BASF
The Chemical Company

MASTERPREN® TPE

Synthetic membrane of TPO

Description

MASTERPREN TPE synthetic liner of TPO modified polyolefin, in two-colour version (sand grey/black), obtained by co-extrusion, which allows it to be produced in a single layer a liner with different physical-chemical properties on the two sides. It has a polyester mesh reinforcement. The upper sand grey layer, which is exposed, is characterised by an extremely high resistance to weathering and ultraviolet rays, whereas the lower black layer is resistant to puncturing

Typical applications

MASTERPREN TPE can be applied in the following circumstances:

- Exposed roofing laid loose
- Exposed roofing mechanically fixed
- Exposed roofing fully bonded (requiring a fleece backing)
- Landscaped areas and roof gardens
- May be used in underground structures and potable water structures

Advantages

- It has superior mechanical characteristics and has an extremely high resistance to weathering and ultra violet rays
- High mechanical properties and resistance to puncturing
- Rot-proof
- Resistance to root penetration
- If double welded it allows pressure testing of joints
- Can be bonded with the Masterpren TPO Adhesive
- Good resistance to hydrocarbons and bacterial attack
- Long life expectancy

Packaging and roll sizes

MASTERPREN TPE is supplied in various thicknesses and widths of 2.10 meters.

Thickness (mm)	1.2	1.5	1.8	2.0	2.5
Width (m)	2.10	2.10	2.10	2.10	2.10
Length (m)	25	20	20	20	20
Colour	Sand grey / Black				

Fire-resistant version is available on request (class B2 according to DIN 4102/1) with EP/PR-FR designation

Application procedure

Usually applied by a Specialist Applicator. Please contact BASF Construction Chemicals for specific application assistance.

Watertight Systems & Engineered Solutions

BASF Construction Chemicals provides systems and engineered solutions, to suit the structure, at the design and construction stages, to ensure water tightness. Various products and elements which form an integral part of a system are manufactured and approved by BASF. The following ranges of products are available;

- Masterpren range – Preformed membranes Masterflex range - Active and passive joint treatment
- Masterseal range - Liquid applied membranes and protective coatings
- Masterflow range - High performance grouts
- Emaco and Concresive ranges - Repair materials

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***Physical / Chemical Properties**

Thickness UNI EN 1849 - 2	1.2mm	1.5mm	1.8mm	2.0mm	2.5mm
Specific weight UNI EN 1849 - 2	1.15 kg/m^2	1.40 kg/m^2	1.68 kg/m^2	1.85 kg/m^2	2.32 kg/m^2
Tensile strength UNI EN 12311 - 2	≥ 1100 N/5 cm	≥ 1100 N/5 cm	≥ 1100 N/5 cm	≥ 1100 N/5 cm	≥ 1100 N/5 cm
Elongation to break UNI EN 12311 - 2	≥ 15 %	≥ 15 %	≥ 15 %	≥ 15 %	≥ 15 %
Puncture resistance DIN 16726-5.12	≥ 400 mm	≥ 700 mm	≥ 900 mm	≥ 1150 mm	≥ 1650 mm
Cold bending UNI EN 495 - 5	≤ - 40°C	≤ - 40°C	≤ - 40°C	≤ - 40°C	≤ - 40°C
Hydrostatic pressure resistance (6 hours at 5 bar) UNI EN 1928 met B	waterproof	waterproof	waterproof	waterproof	waterproof
Resistance to artificial weathering UNI EN 1297	no cracking	no cracking	no cracking	no cracking	no cracking
Root resistance DIN 4062	No penetration	No penetration	No penetration	No penetration	No penetration
Resistance to hail on rigid substrate UNI EN 13583	≥ 25 m/s	≥ 25 m/s	≥ 25 m/s	≥ 25 m/s	≥ 25 m/s
Dimensional stability after 6 hours at 80°C – UNI EN 1107 - 2	≤ ± 0.5 %	≤ ± 0.5 %	≤ ± 0.5 %	≤ ± 0.5 %	≤ ± 0.5 %
Tear Resistance UNI EN 12310 - 2	≥ 300 N	≥ 300 N	≥ 300 N	≥ 300 N	≥ 300 N
Thermal ageing in air after 168 d at 70°C Cold bending UNI EN 1296	≤ - 40 °C	≤ - 40 °C	≤ - 40 °C	≤ - 40 °C	≤ - 40 °C
Peel resistance of joints UNI EN 12316 - 2	≥ 150 N/50 mm	≥ 150 N/50 mm	≥ 150 N/50 mm	≥ 150 N/50 mm	≥ 150 N/50 mm
Shear resistance of joints UNI EN 12317 - 2	Breaking out of joints	Breaking out of joints	Breaking out of joints	Breaking out of joints	Breaking out of joints
Resistance to impact UNI EN 12691	10 mm	10 mm	10 mm	10 mm	10 mm
Resistance to static punching UNI EN 12316	≥ 20 kg	≥ 20 kg	≥ 20 kg	≥ 20 kg	≥ 20 kg

Storage

Store out of direct sunlight, clear of the ground and on pallets.

Note

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local BASF Construction Chemicals representative.

BASF reserves the right to have the true cause of any liability determined by accepted test methods.

Quality and care

All products originating from BASF's Dubai, UAE facility are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational Health & Safety standards ISO 9001, ISO 14001 and OHSAS 18001.

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* Properties listed are based on laboratory controlled tests which are carried out immediately after production.

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