

# MasterCoat® PRI 677

Epoxy Based, Solvent Free, Two Component Primer

## Material Description

**MasterCoat® PRI 677** is an epoxy based, two components, low viscosity primer and penetration material for use on mineral substrates such as concrete and cement.

Complies with EN 1504-2

## Areas of Application

- With the addition of the appropriate amount of silicasand, it can be used as a repair mortar.
- Under **MasterCoat®** epoxy/ polyurethane floor coatings.
- Under **MasterJoint®** epoxy/ polyurethane floor coatings.

## Characteristics and Benefits

- Easy to apply.
- Tolerant to damp that raises from the floor.
- Penetrates to capillary holes within concrete structure hence blocks the holes.
- Provides excellent penetration and adherence on cement based surfaces.
- **MasterCoat® PRI 677** does not lose its performance under sudden temperature changes between -20 - +50°C. It has also been tested under +250°C and above for short periods of time.
- It does not contain any solvents.

## Technical Properties

|                                                                                                     |                                                                                                        |
|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Structure of the Material<br><b>MasterCoat® PRI 677</b> Part A<br><b>MasterCoat® PRI 677</b> Part B | Epoksi Resin<br>Epoksi Hardener                                                                        |
| Color                                                                                               | Transparent                                                                                            |
| Mixture of Density (23°C)                                                                           | 1,089 g/cm <sup>3</sup>                                                                                |
| Viscosity (23°C)                                                                                    | Part A 600 mPa.s<br>Part B 380 mPa.s<br>Mixture 490 mPa.s                                              |
| Re-coating Interval / Ready for Traffic                                                             | 12°C Min. 24 hours Max. 48 hours<br>23°C Min. 7 hours Max. 36 hours<br>30°C Min. 3 hours Max. 24 hours |
| Fully Cured / Ready for Exposure to Chemicals (23°C)                                                | 7 days                                                                                                 |
| Substrate and Application Temperatures (°C)                                                         | Min. 8 Maks. 30                                                                                        |
| Max. Permissible Relative Humidity                                                                  | 10°C % 75<br>>23°C % 85                                                                                |
| Shore D Hardness (7 days)                                                                           | 80                                                                                                     |
| Compressive Strength                                                                                | 50 N/mm <sup>2</sup>                                                                                   |
| Flexural Strength                                                                                   | 20 N/mm <sup>2</sup>                                                                                   |
| Bonding Strength                                                                                    | >2 N/mm <sup>2</sup>                                                                                   |

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

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## Processing Method

### (A) Preparation of Substrate

The concrete substrates on which the product is going to be applied should be C25 or dosage of 350 minimum and the concrete should be 3 weeks old at least. After the preparation of the surface, the tensile strength of the substrate should exceed 1.5 N/mm<sup>2</sup> (tested with an approved pull-off tester at a load rate of 100 N/s). The residual moisture content of the substrate should not exceed 4 % (tested with e.g. CM device). A damp proof course should be installed properly and be intact. The substrate temperature should remain +8°C minimum and the temperature of the substrate should at least be 3 K above the current dew point. All substrates should be structurally sound, dry and clean. Oil, grease and other adhesion impairing contaminants should be removed. Bubble formation on the surfaces which absorbed oil should be removed with the usage of a blastrack or rotatiger. Oil contaminated substrates should first be precleaned with an emulsifying cleaning detergent according to the supplier's instructions. Finally, the concrete or cement screed surface should be cleaned by using a high pressured water jet and excess water should be removed by a wet/dry vacuum cleaner. If MasterCoat® PRI 677 is to be coated on a soil based substrates a layer against rising damp should be installed according to DIN 18195 (or equivalent) standards. The windows, the doors and the roof should be already installed and closed. MasterCoat® PRI 677 can be applied when the residual moisture content of the substrate exceeds 4%. Please refer to Technical Help for detailed information.

### (B) Mixing

MasterCoat® PRI 677 is supplied as ready to use kits in the exact ratio. Before mixing, precondition both A and B parts to the temperature of +15 - +25°C. Pour the entire contents of part B into the container of part A; make sure that there is no product left in the part B package. Scrape well the sides and the bottom of the container to ensure a thorough mixing. After mixing MasterCoat® PRI 677 parts for 3-4 minutes, pour the mix into a fresh container, set it aside for a while and

mix for another minute. When MasterCoat® PRI 677 mixture is ready, oven dried silica can be added with a ratio of 1/0.5-1/2 if the surface is too porous. When 1/1 or 1/5 oven dried silica added, MasterCoat® PRI 677 can be used as a repair mortar.

### (C) Processing

MasterCoat® PRI 677 A+B mixture is applied to the floor with a roller or by pulling a zero comb. If an epoxy or polyurethane based coating is to be applied, sprinkle silica sand with a grain diameter of 0,1 - 0,3 mm or 0,3 - 0,8 mm on MasterCoat® PRI 677 while it is still wet.

