



The Chemical Company

MASTERTOP[®] 200

Unique, Malleable, Iron Armoured Dry Shake Flooring Compound

Description of Product

MASTERTOP[®] 200 is a unique pre-mixed blend of high temperature treated, corrosion inhibited, malleable, iron aggregates, Portland cement and selected additives and workability aids.

Applied by the 'dry shake' method onto concrete floors MASTERTOP[®] 200 provides increased abrasion resistance measured as being **up to 8 times** that of untreated plain cured concrete. (See table 1). Use of malleable metallic aggregates which form an interlocking lamellar reinforced surface increases impact resistance and reduces loss of surface integrity through 'plucking' out which can be a problem with more angular shaped aggregates.

The dry shake method requires the specially blended dry powder to be evenly spread at the desired application rate onto the surface of freshly laid concrete. The special hydraulic cements and workability aids absorb moisture from the concrete helped by the power floating process. Therefore, the material hardens at a very low water cement ratio, monolithically with the base concrete to create an integral, extremely hard wearing surface.

MASTERTOP[®] 200 is available in several colours (see MASTERTOP[®] colour chart) including the highly energy efficient light reflective version (2-3 times increased light reflectance than standard concrete).

Fields of Application

MASTERTOP[®] 200 was first formulated by BASF Inc. in the United States where it was originally named Masterplate 200. Over the past 40 years many hundreds of thousands of square metres of MASTERTOP[®] 200 have been successfully installed in the heaviest industrial/engineering environments,

These include:

- Assembly plants in the Automotive Industry.
- Heavy engineering workshops and machine tool shops.
- Storage areas and traffic aiseways in the steel industry.
- Foundries and furnace areas.
- Paper mills.
- Printing shops.
- Aircraft hangars and workshops.
- Tracked vehicle manufacture and traffic areas.
- Agricultural machinery manufacture.

Features and Benefits

- Malleable iron armoured surface provides excellent impact and point load resistance.
- High strength, provides excellent abrasion resistance against all types of wheeled and tracked vehicles.
- Up to four times service life expectancy than plain concrete floors.
- High density surface provides low porosity, very low dusting, relatively easily cleaned surface.
- Coloured versions provide more attractive work environments.
- Highly reflective version reduces energy and lighting requirements.
- Increased application rate provides improved durability of joint arises.
- Economical in use.
- Pre-mixed, ready to use material provides Quality Assured consistent performance.
- International track record allows product specification with confidence.



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Technical Data/Typical Properties

Compressive Strength 7 days	>70N/mm ²
28 days	>80N/mm ²
E Modulus	28000 N/mm ²
Impact Resistance	At least twice that of 30N/mm ² concrete
Abrasion Resistance NBSR report RP1252	Approx. 8 times more abrasion resistant than plain cured concrete
Conductivity BS2050	Anti-static with resistance at <10 ⁸ Ohms @ 55% relative humidity

Application Procedure

Application

MASTERTOP[®] 200 is essentially, a simple product in use, i.e. the dry powder blend being spread mechanically or by hand onto freshly laid concrete floors followed by working the products into the surface by a power float. However, it is recommended that specialist concrete flooring contractors be employed to ensure the design finish.

Detailed application procedures can be provided by BASF on request, however, the following watchpoints with respect to the quality of the base concrete slab should be noted:-

- Minimum 75mm slump.
- Well designed mix with minimum bleed water.
- Design strength at least 30N/mm².
- No more than 3% entrained air.
- Do not use chloride containing admixtures.
- Do not use salt water or salt contaminated aggregate.
- Take particular care at ambient temperatures greater than 25°C.

In addition the following should be noted with respect to the application of MASTERTOP[®] 200.

- The amount of MASTERTOP[®] 200 required depends upon the expected traffic and is to be specified by the Engineer.

