

# MASTERTOP<sup>®</sup> 200

## Metallic aggregate dry-shake floor hardener

### Description

MASTERTOP 200 is a pre-mixed, dry-shake surface hardener supplied ready to use in powder form. It consists of a hydraulic binder and specially treated metallic aggregates.

### Typical applications

- Mechanical workshops.
- Garages.
- Assembly plants in the automotive industry.
- Storage areas and traffic ways in the steel industry.
- Aircraft hangars.
- Storage areas subjected to heavy loads.
- Printing shops.
- Dry areas in paper mills.
- Areas subjected to attrition by tracked plant.

### Limitations

- Not to be used where floor surfaces will be exposed to acids, salts or other materials which seriously and rapidly attack cement / iron.
- Not to be used in areas of constant high ambient humidity or standing surface water such as toilets and washplaces.

### Packaging

MASTERTOP 200 is packaged in 25kg moisture-resistant bags.

### \*Typical properties

E-modulus after 28 days:	28,000N/mm <sup>2</sup>
Abrasion resistance Böhme:	4.7g/cm <sup>2</sup>
Curing required:	Yes

### Application

In accordance with ACI 201 - 2R77 & ACI 302-1 R-89 a well proportioned Concrete Mix Design is essential. The concrete supplier should ensure that cement contents, w:c ratios, slumps are generally in accordance with the following minimum standard:

Cement (SRC or OPC):	Min 320 kg/m <sup>3</sup>
W:C ratio:	Max. 0.50
	Min. 0.40
Slump:	Ideally 75mm
Strength:	Min 31 N/mm <sup>2</sup>

Concrete should not segregate and bleed or contain more than 3% air. Do not use microsilica in the concrete as this can lead to problems with crusting when the dry shake is applied. RHEOBUILD or POZZOLITH water reducing admixtures are recommended for concrete placement and optimum performance. Screeds to which MASTERTOP 200 is to be applied, should have a minimum thickness of 75mm. Following placement, concrete should be levelled off with a straightedge and then vibrated. The surface is then floated with a wooden float ensuring that it is not closed. Any bleed water should be removed. (Avoid sponge type absorbents). Thereafter sprinkle MASTERTOP 200 along edges of bays (approx. 80mm strips) where expansion and construction joints will be located. Float into surface using a wooden float.

MASTERTOP 200 is ideally applied to a surface which is neither too wet nor too dry. Ambient temperatures will dictate when the material is to be applied. Generally in temperatures of 35-45°C

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a waiting period of 30-40 mins is recommended. This may need to be extended in temperatures of less than 35°C.

Using a raised trestle which spans the slab, the material is broadcast by hand onto the wet concrete surface. The application is carried out in two stages.

1. Apply two thirds of the required material to the concrete ensuring uniform distribution.
2. Allow applied material to absorb moisture from the concrete surface; a uniform darker colour will be apparent.
3. Using a wooden float, float MASTERTOP 200 into the concrete ensuring material becomes an integral part of the surface.
4. Apply the balance of material. Again wait until material has obtained a darker colour before floating with a wooden float.
5. When surface is sufficiently firm enough to take the weight of a man leaving only minor indentations, MASTERTOP 200 should be finished off by means of a power trowel. A smooth slip resistant finish can be obtained, but the surface should not be overworked.
6. If manual finishing with steel trowels is to be undertaken, this should take place before concrete becomes firm enough to take foot traffic.

## **Notes:**

- For heavy-duty traffic areas, concrete designed for at least 30N/mm<sup>2</sup> at 28 days should be used. Thickness of the slab and the type and amount of reinforcement are important design considerations.
- To minimise shrinkage cracking consider the use of BASF water reducing admixtures.

- Do not use calcium chloride in concrete over which shakes containing metallic aggregate and/or colouring pigments will be applied.
- At temperatures over 29°C, at low humidity or when placing concrete without protection from wind or sun, erect sunshades or windbreaks and consider the use of MASTERKURE curing products.
- Do not use salt water or salt contaminated aggregate in concrete over which shakes containing metallic aggregate will be applied.

## **Application rate:**

Job specifications usually state the rate at which the dry shake shall be applied.

Rate of application of MASTERTOP 200 by the following types of exposure:

light to moderate duty	5-6 kg/m <sup>2</sup>
moderate to heavy duty	6-7.5kg/m <sup>2</sup>
heavy duty	7.5-9kg/m <sup>2</sup>
concentrated traffic	9-10 kg/m <sup>2</sup>

For coloured MASTERTOP 200 surfaces, a minimum of 7 to 8kg/m<sup>2</sup> must be used.

## **Curing:**

As soon as the surface will not be marred by the application, apply the MASTERKURE curing compound for the type of surface and floor use involved.

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## For protection:

Deny access to the area after the curing compound is applied. As soon as the curing compound has dried, adequately cover the floor surface to prevent staining, discoloration or physical damage which may be difficult to correct. Alert other trades to the need for special protection against rolling or sliding heavy loads across the surface, oil drippings from pipe threaders, spillage of paint, plaster and mortar, acid washing of interior masonry walls, etc. Ensure that the covering is not damaged during the progress of the job.

## Cleaning:

Clean with water as soon as the equipment is no longer used and before the cementitious material starts to harden on blades, trowels, etc.

## Sawing joints:

Saw the joints as soon as possible, without spalling the concrete.

## Storage

Store out of direct sunlight, clear of the ground on pallets protected from rainfall. Avoid excessive compaction. Shelf life is 18 months in the tightly closed original packages stored as above.

## Safety precautions

- Do not apply over concrete containing calcium chloride or aggregate contaminated with salt or saltwater.
- Do not apply over concrete containing more than 3% entrained air.
- This product contains cement which may cause irritation. Avoid contact with eyes and prolonged contact with skin. If contact occurs wash thoroughly with water. Keep product out of reach of children.

## Note

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local BASF representative.

BASF reserves the right to have the true cause of any difficulty determined by accepted test methods.

## Quality and care

All products originating from BASF's Dubai, UAE facility are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and OHSAS 18001.

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\* Properties listed are based on laboratory controlled tests.

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