate surface irregularities and provide smooth internal concrete surfaces and can be applied manually at thicknesses from 1 – 10 mm to achieve rapid, flat, and economic substrate, prior to final floor finish application.

Uses

- Light industrial floors.
- Garages, workshops, and warehouse floors.
- Refinishing old floors.
- Levelling of uneven subfloors.
- Can be used as a screed for exterior areas when sealed with an appropriate covering such as coatings.
- Filling, smoothing, and leveling of floors prior to the application of parquet, ceramic tiles, seamless resin floors, textile, or elastic floor coverings.

Characteristics / Advantages

- Indoor applications.
- High fluidity for easy placement.
- Good surface appearance and hardness.
- Excellent underlay for resinous coatings, tiles, sheet systems, and wood floor bonding systems.
- Can be used as a wearing surface/ course.
- Self-levelling and self-smoothing properties.
- Rapid drying, low odor, and low shrinkage characteristics.
- Suitable for underfloor heating systems.

Standard Compliance

EN 13813: CT-C30-F7

Safety Instructions

Shieldfloor CML10 may cause irritation to skin or eyes. Refer to the most recent Material Safety Data Sheet for information and advice on the safe handling, storage, and disposal of the product.

Typical Properties

Color / Appearance	Grey powder
Maximum Aggregate Size	600 µm
Fresh Wet Density (@ 23°C)	2.00 ± 0.1 g/ml
Working Time (@ 23°C)	20 minutes
Ready to Walk On (@ 23°C)	3 hours
Full Cure	28 days
Flow Properties (EN 12706) (30 mm ø x 50 mm ring)	(100 – 130) mm
Setting Time (EN 196-3)	Initial: 45 minutes Final: 60 minutes
Compressive Strength (EN 13892-2)	15 MPa @7 days 30 MPa @ 28 days
Flexural Strength (EN 13892-2)	4 MPa @7 days 7 MPa @ 28 days
Yield	14.5 Liters for 25 kg bag

Packaging

Shieldfloor CML10 is supplied in 25 kg bags.

Shelf Life and Storage

Shieldfloor CML10 has a shelf life of 12 months when stored in original unopened packaging in cool and dry conditions, protected from direct sunlight, heat and moisture. Shelf life may be reduced if the recommended conditions are not followed.

Application Instructions

1. Substrate Temperature

+ 5 to + 35 °C

2. Surface Preparation

The substrate must be fully cured, sound, and free from dust, loose materials, surface contamination, and any materials that may reduce bond or prevent adhesion. It is recommended to do light scabbling or grit blasting to provide a roughened key for the underlayment.

Concrete surfaces must be soaked with water to provide SSD condition. Poor quality concrete may require soaking for a significant time. Any excess water should be removed by suitable means prior to application.

3. Priming

Priming is necessary to provide a prepared surface to receive the underlayment and to increase the bond of **Shieldfloor CML10** to the substrate.

Always prime the surface with **Shieldbond AB20/ AB30** prior to application and apply the underlayment after a minimum of 2 hours, if the waiting time exceeds 24 hours, another primer coat must be applied.

4. Mixing

Shieldfloor CML10 requires 4.25 – 4.50 liters of potable water per 25 kg bag for manual hand application. For optimum results, mixing should be performed using a forced action mixing paddle, powered by a heavy-duty electric mixing drill.

Add the pre-measured amount of water to a clean mixing bucket. Add the **Shieldfloor CML10** powder slowly to the water whilst mixing and continue mixing for 2 – 3 minutes until a homogenous, lump-free consistency is achieved. Allow the mixed material to stand for 1 – 2 minutes prior to use.

Pumped Application:

It is recommended to use a conventional floor screed dual-stage mixer and pump, controlling the water dosage to achieve a flowable consistency.

5. Application

Apply the mixed material, in a single pass, by pouring it onto the prepared/primed surface. Allow the material to spread and give the required thickness using a pin rake or trowel.

Roll the material thoroughly with a long-spiked roller in two directions to remove any entrapped air and smooth out any flow lines.

For the best results, pouring and leveling should be carried out in one continuous process.

The optimum timeline for applying the following coverings:

Sealer: after 24 hours.

Ceramic tiles and parquet: after 48 hours.

Epoxy (solvent-free or solvent-based coating) for indoor applications: 72 hours after making sure moisture content does not exceed 2%.

6. Cleaning

All mixing and application equipment should be cleaned immediately with clean water.

Hardened material should be mechanically removed.

7. Curing

Shieldfloor CML10 is self-curing, but as with all cement-based products in hot weather, take adequate measures to protect from exposure to direct sunlight or hot winds, and should be covered completely within a polyethylene sheet for 3 days.

Don't use water spray or liquid membrane curing compounds as it may affect texture or prevent bonding of subsequent layers.

Consumption and Coverage

1.70 kg/m^2/1 mm thickness.

14.5 – 15 m^2 at 1 mm thickness for a 25 kg bag.

Limitations

- **Shieldbond AB20/ AB30** must be used to increase the adhesion of the underlayment. For any other bonding agent, check compatibility before application.
- Do not apply the product if the ambient temperature is less than 5°C.
- Hot weather practices should be adopted during application and curing if the temperature is above 35°C. In hot conditions, store the material in a cool environment prior to application. The working area should be covered in case of harsh weather such as heavy rain, strong winds, dust, etc.
- Not to be used on floors known to suffer from rising damp, unless treated with a suitable damp-proof membrane.
- Do not exceed the maximum recommended water content and only use clean potable water.
- Not suitable for slopes or inclines > 0.5.

Technical Support

Refer to technical information, method statement, or contact technical support team for any inquiry.

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