- Light to Moderate Duty 5 - 6 kg/m²
Moderate to Heavy Duty 6 - 7.5 kg/m²
Heavy Duty to Concentrated Traffic 7.5 - 10.0 kg/m²
- For coloured floors a minimum of 7.5 kg/m² is recommended.
- For light reflective floors a minimum of 9.0 kg/m² is recommended.
- MASTERTOP[®] 200 is normally applied in two layers, two thirds and then one third of the required application rate. The first application is thoroughly worked into the surface before the second is commenced.
- Pay particular attention to details, around columns, doorways, expansion joints, etc. For additional protection apply heavier application rates along joint edges.
- Do not sprinkle additional water onto the surface of the floor during finishing.
- Do not hard burnish coloured floors.
- Saw cut crack control joints as soon as possible.
- MASTERTOP[®] 200 floors should be cured using MASTERKURE[®] 181 at 5m²/L as soon as the surface is not marred by the application.
- Do not water cure MASTERTOP[®] 200.
- Protect the floor from other trades during the construction phase.
- Do not use MASTERTOP[®] 200 externally.
- In areas of heavy oil contamination MASTERTOP[®] 200 will be more easily maintained and cleaned if sealed with MASTERKURE[®] 181 on a planned ongoing basis dependent on service conditions.

Packaging

MASTERTOP[®] 200 is supplied in 25 kg moisture resistant sacks.

Storage

Store in cool, dry warehouse conditions.

Shelf Life

At least 12 months in unopened sacks when stored according to manufacturer's instructions.



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TABLE 1
RELATIVE WEAR RELATIVE

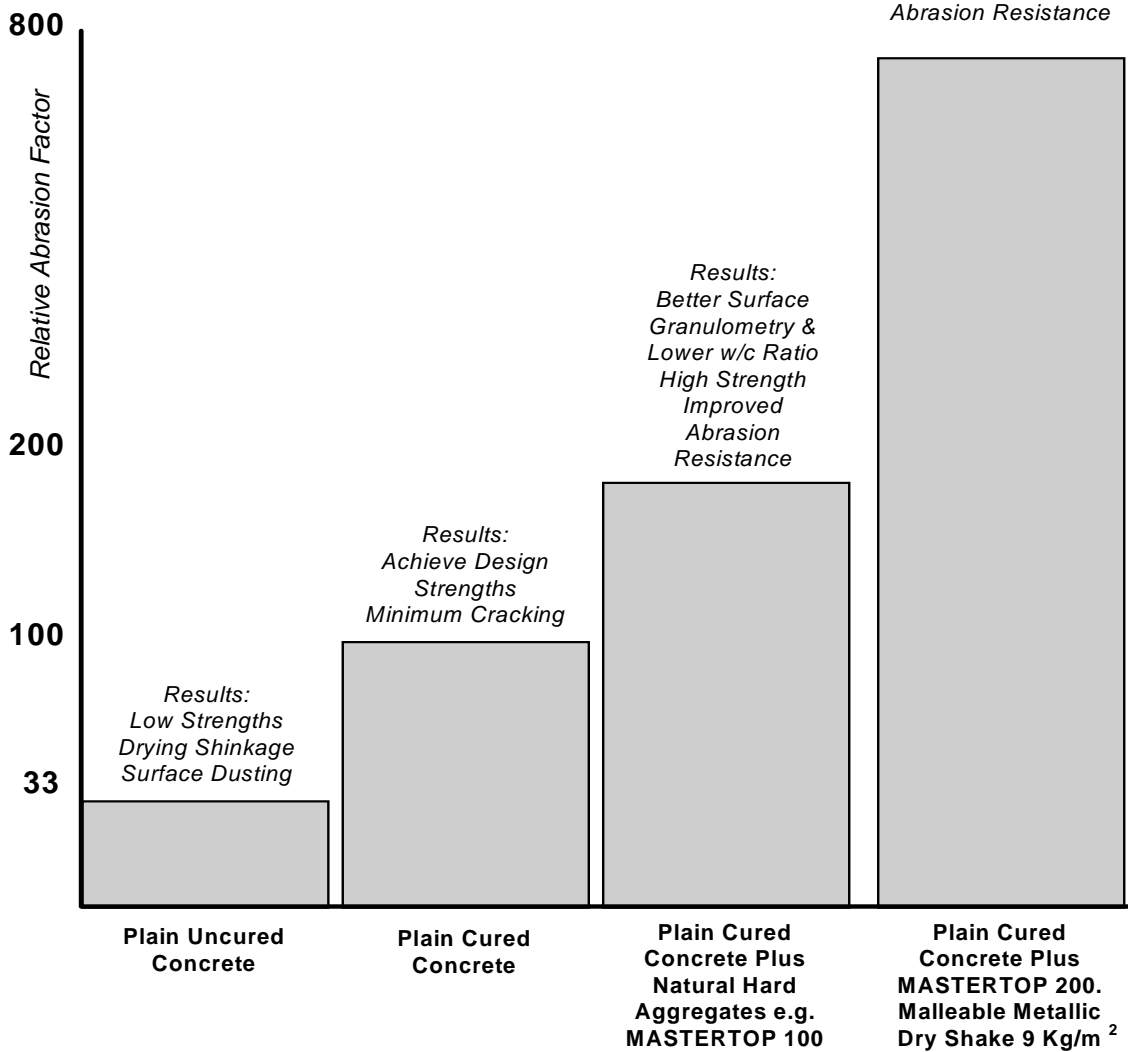
(of various concrete floors surface treatments)

