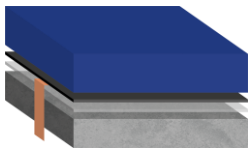
MasterCoat® ULTRA MF AS



Medium-Duty, Conductive Polyurethane Concrete System Designed to Ground Electrostatic Discharges

Material Description

MasterCoat® ULTRA MF AS is a medium-duty, flowapplied,ESD conductive polyurethane concrete flooring system that provides a seamless, matt and smooth finish. It offers a durable, impact-resistant surface with excellent resistance to abrasion, chemical exposure, and mechanical wear.

MasterCoat® ULTRA MF AS is designed for environments requiring both static control and chemical durability.
Typical applications include electronics manufacturing and assembly areas, as well as medium-duty fire-safe zones where conductivity and surface resilience are essential.

Technical Properties	
Structure of the Material **MasterCoat® ULTRA MF AS** Part A **MasterCoat® ULTRA MF AS** Part B **MasterCoat® ULTRA MF AS** Part C **MasterCoat® ULTRA MF AS** Part D **MasterCoat® ULTRA MF AS** Part E	 Polyurethane Resin Polyurethane Hardener Special Filler Liquid Pigment Fiber
Color	Red, Yellow, Green, Blue, Light Grey, Mid Grey, Dark Grey
Density (25°C)	1,90 kg/m^3
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^2
Tensile Strength (EN 196/ ASTM C109)	10 N/mm^2
Flexural Strength (EN 196/ ASTM C109)	20 N/mm^2
Adhesion (EN ISO 4624)	>1,5 N/mm^2
Slip Resistance (DIN 51130) (TRLL Pendulum Slip Test)	Dry > 70 Wet > 21
Abrasion Resistance (EN 13892-4) (BS 8204-2)	AR 0.5 (Special Class)
Co-efficient of Thermal Expansion (ASTM C531)	5.8 x 10-^{5} °C^{-1}
Shore D Hardness (28 days)	80
Pot Life (25°C)	15-20 min. (usable working life of material following mixing and immediate spreading as per the application instructions).
Fire Resistance (EN13501: Bölüm 1)	$B_{FL}S1$
Low Emissions (ISO 1600-3,6,9)(EN 16516)	Compliant
VOC Content	2.71 g/l

The physical properties listed above are based on tests conducted under controlled laboratory conditions at 20°C. Performance results from site-applied samples may vary depending on environmental and application factors. Slip resistance values are influenced by site conditions and application methods, and may diminish over time due to inadequate maintenance, surface wear, or contamination. Consistent and effective cleaning practices are essential to maintain surface performance.

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Colors

Please note, the applied colours may differ from the examples shown. MasterCoat® ULTRA systems may exhibit a yellowing effect over time resulting from thermal, UV or chemical exposure. This will be more pronounced on light grey or blue shades, "Colours marked with an asterix will incur an additional supplement.

HACCP Certification

MasterCoat® ULTRA 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 nonporous,as such they do not support microbial growth.

Application Temperature Range

~10 – 30°C is recommended. Outside of this range, heating or cooling equipment should be used to achieve ambient conditions.
The substrate, before priming, should be at least 3°C above the dew point to reduce the risk of condensation or blooming.
This should be maintained for 48 hours after application.

Processing Method

(A) Surface

Substrate Preparation

Concrete or suitable polymer modified screed substrates should be mechanically prepared using captive vacuum enclosed shot blasting, or by appropriate diamond grinding to remove surface cement based laitance and previous surface treatments leaving an open textured mechanically prepared surface.
Weak concrete / polymer modified screed must be removed and repaired using recommended MBT Tech products. In order to ensure the installed system remains fully bonded to the substrate it is recommended that all terminating edges are rebated to produce a cross-section "anchor chase" of 4.0 mm deep by 4.0 mm wide, stepped out at 150.0 mm from and parallel with the walls i.e. day joints, movement joints, floor edges, door thresholds, upstands, plinths, etc.

Priming

1. Application Surface:
   - The primer must be applied to the prepared surface in accordance with the specified requirements.
2. Primer Type and Application Method:
   - MasterCoat® ULTRA MF scraping compound must be applied with a steel trowel.
   - This process must be completed before the copper strip grid is glued.
3. Porosity Condition:
   - If the surface is excessively porous, multiple coats of primer may be applied until the substrate is completely impervious.
4. Conductive Primer:
   - Before applying MasterCoat® ULTRA MF AS coating, the conductive MasterCoat® PRI 687 W AS must be applied.
   - This application must be completed within 24 hours of the previous primer application.

