Roofing and waterproofing synthetic membrane

**DESCRIPTION**
Mapeplan® T B is a synthetic roofing waterproofing membrane in flexible polyolefin FPO produced in one multi-extrusion coating process, with high quality raw materials, reinforced with glass mat. Mapeplan® T B is conform to EN 13956 standard.

**APPLICATION FIELDS**
Mapeplan® T B is suitable for loose laid ballasted, utility deck (pedestrian - parking) and roof garden systems.
It is resistant to ultraviolet rays.

**NORMS AND CERTIFICATIONS**
CE conformity marking according to EN 13956 standard.
ISO 9001 quality system certification.
ISO 14001 environmental system certification.
BBA Agrément Certification.
FLL root resistance certification.
Mapeplan® T B can contribute in the collection of LEED (Leadership in Energy and Environmental Design) Credits.

**TECHNICAL CHARACTERISTICS**
Mapeplan® T B is a high standard quality product; it performs very good mechanical properties, best workability as well as excellent welding characteristics.

- High solar reflectance
- High workability and weldability
- Resistant to microbiological attacks and root-resistant
- High mechanical resistance
- Excellent flexibility at low temperatures
- Excellent resistance to ageing
- Excellent resistance to UV rays and to weathering
- Vapour permeability
- Formulation without plasticizers

**PACKAGING**

<table>
<thead>
<tr>
<th>PACKAGING</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PALLET</td>
<td>14 rolls per pallet</td>
</tr>
<tr>
<td>LENGTH OF ROLLS</td>
<td>20 m, 15 m (according to the thickness)</td>
</tr>
<tr>
<td>WIDTH OF ROLLS</td>
<td>2,10 m</td>
</tr>
</tbody>
</table>

**SAFETY INSTRUCTIONS**
Mapeplan® T B is not considered dangerous according to the current safety regulation for the classification of goods and substances.
The safety datasheet is therefore not compulsory for the purchase, transport and application.
Precaution during use: ensure a proper change of air if the application is made in closed working environments.

**STORAGE**
Store horizontally, shelter from sun and bad weather in a dry place.
**TECHNICAL DATA**

**PRODUCT PROPERTIES**

<table>
<thead>
<tr>
<th>Product</th>
<th>Waterproofing membrane in FPO (flexible polyolefin), reinforced with glass mat.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Top layer: high reflectance Smart White, Bottom layer: black</td>
</tr>
<tr>
<td>European standard</td>
<td>EN 13956 Certificate also EN 13361 - EN 13362 - EN 13491 - EN 13492</td>
</tr>
</tbody>
</table>

**CHARACTERISTICS**

<table>
<thead>
<tr>
<th>STANDARDS - M.U.</th>
<th>Mapeplan® T B 15</th>
<th>Mapeplan® T B 18</th>
<th>Mapeplan® T B 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visible defects</td>
<td>EN 1850-2</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Length (m)</td>
<td>EN 1848-2</td>
<td>20 (-0/+5%)</td>
<td>15 (-0/+5%)</td>
</tr>
<tr>
<td>Width (m)</td>
<td>EN 1848-2</td>
<td>2,10 (-0,5/+1%)</td>
<td>2,10 (-0,5/+1%)</td>
</tr>
<tr>
<td>Flatness (mm)</td>
<td>EN 1848-2</td>
<td>≤ 10</td>
<td>≤ 10</td>
</tr>
<tr>
<td>Mass per unit area (kg/m²)</td>
<td>EN 1849-2</td>
<td>1,5 (-5/+10%)</td>
<td>1,8 (-5/+10%)</td>
</tr>
<tr>
<td>Effective thickness (mm)</td>
<td>EN 1849-2</td>
<td>1,5 (-5/+10%)</td>
<td>1,8 (-5/+10%)</td>
</tr>
</tbody>
</table>

