

# MasterCoat™ PR MF

Polyurethane Based, High Performance, Matt and Smooth Surface Finish  
Polyurethane Concrete Coating

## Material Description

**MasterCoat™ PR MF** provides an impact resistant surface with resistance to abrasion, chemical attack, and other forms of physical and mechanical based surface activity. The material is resistant to organic acids, dilute mineral acids, vegetable and animal fats, petroleum oils and solvents.

## Areas of Application

**MasterCoat™ PR MF** is used in medium-duty industrial applications subject to chemical exposure and pedestrian / forklift traffic.

The material has been designed for use in the food and beverage sector, and is HACCP International certified as food-safe.

## Technical Properties

Structure of the Material <b>MasterCoat™ PR MF</b> Part A <b>MasterCoat™ PR MF</b> Part B <b>MasterCoat™ PR MF</b> Part C <b>MasterCoat™ PR MF</b> Part D	Polyurethane Resin Polyurethane Hardener Special Filler Liquid Pigment
Color	Red, Yellow, Green, Blue, Grey
Density	1,90 kg/m <sup>3</sup>
BS 8204-6 (FeRFA)	Type 7
Temperature Resistance	Resistant to cleaning processes up to 70°C at 3.0 mm and 90°C at 4.0 mm
Impact Resistance (EN 13813)	>4 Nm (IR4)
Compressive Strength (EN 196/ ASTM C109)	50 N/mm <sup>2</sup>
Tensile Strength (EN 196/ ASTM C109)	10 N/mm <sup>2</sup>
Flexural Strength (EN 196/ ASTM C109)	20 N/mm <sup>2</sup>
Adhesion (EN ISO 4634)	>1,5 N/mm <sup>2</sup>
Adhesion Strength to Concrete (EN13892-8)	Beton hasarı
Slip Resistance (DIN 51130) (R9)	Dry > 70 Wet > 21
Abrasion Resistance (EN 13892-4) (BS 8204-2)	AR 0.5 (Special Class)
Co-efficient of Thermal Expansion (ASTM C531: Bölüm 4.05)	5.8 x 10 <sup>-5</sup> °C <sup>-1</sup>
Shore D Hardness (28 days)	80
Pot Life (25°C)	20-25 min.
Fire Resistance (EN13501: Bölüm 1)	B <sub>FL</sub> S1
Low Emissions (ISO 1600-3,6,9)(EN 16516)	Compliant

*The typical physical properties given above are derived from tests carried out in a controlled laboratory environment at 20°C. Results obtained from testing field-applied specimens may vary depending on site conditions. The shear resistance values given above are affected by application techniques and existing site conditions. Skid resistance may decrease over time due to poor maintenance, general wear or surface contaminants. Good cleaning practices should be followed.*

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## HACCP Certification

**MasterCoat™ PR MF** systems have been HACCP International certified as food-safe for use in facilities operating a food safety management system based on HACCP principles. These systems are seamless, monolithic, impervious and non-porous, as such they do not support microbial growth.

## Indoor Air Quality

**MasterCoat™ PR MF** systems have been independently certified as compliant with Deco Paint Guidelines (EU 2004/42/EG). This demonstrates the highest level of compliance in relation to product emissions. The maximum allowable VOC content for Product Category IIA j Type wb products (in the ready to use state) is: Stage II (from 2010) < 140 g/l VOC. In the ready to use state, this product contains less than 140 g/l VOC.

## Processing Method

### (A) Surface

#### Surface Requirements

**MasterCoat™ PR MF** systems are suitable for application on cementitious substrates and suitable polymer modified screeds.

All surfaces must be load bearing, free from cracks and voids, free from dirt, oil, grease, dust and other contaminants.

The application surface must provide a minimum compressive strength of 25 N/mm<sup>2</sup> and pull-off strength of 1.5 N/mm<sup>2</sup>.

#### Surface Preparation

Concrete or suitable polymer modified screed should be mechanically prepared by using closed vacuum sandblasting or suitable diamond grinding machines to remove grout and weak particles from the surfaces and the weak surfaces removed should be repaired with appropriate methods and products.

In order for the coating system to be fully clamped to

the surface, locking joints must be opened at the edge corner joints and at the edges of the strainer drain etc.

### (B) Mixig

The contents of the MasterCoat™ PR MF Pigment Pack D should be drained into the MasterCoat™ PR MF Universal A component and the two materials thoroughly mixed until homogenous before adding the contents of MasterCoat™ PR MF Universal B.

#### Don't forget!

You're using **MasterCoat™ PR MF Filler C #1** in this mix!

The mixed liquid should then be poured into a clean suitably sized separate mixing container and the MasterCoat™ PR MF Filler C #1 aggregate component slowly added under constant mixing using a suitable slow speed electric mixer fitted with either a single or double mixing paddle or by using a forced action (rotary drum) type compulsory mixer until a uniform free flowing consistency has been achieved.