If the MasterCoat® PRI 677 A+B mixture is thickened with silica sand, the mixture is trowelled onto the defective surfaces both as a primer and as a surface correction paste and sprinkled with silica sand with a grain diameter of 0.1 - 0.3 mm or 0.3 - 0.8 mm while still wet.

## Consumption

MasterCoat® PRI 677 A+B usage is approximately 0.3-0.5 kg/m<sup>2</sup> depending on concrete quality, surface absorbency and roughness. Primer usage and consumption may vary according to system solutions.

CAUTION: Use warm or hot water in cold weather. Do not add aggregate, any chemical or foreign substance to the mixture.

## Point to Consider

- Avoid application under excessive heat or wind and/or when the ambient and/or substrate temperature is below +10°C or above +30°C.
- The materials to be used at the appropriate temperatures should be brought and stored in the application area 1-2 days prior to the application and enabled to adjust the ambient conditions.
- Epoxy and polyurethane based floor coatings should be applied by specialists.
- In extremely cold conditions, heaters should be used to increase the ambient and the workability of the product.

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the packages should be preconditioned to +20-+25°C to become ready to use.

- The reaction and workability times of resin based systems depend on the ambient and substrate temperatures as well as the relative humidity. Under lower temperatures, the chemical reaction times are prolonged and this increases the pot life, coating interval and the working time. In addition to this, the consumption is increased as the viscosity increases. High temperatures ignite stronger chemical reactions and the above mentioned times decrease accordingly. For the material to be cured properly, the ambient and the substrate temperatures should not fall below the specified limits. After the application, the material should be protected from direct contact with water for 24 hours minimum. Within this period, a contact with water may cause a surface carbonation and/or tackiness; both of which will cause the coating to lose its characteristics. In such cases, the overall coating should be removed from the floor and renewed.
- Permissible relative humidity %75-%90.
- MasterCoat® PRI 677 is supplied in working packs which are pre-packaged in the exact ratio. No solvent should be added.
- Mixing should be done with a mechanical drill at 300 - 400 rpm with epoxy/polyurethane mixing paddles.
- DO NOT MIX BY HAND.
- After the first mix, contents should be poured into a clean container and mixed once again.
- The empty packs should be consolidated and disposed properly in order to prevent reusing of the packages.

## Cleaning of Tools

Used tools and equipment must be cleaned carefully with an appropriate solvent: Once fully cured MasterCoat® PRI 677 can only be removed by mechanical means.

## Packaging

| MasterCoat® PRI 677 | Part A   | Part B  |
|---------------------|----------|---------|
| Mixing Ratio        | 15,00 Kg | 6,46 Kg |

## Shelf Life

12 months after the production date under appropriate storing conditions. Opened packages have to be stored by tightly sealing the bag/cover and must be used in one week.

## Storage

Store in original containers, under dry conditions and a temperature between 15°C - 25°C. Do not expose to direct sun-light. For maximum shelf life under these conditions, see "Best before." label.

## Health and Safety

In its cured state, MasterCoat® PRI 677 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.

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# MasterCoat® PRI 617

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|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <b>CE</b>                                                                                                                        |                                                                                              |
| MBT TEKNİK YAPI KİMYASALLARI SAN. VE TİC. A.Ş.                                                                                   |                                                                                              |
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| 25                                                                                                                               |                                                                                              |
| DOP NO: 1401006                                                                                                                  |                                                                                              |
| MasterCoat® PRI 677                                                                                                              |                                                                                              |
| TS EN 1504-2:2004<br>I.2, 5.2 Emprenye Uygulaması<br>I.2, 5.2 Impregnation application (I)                                       |                                                                                              |
| Beton için yüzey koruma sistemleri<br>Surface protection systems for concrete<br>Emprenye uygulaması<br>Impregnation application |                                                                                              |
| Aşınmaya Direnç<br>(Abrasion Resistance)                                                                                         | Uygun / Pass                                                                                 |
| Kapiler Su Emme ve Su Geçirgenliği<br>(Capillary Absorption and Permeability to water)                                           | $w < 0,1 \text{ kg/m}^2 \cdot \text{v/h}$                                                    |
| Çarpmaya Direnç<br>(Impact Resistance)                                                                                           | Class I                                                                                      |
| Çekip koparma deneyi yoluyla yapışma dayanımı<br>(Adhesion strength by pull-off test)                                            | Rigid sistemler trafik yüküyle $\geq 2,0 \text{ N/mm}^2$<br>(Rigid Systems with trafficking) |
| İşleme derinliği<br>(Depth of penetration)                                                                                       | NPD                                                                                          |
| Yangına karşı tepki<br>(Reaction to fire)                                                                                        | E                                                                                            |
| Tehlikeli maddeler<br>(Dangerous substances)                                                                                     | Madde 5.3 'e uygun<br>(Comply with clause 5.3)                                               |

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