

# MasterCoat™ TC 485 W

Epoxy-Based, Two Component, Water-Based, Floor and Wall Coating

## Material Description

**MasterCoat™ TC 485 W** is a two-component, water-based, solvent-free epoxy coating, pigmented and low in viscosity, present excellent mechanical strength, abrasion resistance, and easy application. It is hygienic and dilutable with water.

## Areas of Application

**MasterCoat™ TC 485 W** is a high-performance topcoat formulation developed for surface densification and sealing of concrete, cementitious, and magnesite screeds, ensuring durable, dust-resistant interior surfaces.

## Characteristics and Benefits

- Water-based, environmentally friendly
- Odorless
- Easy to apply
- Moisture tolerant, can be applied on damp concrete surfaces
- Surface structure inhibits microbial growth
- Easy to clean, ideal for creating hygienic environments

- Due to its organic solvent-free and odorless formulation, it is suitable for use in food production environments. Depending on the application thickness, it exhibits resistance to alkalis, diluted acids, mineral oils, lubricants, and fuels.

## Processing Method

### (A) Preparation of Substrate

All substrates (new and old) must be structurally sound, dry and free of laitance and loose particles. Clean floors of oil, grease, rubber skid marks, paint stains and other adhesion impairing contaminants. Mechanical surface profiling by grit or shot blasting, high-pressure water jetting, grinding or scabbling (including the necessary post-treatment) are the preferred floor preparation methods. Pre-treatment is only necessary when the re-coating interval has been exceeded or when too much dust are present on the surface or when you apply **MasterCoat™ TC 485 W** on old aged flooring systems.

After surface preparation the tensile strength of the substrate should exceed 1.5 N/mm<sup>2</sup> (check with an approved pull-off tester i.e. "Herion" at a load rate of 100 N/s).

## Technical Properties

Solid Content		% 57
Density (23°C)	Part A Part B Mixed	1,10 g/cm <sup>3</sup> 1,40 g/cm <sup>3</sup> 1,25 g/cm <sup>3</sup>
Vizkozite (23°C)	Part A Part B Mixed	1000 mPa.s 5000 mPa.s 1200 mPa.s
Pot Life (23°C)		1,0 N/mm <sup>2</sup>
Ambient and substrate temperatures (23°C)		Min. 8 hours - Max. 48 hours
Re-Coating Interval (°C)		Min. 10 – Max. 48
Ready for Low Traffic (23°C)		48 hours
Fully Cured (23°C)		7 days

## Technical Properties Cured Material

Abrasion Resistance TABER (EN ISO 5470-1)	65 mg
Fire Classification (ÖNORM EN 13501-1) (Tüketim: 300 g/m <sup>2</sup> )	B-s1

The above figures are intended as a guide only and should not be used as a basis for specifications.

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The residual moisture content of the substrate must not be exceed 4% (check with e.g. CM device). The temperature of the substrate must be at least 3K above the current dew point temperature. A damp proof course must have been properly installed and intact.

## (B) Mixing

**MasterCoat™ TC 485 W** is supplied in working packs which are pre-packaged in the exact ratio. Before mixing, pre-condition both A and B components to a temperature of approximately 15 to 25°C. Pour the entire contents of Parts A and B into a clean pail. DO NOT MIX BY HAND. Mix with a mechanical drill and paddle at a low speed (ca. 300 rpm) for at least 2 minutes.

Scrape the sides and the bottom of the container several times to ensure complete mixing. Keep the mixer blades submerged in the coating to avoid introducing air bubbles.

DO NOT WORK OUT OF THE CONTAINER USED FOR MIXING.

After proper mixing to a homogeneous consistency pour the mixed Parts A and B into a fresh container and mix for another 2 minutes.

## (C) Processing

As a rule, **MasterCoat™ TC 485 W** is applied in two coats, where the consumption per coat depends on the type of application. (See "Consumption"). For the first coat (priming) the dilution is 5% with water and applied by a short-haired roller.

For the second coat the product is ready-for-use; in case of particular application conditions it is possible to dilute the product up to 5% with water, with the care to maintain a constant dilution ratio in the same area. If applied as a coating, the use of a brush or an airless spray is also possible. The second- and eventually the third-coat is applied after the previous coat has dried, but preferably the following day.

As with all water borne sealers, it is important to avoid dry edges by always working wet in wet when overlapping otherwise roller marks will be visible in the final finish. Using a max. 40 cm, medium nap roller, start in the middle of one of the short sides of the floor. Dip the roller into the mixed material and roll

out a strip of **MasterCoat™ TC 485 W**, parallel to the wall out to one of the corners. Dip the roller into the material once again and roll out a second strip from the starting point out to the other corner. Move backwards and repeat these steps, overlapping the first strip by a few cm. Using a second roller, starting in one corner, back roll the **MasterCoat™ TC 485 W**, without stopping, to the other corner. Offset the roller by 10 – 20 cm and roll over, again without stopping, to the opposite wall. Always roll in the same direction, do not back roll in a criss-cross pattern. When almost all the laid material has been back rolled, lay two more strips and back roll as described above. Using this method, the period between the overlapping should not exceed 1 – 4 minutes and visible roller marks will be minimised.

**MasterCoat™ TC 485 W** dries primarily by evaporation of water followed by a chemical cross-linking reaction. Therefore when applying **MasterCoat™ TC 485 W** the ambient temperature and humidity are of importance. High humidity (especially in combination with low temperatures) slows down the drying process and the gloss level. After application, the surface should be protected **from direct contact with water for at least 24 h (15°C / 50 % r.h.)**.

## Consumption

First layer (priming):  
0.15 – 0.25 kg/m<sup>2</sup> (Dil. 5% with water)

Second and third layer:  
0.20 – 0.25 kg/m<sup>2</sup> (no dilution)

## Cleaning of Tools

All the tools and equipments must be cleaned by water after the application. After **MasterCoat™ TC 485 W** is hardened, it can only be removed from the surface mechanically.

## Packaging

MasterCoat™ TC 485 W	Part A	Part B
Mixing Ratio	10 kg	15 kg

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## EU REGULATION 2004/42 (DECOPAINT GUIDELINE)

This product conforms to the EU directive 2004/42/EG (Deco-Paint directive) and contains less than the maximum allowable VOC Limit (Stage 2, 2010). According to the EU directive 2004/42, the maximum allowable VOC content for the Product Category IIA / j type wb is 140 g/l (Limit: Stage 2, 2010). The VOC content for **MasterCoat™ TC 485 W** is < 140 g/l (for the ready to use product).

## Shelf Life

12 months after production date under appropriate storage conditions.

## Storage

Store in original containers, under dry conditions and a temperature between 15–25°C. Do not expose to direct sun-light. Protect from frost.

## Health and Safety

In its cured state, **MasterCoat™ TC 485 W** is physiologically non-hazardous. The following protective measures should be taken when working with the material:

Wear safety gloves, goggles and protective clothing. Avoid contact with the skin and eyes. In case of eye contact, seek medical attention. Avoid inhalation of the fumes.

When working with the product do not eat, smoke or work near a naked flame. For additional references to safety-hazard warnings, regulations regarding transport and waste management please refer to the relevant Material Safety Data Sheet. The regulations of the local trade association and/or other authorities, regulating safety and hygiene of workers handling epoxy resins must be followed.

## 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.

## Contact

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