### (C) Processing

#### Primer

The existing surface should be primed with MasterCoat™ PR Primer at a consumption rate of approx. 1.00 kg/m<sup>2</sup> or MasterCoat™ PU MF at an average consumption rate of 1.50 kg/m<sup>2</sup> using a gauge.

Allow the primer coat to cure for 12 to 16 hours before applying the main coat of MasterCoat™ PR MF.

If the surface is excessively porous, the primer consumption should be increased or re-primer should be applied to make the surface completely non-porous.

#### Ground Floor

Apply the mixed **MasterCoat™ PR MF** with a notched trowel or a special thickness-adjustable squeegee to the desired thickness.

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After approximately 10 minutes, remove the air from the **MasterCoat™ PR MF** with a spiked roller. Care should be taken to ensure continuity during production (max. Within 5 - 7 minutes, the mixed materials should be brought to the application area and applied).

The base coat should be applied within 24 hours of the primer application. If more than 24 hours have elapsed, the surface will need to be lightly ground by mechanical means before the base coat is applied.

## Consumption

MasterCoat™ PR MF should be applied to the surface as a primer with a consumption of approximately 1,00 - 1,65 kg/m<sup>2</sup>.

MasterCoat™ PR MF should be applied with a total consumption of 5,70 kg/m<sup>2</sup> for 3,0 mm thickness and 7,60 kg/m<sup>2</sup> for 4,0 mm thickness.

These consumptions are theoretical and may vary depending on a number of factors including the condition of the substrate.

## Point to Consider

- The tiled floor should be protected from further treatment using Kraft paper or a similar breathable material such as Correx board. Polyethylene should not be used.
- Protect the finished floor covering from moisture, condensation and water for at least 24 hours at 20°C.
- After application, ensure that the ambient temperature remains above 10°C for at least twenty-four hours.
- As with all aromatic based polyurethane products exposed to UV light, **MasterCoat™ PR MF** systems will be prone to cosmetic discoloration (yellowing of the surface), but this does not affect the physical or chemical resistance properties of the applied system.

## Cleaning and Maintenance

The cleaning and maintenance of **MasterCoat™ PR MF** systems must be considered a vital and integral

part of an overall hygiene program covering all areas of the processing plant. Regular cleaning and maintenance will ensure that the floor maintains the performance profile listed below. The method of cleaning and choice of cleaning equipment and / or agent should match the soil conditions and level of sanitation required.

All **MasterCoat™ PR** systems will withstand water wash down processes at continuous sanitising temperatures as well as fumigation. **MasterCoat™ PR** can be cleaned routinely by the direct application of a water-steam mix

## Cleaning of Tools

**MasterCoat™ Tool Cleaner** should be used for cleaning tools and equipment after application.

## Packaging



Component	Weight
MasterCoat PR MF Universal A	3.00 kg
MasterCoat PR MF Universal B	3.00 kg
MasterCoat PR MF Filler C #1	13.82 kg
MasterCoat PR MF Pigment Pack D	0.18 kg
<b>Total Unit:</b>	<b>20.00 kg</b>

## Shelf Life

6 months after the production date under appropriate storing conditions. Opened packages should be stored under appropriate storage conditions and used within one week.

## Storage

Store in original drums under dry conditions and a temperature between 10-30°C. Do not expose to direct sun-light and prevent the temperature from falling below the above mentioned range.

## Further Information

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Information relating to the safe handling of this product can be found in the Material Safety Data Sheet. Local regulations concerning the safe handling of resin-based coating materials must be observed. Suitable protective clothing including suitable eye protection must be worn at all times.

All consumptions listed are for recommendation purposes only. Detailed application instructions and system build-up advice can be provided on request through our Technical Services team.

MasterCoat™ Polymers' systems and products are guaranteed against defective material and manufacture and are sold subject to its standard Terms and Conditions of Sale, copies of which can be obtained on request.

MasterCoat™ Polymers accepts no responsibility for liability claims based on the suggested practices and data values listed on product data sheets. Product data sheets are regularly updated and it is the user's responsibility to ensure they obtain the most recent version.

## Health and Safety

It is dangerous to approach the application sites. During the application, a protective apparel, protective gloves, goggles and masks which comply with the Occupational Health and Safety Rules should be used. Due to the irritation effect of the uncured materials, the mixture should not come into contact with skin and eyes; in case of a contact, the affected area should be washed with plenty of water and soap; in case of swallowing, a physician should be consulted immediately. No food or beverages should be brought to the application area. The product should be stored and kept out of reach of children. For detailed information please consult the Material Safety Data Sheet.

## Disclaimer

The technical information given in this publication is based on the present state of our best scientific and

practical knowledge. **MBT Teknik Yapı Kimyasalları Sanayi ve Ticaret A.Ş.** is only responsible for the quality of the product **MBT Teknik Yapı Kimyasalları Sanayi ve Ticaret A.Ş.** is not responsible for results that may occur because the product is used other than advised and/or out of instructions regarding the place and the method of use. This technical form is valid only till a new version is implemented and nullifies the old ones.

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