**TECHNICAL CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Mapeplan® T B 15</th>
<th>Mapeplan® T B 18</th>
<th>Mapeplan® T B 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watertightness</td>
<td>EN 1928 B Method</td>
<td>Watertight</td>
</tr>
<tr>
<td>Reaction to fire</td>
<td>EN 13501-1</td>
<td>Class E</td>
</tr>
<tr>
<td>Joint peel resistance</td>
<td>EN 12316-2 (N/50mm)</td>
<td>≥ 300</td>
</tr>
<tr>
<td>Joint shear resistance</td>
<td>EN 12317-2 (N/50mm)</td>
<td>≥ 500</td>
</tr>
<tr>
<td>Vapour diffusion resistance</td>
<td>EN 1931 (µ)</td>
<td>150000</td>
</tr>
<tr>
<td>Tensile strength</td>
<td>EN 12311-2 (N/mm²)</td>
<td>≥ 9</td>
</tr>
<tr>
<td>Elongation at break</td>
<td>EN 12311-2 (%)</td>
<td>≥ 550</td>
</tr>
<tr>
<td>Resistance to impact - rigid support (A method)</td>
<td>EN 12691 (mm)</td>
<td>≥ 600</td>
</tr>
<tr>
<td>- flexible support (B method)</td>
<td>EN 12691 (mm)</td>
<td>≥ 15</td>
</tr>
<tr>
<td>Resistance to static load - flexible support (A method)</td>
<td>EN 12730 (kg)</td>
<td>≥ 150</td>
</tr>
<tr>
<td>- rigid support (B method)</td>
<td>EN 12730 (kg)</td>
<td>≥ 150</td>
</tr>
<tr>
<td>Tear resistance</td>
<td>EN 12310-2 (N)</td>
<td>≥ 150</td>
</tr>
<tr>
<td>Dimensional stability</td>
<td>EN 1107-2 (%)</td>
<td>≤ 0.2</td>
</tr>
<tr>
<td>Foldability at low temperatures</td>
<td>EN 495-5 (°C)</td>
<td>≤ -40</td>
</tr>
<tr>
<td>UV exposure</td>
<td>EN 1297 (5000 h)</td>
<td>grade 0 - passes</td>
</tr>
<tr>
<td>Exposure/compatibility to aged bitumen (possible colour variations)</td>
<td>compatible</td>
<td>compatible</td>
</tr>
<tr>
<td>Resistance to root penetration</td>
<td>EN 13948 - Test FLL</td>
<td>conform</td>
</tr>
<tr>
<td>SRI (Solar Reflectance Index)</td>
<td>ASTM E1980</td>
<td>102</td>
</tr>
</tbody>
</table>

**MAPEPLAN® T accessories**

- Mapeplan® T D, membrane for details and particulars
- Mapeplan® T, metal sheets coupled to Mapeplan® T membrane
- Mapeplan® T, internal and external prefabricated corners
- Mapeplan® ADS 300, contact adhesives
- Mapeplan® T Seam Prep, liquid preparation overlaps
- Mapeplan® T Cleaner, cleaning liquid
- Mapeplan® T, outlets and special prefabricated pieces
MAPEPLAN® T B LAYERING

- High solar reflectance
- Environmental friendly
- Resistant to ageing processes
- Root-resistant
- Resistant to microbiological attacks
- Flexible at low temperatures
- Puncture resistant
- UV-resistant
- High workability and weldability
- Vapour permeable
- Formulation without plasticizers
- Dimensionally stable
- Excellent fire behaviour

Technical specifications of product are available on the technical books.
References for this product are available on request and on Mapei and polyglass web sites at the following addresses www.mapei.it, www.mapei.com and www.polyglass.com

LEGEND
1. Layer of ballast, gravel
2. Protective layer (for example POLYDREN)
3. MAPEPLAN® T B, roofing membrane
4. Thermal insulation
5. Vapour control layer (for example POLYVAP)
6. Substrate
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LEGEND
1. Layer driveway, cement screed with a wear layer
2. Antisooting layer
   (for example MAPEPLAN® PE micro-perforated)
3. Protection layer (for example POLYDREN)
4. MAPEPLAN® T B, roofing membrane
5. Thermal insulation
6. Vapour control layer
   (for example POLYVAP)
7. Substrate
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LEGEND
1. Growth medium
2. Filter layer (for example POLYDREN)
3. Drainage layer
4. Protective layer (for example POLYDREN)
5. MAPEPLAN® T B, roofing membrane
6. Thermal insulation
7. Vapour control layer (for example POLYVAP)
8. Substrate