

MasterCoat® PRI 604

Pre-filled, Two Component Epoxy Resin Based Primer, Suitable for Mineral Substrates

Material Description

MasterCoat® PRI 604 is a total solid, pre-filled, low viscosity, two component epoxy resin based primer.

Areas of Application

MasterCoat® PRI 604 can be used as a pore-sealing primer in interior areas and/or as a roughcast primer by adding dried silica sand to concrete and cement in a ratio of 1:0.5 - 1:0.8.

Technical Properties		
Structure of the Material MasterCoat® PRI 604 Part A MasterCoat® PRI 604 Part B		Epoksi Resin Epoksi Hardener
Color		Light Yellow
Mixing Ratio		100:27 (by weight)
Density (23°C)	Part A Part B Mixture	1,65 g/m ³ 1,05 g/m ³ 1,47 g/m ³
Viscosity (23°C)	Part A Part B Mixture	8500 mPa.s 80 mPa.s 1200 mPa.s
Pot Life	12°C 23°C 30°C	60 mins. 30 mins. 15 mins.
Re-coating Interval / Ready for Traffic	10°C 23°C 30°C	Min. 16 hours Max. 48 hours Min. 6 hours Max. 48 hours Min. 3 hours Max. 24 hours
Fully Cured / Ready for Exposure to Chemicals	10°C 23°C 30°C	5 days 3 days 2 days
Substrate and Application Temperatures (°C)		Min. 8 Maks. 30
Max. Permissible Relative Humidity	10°C >23°C	% 75 % 85
Shore D Hardness (7 days)		79
Compressive Strength (EN 12190) (28 days)		55 N/mm ²
Tensile Strength (EN 1542) (7 days)		≥ 2 N/mm ²

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

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MasterCoat® PRI 604 has been tested for emissions in the MasterCoat® I273 system.

Characteristics and Benefits

- Low viscosity
- Easy to apply
- Excellent penetration
- Seals pores and capillaries
- Excellent bond to substrate
- Pre-filled
- 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 adhesion impairing contaminants. Mechanical surface profiling by grit or shot blasting, high-pressure water jetting, grinding or scabbling (including the necessary posttreatment) are the preferred floor preparation methods.

After surface preparation the tensile strength of the substrate should exceed 1.5 N/mm² (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 604 is supplied in working packs which are pre-packaged in the exact ratio (except for the deliveries in drums). 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.

NOTE: For drum formats, pre-mix part A with a mechanical drill and paddle at a very low speed (ca. 300 rpm).

Once part A has been homogenized, mix part A and part B together as previously described and respect the defined mix ratio (100:27) by using a scale.

(C) Processing

MasterCoat® PRI 604 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. After mixing, MasterCoat® PRI 604 is applied to the prepared substrate by spreading with a squeegee or with a roller. We recommend to broadcast the wet primer with oven dried sand in order to improve adhesion of the following layer in case of PU based coat application. The curing time of the material 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 chemical 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 3 K 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 604 as primer is between 0.3 – 0.8 kg/m² depending on filling grad, condition and porosity of the substrate. A second coat of 0.2 – 0.4 kg/m² of MasterCoat® PRI 604 is recommended for very

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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/m² 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.

Cleaning of Tools

Re-usable tools must be cleaned carefully with isopropanol.

Packaging

30 kg set

Part A: 23.6 kg

Part B: 6.4 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 604** 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 604	
TS EN 1504-2:2004 1.2, 5.2 Emprenye Uygulaması 1.2, 5.2 Impregnation application (I)	
Beton için yüzey koruma sistemleri Surface protection systems for concrete	
Emprenye uygulaması Impregnation application	
Kapiler Su Emme ve Su Geçirgenliği (Capillary Absorption and Permeability to water)	NPD
Su Buharı Geçirgenliği (Permeability of water vapour)	Sınıf I (Class I)
Çekip koparma deneyi yoluyla yapışma dayanımı (Adhesion strength by pull-off test)	Çatlak kapatma veya esnek sistemler (trafik yükü olmadan) $\geq 0,8 \text{ N/mm}^2$ Crack-bridging or flexible systems (without traffic load)
Yangına karşı tepki (Reaction to fire)	E
Tehlikeli maddeler (Dangerous substances)	Madde 5.3 'e uygun (Comply with clause 5.3)

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