

MasterJoint® PR 640

Single Part Polyurethane Waterproofing Membrane

Material Description

MasterJoint® PR 640 is a single part, polyurethane based, elastomeric waterproofing membrane applicable by roller and airless spray machine.

Areas of Application

- Indoors and outdoors areas,
- Terraces,
- Balconies,
- Roofs,
- Terraces above parking lots,
- For waterproofing purposes on floors with light pedestrian,
- For the protection of polyurethane thermal insulation foam,
- For waterproofing and protection purposes in bridge, deck, stadium concrete.
- For waterproofing wind turbine tower and foundation

Characteristics and Benefits

- Single part, easy to apply
- Can be applied by airless spray machine, brush or roller
- High elasticity and flexibility
- Excellent adhesion to concrete
- Excellent mechanical properties
- Excellent crack bridging capacity even at low temperatures
- Resistant to temporary standing water

Processing Method

(A) Preparation of Substrate

Cement based surfaces must be sound, dry, load bearing, dust free, clean and level at the same time. The surface should be thoroughly cleaned from all kinds of oil, grease, paraffin and residues that may weaken adherence and there should be no loose particles on the surface. The concrete surface to be applied must have 28 day strength, minimum compressive strength of 25 MPa and moisture content of maximum 4%.

Technical Properties

Material	Polyurethane
Colour	Grey
Density	1,40 ± 0,30 g/cm ³
Viscosity	4000 ± 1000 mPa.s
Solid Content	%90
Elongation At Break	≥ 400%
Tensile Strength	≥ 2,50 N/mm ²
Adhesion to Concrete	≥ 1,90 N/mm ²
Application Temperature	From +5°C to +35°C
Permissible Moisture on The Support	Max. 4%
Re-coating Interval	Min. 12 hours max. 24 hours
Open to Pedestrian Traffic After	24 h
Fully Cured	7 days
Shore A Hardness	65
Service Temperature	-30°C +80°C

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After cleaning the surfaces with capillary and small cracks, apply **MasterJoint® PR 640** with a consumption of 0,20-0,25 kg/m² per square meter on the dry surface only where there are cracks with a suitable roller and let it dry for 2-3 hours. Then, in order to bridge across the crack, polyester felt of 60 or 90 gr/m², cut in 20 cm width, is placed into the still wet **MasterJoint® PR 640** material with the help of a roller or trowel and then covered with a second layer of material and left to cure for 12 hours.

When necessary for bridging expansion or control joints, it can be deepened and widened to form a smooth cross-section. In moving joints, a depth of 10-15 mm can be formed, but the depth of the joint should be approximately half of its width. Wait for a minimum of 24 hours after the application of polyethylene roving and sealant, depending on weather conditions. Then, in order to bridge across the crack, polyester felt of 60 or 90 gr/m², cut in 20 cm width, is placed into the still wet **MasterJoint® PR 640** material with the help of a roller or trowel and then covered with a second layer of material and left to cure for 12 hours. At slab and parapet joints, the application is made around the drains in the same way as geotextile.

(B) Mixing

MasterJoint® PR 640 must be mixed before application.

(C) Processing

Primer Application

After cleaning the entire surface, apply on dry surface with a suitable primer and roller with a consumption of 0,20-0,25 kg/m² per square meter.

Product Application

After thoroughly mixing the product, apply it evenly to the primed surface with a roller or brush until the dry film thickness does not exceed 0,6 mm per square meter. After approximately 12 - 24 hours, apply the second coat in the same manner, provided it does not exceed 48 hours. **MasterJoint® PR 640** is applied as the first coat at a rate of

0,75 kg/m² per square meter and allowed to cure for 12-24 hours. In problematic and large areas, the geotextile felt should be placed on the surface with a 10 cm overlap with the appropriate amount of material before the second coat is applied. The second coat is then applied at a rate of 0,75 kg/m². It is recommended that three coats be applied on uneven and slightly sloped surfaces. If the coating will be exposed to UV light, overcoat with **MasterJoint® TC 269** or suitable product.

Consumption

1.5 - 2.0 kg/m² in two coats, depending on the roughness of the surface.

Point to Consider

- In application, if the ambient and surface temperature is below +5°C or above +35°C, appropriate temperatures should be expected.
- Working and reaction times of polyurethane based systems are affected by ambient and ground temperature and relative humidity in the air. At low temperatures, the reaction slows down, which extends pan life and working time. High temperatures accelerate the reaction, and the times mentioned above are shortened accordingly. For the material to complete curing, the ambient and ground temperature should not fall below the minimum permissible temperature.
- The concrete surfaces to be treated must have 28 day strength, minimum compressive strength of 25 MPa and minimum humidity of 4%.
- Care should be taken to apply two coats of primer on light weight concrete and fragile, porous surfaces.
- Do not apply on wet and damp surfaces.
- The surface should not be cleaned with water during surface preparation.

Cleaning of Tools

All the tools and equipment must be cleaned by solvent after the application. After **MasterJoint® PR 640** is hardened, it can

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only be removed from the surface mechanically.

Packaging

25 kg tin

Shelf Life

12 months after the production date under appropriate storage conditions. MasterJoint® PR 640 freezes below 0°C.

Storage

Must be stored in between +5 °C and +35 °C, unopened original packing, and in cool and dry environment protected from freezing. Delivery must 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, protective apparel, protective gloves, goggles and masks which comply 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 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

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MasterJoint® PR 640	
TS EN 1504-2 Nem kontrolü 2.2, Artan direnç 8.2 Humidity control 2.2, Increased Resistance 8.2	
Beton için yüzey koruma sistemleri Surface protection systems for concrete	
Kaplama uygulaması Coating application	
Su Buharı Geçirgenliği Permeability to water vapour	NPD
Kapiler Su Emme ve Su Geçirgenliği Capillary absorption and permeability to water	w<0,1 kg/m ² .y
Çekip Koparma Deneyi Yoluyla Yapışma Dayanımı Adhesion strength by pull-off test	Emek Sistemler Trafik yükü ile birlikte ≥ 1,5 N/mm ² Crack bridging on/flexible systems (with traffic load)
Yangına Karşı Tepki Reaction To Fire	E
Tehlikeli maddeler Dangerous substances	Güvenlik bilgi formu Safety data sheet

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