Based on reports of leading authorities on concrete:

Journal of ACI Proceedings Vol. 50 - 18 "Floor Aggregates"

National Bureau of Standards Report RP1252

Results:
Greatly Improved
Surface Structure
Lower w/c Ratio
Higher Compressive
Strength
High Point Load &
Impact Resistance
800% Increase in
Abrasion Resistance





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MASTERTOP® 200 has been manufactured and supplied by BASF for over 50 years. Many hundreds of thousands (millions) of m² have been successfully installed in arduous industrial environments around the world. The list below gives just some of the companies with whom we are delighted to have done business:-

Peugeot France, UK > 50000m²
Honda UK > 2000m²
Iveco Italy > 20000m²
General Motors USA 35000m²
Goodyear USA 15000m²
Aerospatriale France 35000m²
Ford USA > 20,000m²
Honda, Al Ain
Shimizu, Runcorn
Western Airlines, USA
Canadian Pacific Airlines, Canada
U.S. Naval Air Station
Aer Lingus, Ireland
Boeing Corporation, USA
Dan Air, United Kingdom

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Health and Safety

*For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapour until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

Solvent Based Products

Use in well ventilated areas; avoid inhaling. Suitable respiratory equipment may be needed, eg when spraying. Can cause skin, eye irritation. Wear protective eye shields and gloves during use. Do not smoke or allow sparks or naked lights when stored or in use.

Powder Products

Should be handled to minimise dust formation; use light mask if excessive dust unavoidable. Cement powders when wet or moistened can cause burns to skin and eyes which should be protected during use.

Resin Products

Can cause irritation, dermatitis or allergic reaction. Use protective equipment particularly for skin and eyes. Use only in well ventilated areas.

Spillage

Chemical products can cause damage; clean spillage immediately.

DISCLAIMER

"BASF" (the Company) endeavour to ensure that advice and information given in Product Data Sheets, Method Statements and Material Safety Data Sheets (all known as Product Literature) is accurate and correct. However, the Company has no control over the selection of its products for particular applications. It is important that any prospective customer, user or specifier, satisfies him/herself that the product is suitable for the specific application. In this process, due regard should be taken of the nature and composition of the background/base and the ambient conditions both at the time of laying/applying/installing the material and when the completed work is to be brought into use.

Accordingly, no liability will be accepted by the Company for the selection, by others, of a product which is inappropriate to a particular application.

Products are sold subject to the Company's standard conditions of sale and all customers, users and specifiers, should ensure that they examine the Company's latest Product Literature.