(B) Mixing

The contents of the MasterCoat® ULTRA MF AS (Part D) and MasterCoat® ULTRA MF AS (Part E) should be emptied into the MasterCoat® ULTRA MF AS (Part A) and all materials thoroughly mixed until homogenous before adding the contents of MasterCoat® ULTRA MF AS (Part B). The mixed

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liquid should then be poured into a clean suitably sized separate mixing container and the MasterCoat® ULTRA MF AS (Part C) 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

The Apply the mixed MasterCoat® ULTRA MF AS screed by notched trowel, or pin rake to the required thickness.
Within approximately 10 minutes roll the MasterCoat® ULTRA MF AS with a spike roller to de-aerate the material.
When the material is sufficiently cured existing joints in the substrate must be carried through into the MasterCoat® ULTRA MF AS finish.
Ensure to maintain continuity of wet material between pours (max. 5 – 7 minutes). For cleaning of tools and other contaminants using a suitable tool cleaner.

Overcoating

Overcoating should be carried out within 24 hours of application. If longer than 24 hours it will be necessary to lightly grind the surface by mechanical means before overcoating is carried out.

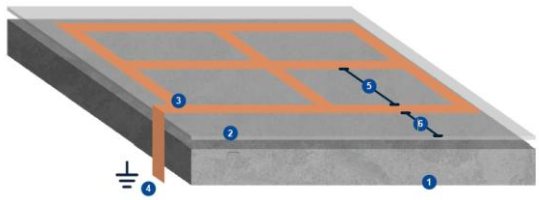
Consumption

The recommended coverage of MasterCoat® ULTRA is 5.70 kg/m² at 3.0 mm or 7.60 kg/m² at 4.0 mm.
The primed surface must receive an epoxy conductive primer and a grounding copper grid network installed prior to installation of the MasterCoat® ULTRA MF AS.

Earthing Points Layout

Apply min. 12.7 mm wide copper tape around the perimeter of the area, 1.0 m from the walls. Apply a 3-metre grid of copper tape within the perimeter tape, as shown on the diagram below. Connect the copper tape grid to earth.

Note: connecting to earth must be carried out by a qualified electrician



1 Prepared substrate
2 Primer
3 Copper tape
4 Earth *(see table)*
5 3.0 m centres
6 1.0 m to edge

Floor Area	Earth Points
> 400 m²	2
> 600 m²	3
> 800 m²	4
> 1000 m²	5

Point to Consider

- The installed floor should be protected from other trades using Kraft paper or similar breathable material e.g. Correx sheet. Polythene should not be used.
- Protect the installed floor finish from damp, condensation, and water for at least 24 hours at 20°C.
- Ensure that the ambient temperature remains above 10°C for at least 24 hours after installation.
- As with all aromatic based polyurethane products light colours exposed to UV light, MasterCoat® ULTRA systems will be prone to cosmetic discolouration (yellowing of the surface), however this does not affect the physical or chemical resistance properties of the installed product.

Cleaning and Maintenance

The cleaning and maintenance of MasterCoat® ULTRA 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.

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The method of cleaning and choice of cleaning equipment and / or agent should match the soil conditions and level of sanitation required.
All **MasterCoat® ULTRA** systems will withstand water wash down processes at continuous sanitising temperatures as well as fumigation. **MasterCoat® ULTRA** can be cleaned routinely by the direct application of a water-steam mix.

Packaging

Component	Weight
MasterCoat® ULTRA MF AS Part A	2.85 kg
MasterCoat® ULTRA MF AS Part B	3.15 kg
MasterCoat® ULTRA MF AS Part C	10.00 kg
MasterCoat® ULTRA MF AS Part D	0.36 kg
MasterCoat® ULTRA MF AS Part E	0.05 kg

Shelf Life

When stored under appropriate storage conditions, the shelf life of MasterCoat® ULTRA MF Part A, Part B, Part D and Part E is 12 months from the date of production, while the shelf life of MasterCoat® ULTRA MF Part C is 6 months from the date of production.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 sunlight and prevent the temperature from falling below the above mentioned range.

Further Information

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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DOP NO: 1102002	
EN 13813 SR-B2.0-AR0.5-IR20	
MasterCoat® ULTRA MF AS	
TS EN 13813 İç mekan kullanımı için tasarlanmış çimento modifiyeli poliüretan döşeme malzemesi Cement modified polyurethane flooring material designed for interior use	
Aşınma Direnci Wear resistance	AR0.5
Bağ Dayanımı Bond strength	B2.0
Çarpmaya Direnç Impact resistance	IR20
Aşındırıcı maddelerin salınımı Release of corrosive substances	SR
Yangına Karşı Tepki Reaction To Fire	B_{fl}-s1
Tehlikeli maddeler (Dangerous substances)	Güvenlik bilgi formu Safety data sheet