



The Chemical Company

# MASTERTOP<sup>®</sup> 300

## Premixed dry shake surface floor hardener

### Description

MASTERTOP 300 is a ready to use blend of a synthetic mineral aggregate and cement which is applied as a dry shake to the surface of fresh concrete or screeds.

MASTERTOP 300 will provide continuous protection to concrete floors against wear, impact, and abrasion and a high resistance to various industrial chemicals, oils, greases, detergents and hydraulic fluids found in the aviation industry.

### Primary uses

MASTERTOP 300 is designed to ensure improved durability in applications where the floor is subjected to medium and heavy traffic and where a non-dusting surface is required. It will improve and enhance performance of all concrete floors.

### Typical applications

- Workshops
- Power stations
- Garages
- Car parks
- Warehouses
- Loading bays
- Factories
- Shipyards
- Aircraft hangars
- Traffic decking
- Car washes
- Helicopter pads

### Composition

MASTERTOP 300 consists of non-metallic, inert high quality synthetic mineral aggregates, proprietary chemicals, pigments and cement.

### Advantages

- Premixed offering factory controlled quality assurance.
- Applied monolithically to fresh concrete.
- Quick application and finishing results in considerable time savings.
- Ease of application.
- Joints can be provided with better protection by addition of extra material at edges of bays.
- Wear, abrasion and impact resistance are superior to normal concrete.
- Non-oxidising.
- Slip-resistant finish can be obtained.
- High impermeability compared to concrete under the same conditions.
- MASTERTOP 300 forms an integral part of the floor surface and will not delaminate or peel.
- Non-dusting.
- For internal and external use.
- Easy to clean.
- Economic installation.
- Maintenance free, long life performance.

### Packaging

MASTERTOP 300 is available in 25kg bags.

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## Typical properties

Properties listed are only for guidance and are not a guarantee of performance

|                      |   |
|----------------------|---|
| Chemical resistance: | Will resist motor oils, mineral oils, mild acids, salt solutions 10%, sea water, soda solution 25%, when cured as recommended.  |
| Abrasion resistance: | When tested in accordance with the principles of ASTM C1353, MASTERTOP 300 applied at 5kg/m <sup>2</sup> exhibited approx. 240% greater abrasion resistance than control concrete |

## 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 ratio and slump 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<br>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. When applying to microsilica concrete special care must be taken to ensure the dry shake is applied at the correct time. RHEOBUILD or POZZOLITH water reducing admixtures are recommended for concrete placement and optimum performance. Screeds to which MASTERTOP 300 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

300 along edges of bays (approx. 80mm strips) where expansion and construction joints will be located. Float into surface using a wooden float.

MASTERTOP 300 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 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 300 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 300 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.



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## Curing

Curing should be carried out immediately after the final trowelling operation has been completed. This can be done by either covering with polyethylene sheets or by the application of curing compound. The use of MASTERKURE 181 at a rate of 1 litre per 5m<sup>2</sup> is recommended. Further advice on the correct selection of curing compounds will be provided by BASF's Technical Services Department as these may differ depending on the type of subsequent treatment to be applied.

## Watchpoints

1. Dry shake applications should not take place in direct sunlight or when hot winds are blowing. This will avoid "bread crusting" occurring i.e. top 5-10mm of surface dries whilst concrete beneath is still wet. This often results in tearing of the surface when trowelling.
2. As with any concrete slab or bay, curing is of paramount importance and should take place immediately upon completion of finishing.
3. Subsequent coatings and finishes may be applied but will depend on the curing compound, surface texture, etc. (refer to BASF's Technical Services Department for advice.)

## Coverage

Typical applications can be from 3kg - 7kg/m<sup>2</sup>, however for most industrial applications 5kg/m<sup>2</sup> coverage is recommended. For more details,

please contact BASF's Technical Services Department.

## Storage

Store out of direct sunlight, clear of the ground on pallets protected from rainfall. Avoid excessive compaction. Shelf life is 12 months when stored as above. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult BASF's Technical Services Department.

## Safety precautions

This product contains cement which may cause irritation. Avoid contact with eyes and prolonged contact with skin. If contact occurs wash thoroughly with water and call a doctor. 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.



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## 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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**As all BASF technical datasheets are updated on a regular basis it is the user's responsibility to obtain the most recent issue.**

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