

MASTERCEM 400

CEMENT BASED, SELF LEVELING TRAFFIC GRADE FLOOR SURFACING

DESCRIPTION

MASTERCEM 400 is an industrial wearing purpose polymer modified self- leveling floor topping at a thickness from feather edge to 15 mm. It consists of blend of selected cements and hard wearing aggregates modified with polymers and flow agents. Mastercem 400 is supplied as a dry powder requiring only the addition of water to produce a smooth, free flowing and self- leveling material.

USES

- Mastercem 400 is designed as thin layer cementitious underlay for rough undulated floors, which forms a smooth and hard surface that is subjected to foot and forklift traffic.
- It is used for leveling and repair of old worn out concrete floor.
- Used for applications in warehouses, car parks, manufacturing facilities, office floor and rehabilitation.

FEATURES & ADVANTAGES

- One pack product: Easy to use, simple addition of measured quantity of water
- Time saving: Self- leveling, quick easy laying
- Cost effective: economical that alternates resin based system.
- Excellent bonding: Excellent adhesion to the prepared substrate
- Excellent wear resistant under fork lift and light vehicular traffic
- Dimensionally stable and can be installed in a large area.
- Rapid hardening and curing allows speedy access for floor traffic

TYPICAL PROPERTIES

The values given below are average figures based on 4.75 liters of water added per 25 kg bag of Mastercem 400. The actual values obtained at site may show minor variations from those quoted.

PHYSICAL PROPERTIES

Nature	: Single component powder
Color & appearance	: Grey cementitious free flowing powder
Compressive strength	: 30 N/mm ² in 28 days
Flexural strength	: 9 N/mm ²
Time for foot traffic	: 6 hrs
Time to light traffic	: 24 hrs
Time to Heavy traffic	: 7 days

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DESIGN CRITERIA

- Mastercem 400 is designed for application thickness of 5mm to 10mm.
- Mastercem 400 can be applied to a sound prepared concrete surface free from loose materials, oil, grease, paint etc. Concrete should have a minimum compressive strength of 25 N/mm².
- New concrete should be at least 21 days old.

DIRECTION FOR USE

SURFACE PREPARATION

The substrate should be clean and free from loose materials and contaminations such as plasters, oil, paint and grease. Excess laitance should be removed by light scabbling, oil and grease must be removed. Large cracks and holes must be filled using a mix consistency of equal volume of Mastercem 400 and clean sand made up to a trowelable mortar consistency. Porous surface such as concrete or sand – cement screeds should be first dampen down with water and primed with Mastercrete M81.

PRIMING

The object of priming is to seal the substrate to prevent air release from the subfloor rising and forming bubbles and pin holes on the surface of the floor. Extremely porous substrate may require two priming coats. Prime the surface with Mastercrete M81 as a primer.

Note: Do not apply thick coat as it may adversely affect the adhesion.

MIXING

Each 25 kg bag of Mastercem 400 requires the addition of 4.5 liters- 5.0 liters (Avg. – 4.75 liters) of cool, clean water to produce a free flowing self leveling consistency. Pour 2/3 of the mixing water into a clean mixing vessel then add the powder slowly to the water, mixing continuously with a heavy duty drill fitted with a suitable paddle. (RPM of drill should be 200 - 500). Add the remaining water. Continue mixing for at least 2- 3 minutes until a smooth creamy consistency is attained. Do not mix more Mastercem 400 than can be reasonably laid within the flow time of the material, however ensure subsequent mixes are ready to enable continuous pouring until the area to be surfaced is complete.

APPLICATION PROCEDURE

- Thoroughly prepare the floor surface.
- Prime the surface with the primer and allow drying.
- Reprime the surface if necessary.
- Pour the mixed material on the dried primed surface spread a desired thickness with a notched trowel and allow to self - level.

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- Pouring and leveling should be continuous.
- Roll the material with a spike roller as soon as it is leveled, to assist the self smoothing properties and air release.

NOTE

- If the mix stiffens it should be discarded, do not attempt to remix with water.
- Do not use below 10°C.
- Do not attempt to float the surface, if high spots or splashes of material occur on the surface it can be best removed by pairing them with the edge of a trowel after initial set.
- Do not apply on asphalt substrate.
- A normal damp proof membrane must be present in the sub floor, any under floor heating must be switched off and the floor allowed cooling before application.
- The fresh applied material should be protected from direct sunlight or dry wind until the material is hardened.
- If the underneath substrate moves or cracks, reflective cracking may occur.
- Continue the existing expansion/contraction joints in the floor through Mastercem 400; design the joint dimension to allow the anticipated movement and seal with a suited sealant from Choksey's range.

STANDARD COMPLIANCE

The applicable standard for performance and testing are- ASTM C109

CLEANING OF EQUIPMENTS

All equipment's must be cleaned with water immediately after use. Hardened material must be removed mechanically.

COVERAGE

Each 25 kg bag yields approx. 14.8 liters when mixed with 5.0 liters of water. 14.8 liters will cover 2.9 m² at 5 mm thickness.

The coverage figures are given are theoretical- due to wastage factors and the nature and variety of possible substrates, practical coverage may vary.

PACKING- 25 kg

STORAGE

Masterfloor Top should be stored on pallets in dry conditions & should be protected from direct sunlight or extreme temperatures. Under these conditions the product will have a shelf life of 6 months from the date of manufacturing.

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HEALTH & STABILITY

Mastercem 400 is non-toxic but mildly alkaline, gloves should be worn during the application, splashes to the skin or eyes should be removed with clean water.