

MASTERTOP™ 100E

High performance, Dry shake, non-metallic, floor hardener

Description

MASTERTOP 100E is a premium grade, premixed, non-metallic, ready to use powder, designed for application as a dry shake over freshly floated concrete floors or floor screeds to obtain a monolithic floor with enhanced abrasion resistance.

The product is based on selected hardwearing natural aggregates with hardness number 9 on Moh's scale.

Tests results show that MASTERTOP 100E significantly reduces the depth of wear.

Uses

MASTERTOP 100E is recommended for treating floor areas, where superior abrasion resistance is desired to minimise dusting and maintenance, but not exposed to serious chemical attack. Application areas include;

- Aircraft hangars.
- Basements and cellars.
- Mechanical workshops.
- Garage for light vehicles.
- Storage rooms.
- Corridors and halls.
- Parking areas.
- Loading platforms.

Advantages

MASTERTOP 100E provides a hard wearing surface on concrete floors. This reduces the rate of abrasion from the pedestrian and vehicular movement and increases the service life of the concrete floor.

- Easy to use
- Most economical to use
- Available in range of colours (Light Grey, Dark Grey, Royal White, Royal Yellow, Royal Green, Royal Red)
- Non metallic – Do not rust
- Enables abrasion resistant, hard wearing surface

Typical Properties

Aspect	: Free flowing powder
Hardness on Moh's scale	: 8 – 9
Abrasion resistance, H22 wheel (ASTM C501, 1000 cycles)	: < 0.25 grams

Specification Clause

The non-metallic, dry-shake floor hardener shall be MASTERTOP 100E, pre-mixed powder containing selective hard aggregates having hardness 9 on moh's scale. The product shall enhance surface

abrasion resistance and shall not exceed wear of 0.25 mg/cycle when tested to ASTM C501, H22 wheel.

Directions for use

The design and construction of the floor should be adequate to withstand the traffic, impact and such other loads the floor is likely to be exposed to.

The concrete used for flooring should be > M25 grade and should be free of bleed & segregation and should not contain more than 3% air.

Surface preparation

Pump, place or otherwise convey the base concrete at a slump not in excess of 120 mm for a slab on grade. (Please contact your local BASF representative for information on special suspended-slab applications.) After the concrete has been placed, screed immediately; then bull-float/ straightedge the surface. Allow bleed water to rise to surface. Early moisture loss and rapid setting around the perimeter of the slab are typical. Monitor them closely for proper timing of the floating operations.

Do not apply the dry shake in to the bleed water. If excessive bleed water is present, remove standing bleed water by dragging a hose across the surface or using a squeegee or other approved method.

Placing

BASF recommends two pass process: apply and float 1/2 to 2/3 of the total amount of MASTERTOP 100E on the first application. Apply the remaining amount on the succeeding application. Applying more than 4 kg/m² in one pass often results in limited success. In most cases, it shocks the base slab by demanding more water than is available for incorporation of the shake. Drier area tends to crack or delaminate, leaving less water available for subsequent shake passes.

Mark the floor areas into bays of convenient size and keep the required quantity of MASTERTOP 100E ready for each bay.

First shake on application

After the evaporation of bleed-water, broadcast the powder evenly by hand to obtain a uniformly thick application. Do not throw or broadcast with a shovel.

When the applied MASTERTOP 100E darkens in colour indicating absorption of moisture and when the concrete has stiffened enough to prevent disk float from digging into the surface, float the treated surface using wooden hand float or mechanical float fitted with float blades.

Float just enough to bring the excess moisture to the surface.

Second shake on application

Follow with the second application of MASTERTOP 100E exactly as the first application, but while broadcasting, compensate with extra material over areas under-applied during the first shake on application.

If a coarse non-slip surface is desired, start curing without any more finishing operations.

Finishing

The extent of further floating or trowelling depends upon the finish desired on the surface. Different levels of smoothness can be achieved by repeated trowelling using power trowel and gradually increasing the blade angle in each repeat trowelling. Consult your BASF representative for advice.

Precautions:

- During hot, dry or windy conditions trowelling should be kept to the minimum to obtain the required finish.
- All moisture used to incorporate dry-shake material must come from within the slab. Under no circumstances should water be applied to aid in the incorporation of dry shake.
- Saw the joints as soon as possible, without damaging the concrete.
- If coloured floor hardener is warranted, it is strongly advised to carry out a sample area before finalisation of supply order.
- Clean the tools and equipment with water before the paste sticking to them hardens.

Curing

Start curing immediately after final finishing using a membrane curing compound such as Masterkure 107i or Masterkure 181.

Barricade the area after the application of curing compound. Immediately after the curing compound dries, cover the floor surface to protect it from staining, discoloration, or physical damage.

Coverage

The rate of application of MASTERTOP 100E depends on the service conditions, which the floor will be exposed to. The recommended rates of application are as below:

For heavy-duty traffic: 6-8 kg/m²

For medium duty traffic: 5-6 kg/m²

For light duty traffic 3-5 kg/m²

Maximum recommended rate for vacuum dewatered floors is 5 kg/m²

Packaging

MASTERTOP 100E is available in 25 kg, moisture resistant bags.

Storage and Shelf life

Store under cover, out of direct sunlight and protect from extremes of temperature. In tropical climates the product must be stored in an air-conditioned environment.

Shelf life is 6 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 please consult BASF's Technical Services Department.

Safety precautions

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs (which can also be tainted with vapour until product fully cured or dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. Keep away from children and animals. Reseal containers after use. Do not reuse containers for storage of consumable item. For further information refer to the material safety data sheet. MSDS available on demand or on BASF construction chemicals web site.

Note

All BASF Technical Data Sheets are updated on regular basis; it is the user's responsibility, to obtain the most recent issue.

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

Disclaimer

Whilst any information contained herein is true, accurate and represents our best knowledge and experience, no warranty is given or implied with any recommendations made by us, our representatives or distributors, as the conditions of use and the competence of any labour involved in the application are beyond our control.

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