

MasterJoint™ PR 800

Polyurethane Based, Two Component, Solvent Free, Spray Applied Waterproofing Membrane

Material Description

MasterJoint™ PR 800 is a two component, solvent free, polyurethane based waterproofing membrane with crack bridging capability. Since it is very reactive, it can only be applied with a special spray equipment.

Areas of Application

- Roofs, terraces and terrace gardens
- Aircraft hangars
- Tunnels
- Collecting tanks
- Underground water tanks
- Insulation and coating of car park decks
- Pools
- Channels
- Warehouses

Characteristics and Benefits

- High mechanical strengths.
- Can be applied both to horizontal and vertical surfaces.
- Provides easy solutions in complicated details.
- Used safely without attending to the solutions for corner, side and joint.
- Quick application and curing.
- Provides monolithic application, no joints, laps etc details.
- Can be adhered to many surfaces with the right primer.
- 100% adhesion to the substrate.
- Low risk of blistering owing to water vapor permeability.
- Crack bridging properties.
- Resistant to standing water.
- Solvent free.

Technical Properties

Structure of the Material	
MasterJoint™ PR 800 Part A	Polyurethane Resin
MasterJoint™ PR 800 Part B	Polyurethane Hardener
Color	Grey
Mixing Ratio	100/73 (weight)
Density:	
Part A	~1,04 g/cm ³
Part B	~1,09 g/cm ³
Viscosity:	
Part A	~1750 mPas
Part B	~1900 mPas
Shore A hardness (28 days)	80
Tensile Strength (DIN 53504)	8 N/mm ²
Tear Strength (DIN 53504)	16 N/mm ²
Breaking Elongation	400%
Gel Time (Hand Mixed)	12 - 18 seconds
Substrate Temperature	+10°C + 30°C
Service Temperature	-40°C + 120°C (for shot terms +250°C)

Typical values are obtained from the test results in 23°C and 50% relative humidity conditions. High temperatures shorten the curing and working time, lower temperatures extends the durations.

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Processing Method

(A) Preparation of Substrate

Substrate preparation and correct primer use are very important in the application of **MasterJoint™ PR 800**. Refer to the technical data sheet of the primers before applying preliminary surface preparation primers.

Concrete

Concrete floors on which the product will be applied must be of concrete pressure class C20/C25 quality and at least 3 weeks old. After surface preparation, the tensile strength of the concrete floor must be minimum 1,5 N/mm². The moisture content of the floor concrete must not exceed 4% (measured with a CM instrument). If necessary, a damp-proof layer must be applied. The floor temperature must remain constant at a minimum of +8°C and must be at least +3°C above the dew point.

All surfaces must be solid, load-bearing, dust-free, dry and clean. The surface must be free from weak and loose particles that reduce adherence and all kinds of oil, grease, rust and paraffin residues. The foam layer formed on the oil-absorbed surfaces should be removed with the help of blastrack or rotatiger and the dust layer formed should be swept with industrial vacuum cleaners. Oily surfaces should be cleaned with chemical cleaning detergent in accordance with the supplier's instructions. Finally, the concrete surface should be cleaned with the help of water jet and excess water should be removed with a wet/dry vacuum cleaner.

Asphalt

Asphalt should be cleaned by high pressure water jetting. The load bearing capacity of the asphalt in applications under load, should be suitable for the intended use. The surface should be shotblasted so that at least 60% of the surface aggregates are exposed.

Bitumen Felt

Blisters should be opened and dried. Major cracks should be repaired and taped. **MasterJoint™ PR 800** is not suitable for applications to black APP and there is not any primer for these substrates.

Plywood

All joints should be flushed and taped.

Iron/Steel

Iron/steel should be sand blasted to an SA 2.5 finish prior to the application of the primer.

Primer

Substrate	Primer
Bitumen felt	MasterCoat™ PRI 698
Concrete/Cementitious Screed	MasterCoat™ PRI 677/604 Followed by MasterCoat™ PRI 691
Asphalt Screed	MasterCoat™ PRI 660 or MasterCoat™ PRI 678
Plywood	MasterCoat™ PRI 660 or MasterCoat™ PRI 691
PVC	MasterCoat™ PRI 699
Iron and Steel	MasterCoat™ PRI 691
MasterJoint™ PR 800	MasterCoat™ PRI 691

Top Coats

MasterJoint™ PR 800 does not have sufficient UV resistance. There are various topcoat products according to the type and purpose of use. MBT Teknik should be consulted for appropriate material usage.

(B) Processing

MasterJoint™ PR 800 system solutions and applications must be applied by Specialist Applicator Dealers certified by MBT Teknik Construction Chemicals Technical Service. **MasterJoint™ PR 800**

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can only be applied with a suitable two-component spraying machine. **MasterJoint™ PR 800** should only be applied to properly prepared surfaces. Adjacent surfaces not to be treated should be protected by masking (e.g. polythene sheet or paper.) Care should be taken to prevent wind transport of spray mist using suitable barriers. **MasterJoint™ PR 800** should be applied within the recommended temperature and relative humidity limits. The surface temperature during application should be at least 3°C above the dew point.

Consumption

Consumption of 1,8 - 2,2 kg/m² under normal conditions.

In some special cases the consumption can be up to 4,0 kg/m².

Point to Consider

- Avoid application under excessive heat or wind and/or when the ambient and/or substrate temperature is below +10 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.
- In extremely cold conditions, heaters should be used to increase the ambient and the workability of the product, the packages should be preconditioned to +20°C - +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 is 90% max
- DO NOT MIX BY HAND.
- 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 cured **MasterJoint™ PR 800** can only be removed by mechanically.

Packaging

Part A: 210 kg barrels

Part B: 220 kg barrels

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

Must be stored in unopened original packing, and in cool and dry environment protected from freezing. In short-term storing, maximum 3 palettes can be stowed on top of each other and delivery has to be according to first in first out system. In long-term storing, the palettes must not be stowed on top of each other.

Health and Safety

It is dangerous to approach the application sites. During the application, a protective apparel, protective gloves, goggles and masks which comply

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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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