**TECHNONICOL India Private Limited**
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# ULTRAPLAST BRIDGE

## Description:

APP-modified bitumen membrane ULTRAPLAST BRIDGE is designed for waterproofing of steel orthotropic plate and reinforced concrete slab of carriageway when asphalt concrete (up to +220°C) is laid directly on the waterproofing layer. Can be also used as a single-layer waterproofing of the foundation.

ULTRAPLAST BRIDGE is a waterproofing material produced by the two-sided placing of a special high-quality polymer-bitumen binder on an extra-strong polyester base. The material has the highest physical and mechanical properties and can withstand very high temperatures.

On the bottom side, the material is covered by a polymer film with special graphic elements, melting of which indicates the proper material heating. On the top, the material is covered by fine-grained sand.

## General requirements:

- Rolls of the material should be stored indoors in a dry place in their original packaging and taken to the construction site ready to use.
- Keep the rolls upright and do not stack pallets.
- The application surface must be cleaned of dust, debris, grease, leaves, oil and should not have gaps and cracks or other irregularities to ensure proper adhesion of the membrane.
- Surface must be treated with primer before installation of waterproofing material.

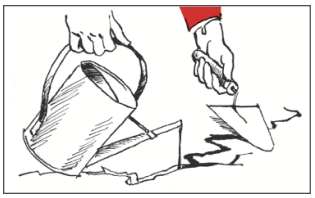
## Directions for use:

Rolls of the material should be installed in a longitudinal direction to traffic starting from the lower places.

Installation of asphalt concrete layer (up to +220°C) should be performed not earlier than 3 hours and not later than 3 days after installation of the waterproofing layer. If the installation of reinforced concrete is impossible in that period the waterproofing membrane should be protected from direct sunlight, mechanical and heat influences by means of geotextile or reflective film.

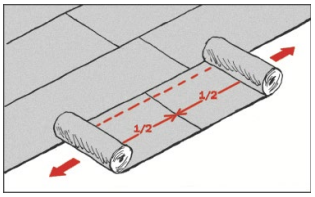
## Installation:

- **FLAT SURFACE**

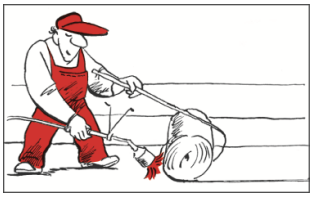


Clean the surface and repair any gaps, cracks, etc. It should be aligned and dry.

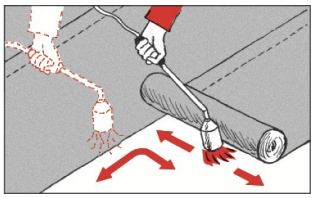
Treat the surface with bitumen primer to increase the adhesion of bitumen membrane.



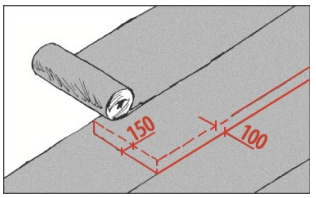

Roll out and align the membranes, then re-roll them tightly from both sides towards the centre.



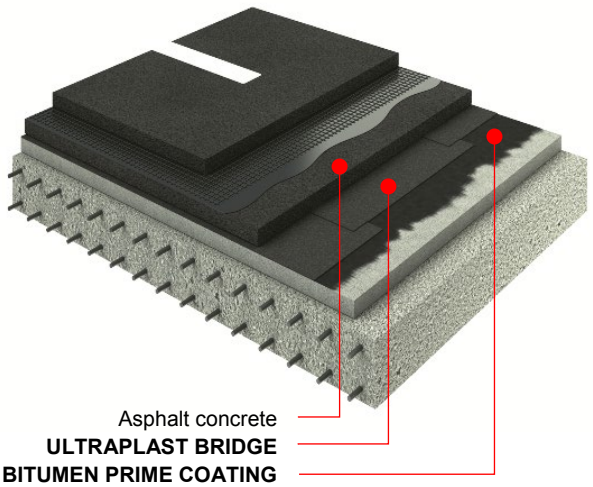
Heat the base and the bottom side of material at the same time to get small bitumen flow.



