MasterCoat™ PRI 617

Epoxy Based, Solvent Free, Two Component Primer

Material Description

MasterCoat™ PRI 617 is a solvent free, low viscosity, two component, epoxy based primer.

Mixing ratio (w/w) 100:43

Areas of Application

MasterCoat™ PRI 617 is designed for use indoor and outdoor as a primer on mineral substrates such as concrete and cementitious screed. You can use it as scratch primer by adding oven dried silica sand in a proportion of 1: 0,5 till 1: 2.

Technical Properties	
Structure of the Material **MasterCoat™ PRI 617** Part A **MasterCoat™ PRI 617** Part B	 Epoxy Resin Epoxy Hardener
Color	Transparent
Density (23^{0}C) Part A Part B Mixture	 1,15 g/m³ 1,06 g/m³ 1,10 g/m³
Viscosity (23^{0}C) Part A Part B Mixture	 500 mPa.s 380 mPa.s 460 mPa.s
Pot Life 12^{0}C 23^{0}C 30^{0}C	 60 mins. 30 mins. 15 mins.
Re-coating Interval / Ready for Traffic 12^{0}C 23^{0}C 30^{0}C	 Min. 24 hours Max. 48 hours Min. 7 hours Max. 36 hours Min. 3 hours Max. 24 hours
Fully Cured / Ready for Exposure to Chemicals 10^{0}C 23^{0}C 30^{0}C	 5 days 3 days 2 days
Substrate and Application Temperatures (^{0}C)	Min. 8 Maks. 30
Max. Permissible Relative Humidity 10^{0}C >23^{0}C	 % 75 % 85
Shore D Hardness (7 days)	80
Compressive Strength	60 N/mm²
Tensile Strength	1,5 N/mm²

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

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Characteristics and Benefits

- Low viscosity
- Easy to apply
- Excellent penetration
- Seals pores and capillaries
- Excellent bond to substrate
- Low emission

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 ad- hesion impairing contaminants. Mechanical surface profil- ing by grit or shot blasting, high-pressure water jetting, grinding or scabbling (including the necessary posttreatment) are the preferred floor preparationmethods.
After surface preparation the tensile strength of the substrate should exceed 1.5 N/mm^2 (check with an approved pull-off tester at a load rate of 100 N/s).
The residual moisture content of the substrate must not exceed 4% (check with e.g. CM device).
A damp proof course must have been properly installed and be intact.

(B) Mixing

MasterCoat™ PRI 617 is supplied in working packs which are pre-packaged in the exact ratio. Before mixing, precondition both A and B components to a temperature of approximately 15 to 25°C. Pour the entire contents of Part B into the container of Part A. DO NOT MIX BY HAND. Mix with a mechanical drill and paddle at a very low speed (ca. 300 rpm) for at least 3 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 ORIGINAL CONTAINER. After proper mixing to a homogeneous consistency pour the mixed Parts A and B into a fresh container and mix for another minute.
MasterCoat™ PRI 617 should be applied when the ambient temperature is constant or falling as this will decrease the risk of bubble formation due to expansion of air that is enclosed in the concrete.

(C) Processing

After mixing, **MasterCoat™ PRI 617** is applied to the prepared substrate by spreading with a squeegee and finishing with a roller. Oven dried sand is broadcast into the still wet primer in order to improve adhesion of the following coat. The curing time of the materi- al is influenced by the ambient, material and substrate temperatures. At low temperatures, the chemical reactions are slowed down; this lengthens the pot life, open time and curing times. High temperatures speed up the chemi- cal reactions thus the time frames mentioned above are shortened accordingly. To fully cure, the material, substrate and application temperature should not fall below the minimum.
After application, the material should be protected from direct contact with water for approx. 24h (at 20°C). Within this period, contact with water can cause a surface bloom and/or surface tackiness, both of which must be removed. The temperature of the substrate must be at least 3K above the dew point both during the application and for at least 24 hours after the application (at 15°C).

Consumption

The consumption of **MasterCoat™ PRI 617** is between 0.3 – 0.5 kg/m^2 depending on the condition and porosity of the substrate. A second coat of 0.2 – 0.4 kg/m^2 of **MasterCoat™ PRI 617** is recommended for very porous substrates and improves the protection against rising damp.
Oven dried silica sand 0.3 – 0.8 mm should be broadcast at approximately 1.0 kg/m^2 not in excess into the still wet primer.
The above consumption figures are intended as a guide only and may be higher on very rough or porous substrates.

EU REGULATION 2004/42 (Decopaint Guidline)

This product conforms to the EU directive 2004/42/EG (Deco-Paint directive) and contains less

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than the maxi-mum 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 sb is 500 g/l (Limit: Stage 2, 2010). The VOC content for **MasterCoat™ PRI 617** is < 500 g/l (for the ready to use product).

Point to Consider

- Do not apply in extremely hot, rainy or windy weather or if the ambient and surface temperature is below +8°C or above +30°C.
- In applications to be carried out at suitable temperatures, the materials to be used should be brought to the application area 1-2 days in advance and stored and adapted to the ambient conditions.
- In applications to be carried out in extremely cold weather, the ambient and ground temperature should be increased with the help of heaters, and the packages should be made ready for use by conditioning to +20°C - +25°C to increase the workability of the material.
- Epoxy and polyurethane based floor systems should be applied by expert applicators.
- The working and reaction times of resin-based systems are affected by the ambient and ground temperature and the relative humidity in the air. At low temperatures, the chemical reaction slows down, which prolongs the use time, coating time and working time. At the same time, consumption increases as viscosity increases. High temperatures increase the chemical reaction and the above mentioned times are shortened accordingly. The ambient and ground temperature should not fall below the minimum permissible temperature in order to complete the complete curing of the material. After completion of the coating, the coating should be protected from direct water contact for at least 24 hours. If water contact occurs, this will cause carbonation and softening of the coating, which will cause the coating to lose its properties. In such a case, the entire coating should be removed from the floor and replaced.
- **MasterCoat™ PRI 617** is produced in ready-to-use sets. Solvents etc. should not be added to the mixture during application.
- Relative humidity should be between 75% - 90% during application.
- After the first mixing, the mixture must be taken into a clean container and mixed again. If the material is used by pouring from the first mixing container, unreacted free components will remain on the surface without hardening.
- The used packages should be placed inside each other to ensure adhesion and reuse of the packages should be prevented.
- SHOULD NOT BE MIXED BY HAND.

Cleaning of Tools

Re-usable tools must be cleaned carefully with isopropanol.

Packaging

MasterCoat™ PRI 617	Part A	Part B
Mixing Ratio	14.47 kg	6.5 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 617** 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

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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 as-sociation and/or other authorities, regulating safety and hygiene of workers handling epoxy resins must be fol-lowed.

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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