Heat the material and the base on all width of the roll, overlaps must be heated additionally.




Longitudinal overlaps should be 100 mm; end overlaps should be not less than 150 mm.



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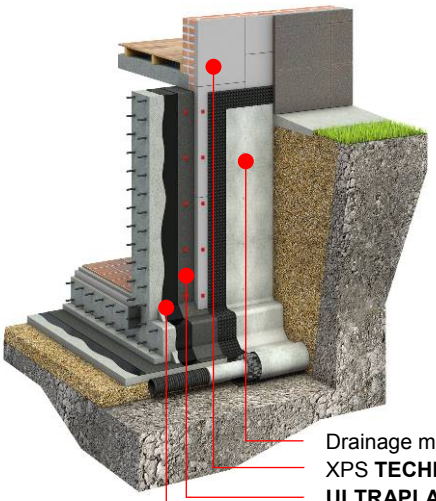
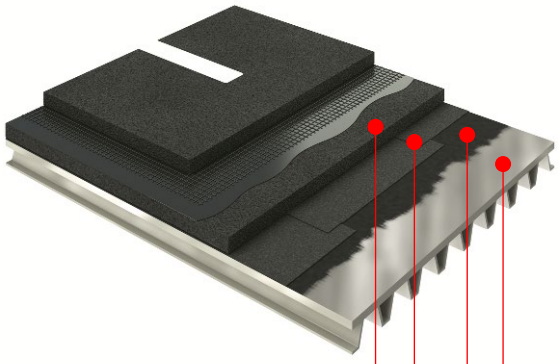
## System solutions:

- **FOUNDATION WITH THERMAL INSULATION**



Drainage membrane **PLANTER geo**
XPS **TECHNONICOL CARBON ECO**
**ULTRAPLAST BRIDGE**
**BITUMEN PRIME COATING**

- **BRIDGE DECK WITH BASE MADE OF STEEL ORTHOTROPIC PLATES**



Asphalt concrete
**ULTRAPLAST BRIDGE**
**BITUMEN-POLYMER PRIMER**
Steel orthotropic plate

## Declared performance:

| Essential characteristics | Test method | Performance | Essential characteristics | Test method | Performance |
|---|---|---|---|---|---|
| Protection of the top side | - | **fine-grained sand** | Softening point, °C | ASTM D36 | **≥+150** |
| Protection of the bottom side | - | **polymer film** | Flexibility at low temperature, °C | EN 1109-1 | **≤-25** |
| Length, m | EN 1848-1 | **≥8.0** | Flow resistance at elevated temperature, °C | EN 1110 | **≥+140** |
| Width, m | EN 1848-1 | **≥1.0** | Watertightness at 0.3 MPa for 24 hours | EN 1928 | **Pass** |
| Straightness | EN 1848-1 | **≤10 mm / 5 m** | External fire performance | EN 13501-5 | **Froof** |
| Mass per unit area, kg/m² | EN 1849-1 | **5.8±0.25** | Reaction to fire | EN 13501-1 | **Euroclass F** |
| Thickness, mm | EN 1849-1 | **5.2±0.10** | Dimensional stability, % | ASTM D5147 | **1.0** |
| Type of carrier | - | **polyester** | Adhesion of granules, % | EN 12039 | **NPD** |
| Tensile properties: maximum tensile force L / T, N/50mm | ASTM D5147 | **≥1000 / ≥900** | Visible defects | EN 1850-1 | **Pass** |
| Tensile properties: elongation L / T, % | ASTM D5147 | **≥40 / ≥40** | Water vapour transmission properties | EN 1931 | **μ=20000** |
| Tear resistance L / T, N | ASTM D4073 | **NPD** | Dangerous substances | Does not contain dangerous substances | |

Footnotes: L / T – Longitudinal / Transverse; NPD – No Performance Determined.
Shelf life if all storage requirements are met: 12 months from the date of production.