

# Waterproofing of accessible roofs & terraces

## 1-a Waterproofing with bituminous sheet membranes

### Recommended products



**Biflex PL** is a SBS modified bituminous membrane, torch applied, recommended for use in cold regions where temperatures might drop below °5C

**Biplas PL** is an APP bituminous membrane, torch applied, recommended for use in hot to moderate regions. They are reinforced with 180 g/m<sup>2</sup> of polyester and have a plane surface. They are supplied in rolls of 10 m length and 1 m width.

*Care should be taken for the stacking of materials on the roof. The rolls should be dispersed uniformly. They should be stored standing up. Any horizontal stacking of bituminous membranes on top of each others, might damage the materials, especially under sun heat.*

### Product application

- Prepare the surface as mentioned in surface preparation.
- Primer: Apply **weberdry prime WB**, a bituminous primer coat at the rate of: 150 to 250 g/m<sup>2</sup>
- Reinforcing Corner strip: Apply at all angles, using a torch, a strip of plain bituminous membrane, **Biflex PL** or **Biplas PL** of 200 mm girth.
- Horizontal membrane (**Biflex PL** or **Biplas PL**): Unroll the first roll at the lowest area starting from the drain location.
- The second roll and the following ones should be unrolled in a way to have at least 100 mm overlapping in the length direction and 150 mm in the width direction.
- Torch apply each roll by melting its bottom face and laying it on the concrete surface. Make sure that overlapped parts are fully melted and bonded.
- Seal the edge of the overlap by melting and pressing using a trowel.
- Continue torching until the whole surface area is covered and the skirting is raised at least 10 cm above the final finish level.
- Fix the top of the skirting using screws and washers by the mean of an Aluminum strip of 10 cm width (aluminum flashing) cut and bent to profile.
- Fill the groove provided in the aluminum flashing with Polyurethane sealant "**weber jointseal PU**" in order to completely seal the top of the skirting.
- Protection:
  - Second layer of bituminous membrane should be slated
  - Or lay **Geotextile white PET** above which you will spread a gravel bed of minimum 5 cm.

*N.B. For enhanced protection, 2 layers of **Biflex PL** or 2 layers of **Biplas PL** are recommended. Make sure that the middle of the 2nd layer will come on top of the first layer's overlapping.*

## 1-b Waterproofing with polyurethane liquid membranes

### Recommended products



weberdry prime 310 PU

weberdry 360 PU

**weberdry 360 PU** is a 1-component liquid applied liquid membrane made of polyurethane specially designed for waterproofing of roofs which will be protected with tiles or screed. Once cured, it forms a flexible, resilient and seamless waterproofing membrane. They maintain their properties with service temperature from °30-C to + °90C.

### Product application

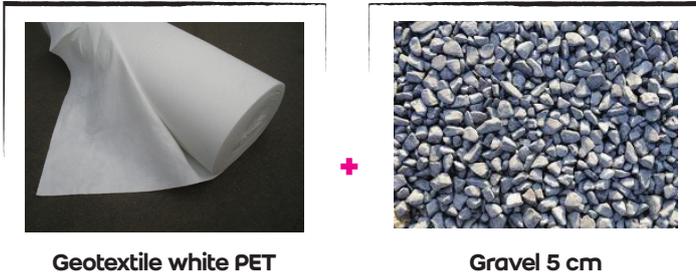
- Prepare the surface as mentioned in surface preparation and prime with **weberdry prime 310 PU**.
- Mix thoroughly the content of the pail of **weberdry 360 PU** before starting application.
- Apply by roller a strip of 10 cm wide over all cracks and corners.
- While it is still tacky un-roll 10 cm wide fiberglass over the wet strip.
- Apply the first coat by roller or appropriate airless spraying gun over the entire horizontal area at the rate of 1.0 kg/m<sup>2</sup>.
- Once the first layer is dry and not later than 24 hours, apply a second coat at the rate of 1 kg/m<sup>2</sup>. Extend the application over the skirting by 10 cm above the finished level.



## 2- Protection

### 2-a Soft protection

#### Recommended products



A protection is called soft when gravels or pebbles are spread over the horizontal waterproofing membranes to an average thickness of 5 cm. (to be applied only for rooftops lower than 15 m height) An underlay of **Geotextile white PET** should precede the spreading of gravels in order to avoid puncturing of the waterproofing membranes placed underneath and separate it from the gravels / ballast.

### 2-b Hard protection

#### Recommended products



A protection is called hard when the waterproofing membrane is covered with tiles. There are two ways to proceed with hard protection:

- Loosely laid tiles are concrete tiles of sizes around 40x40 cm and 3 to 4 cm thick. They are laid loose over the soft protection described above.
- Mortar laid tiles are tiles laid over a bed of cement mortar like **webercol floor** (Carrmortar) range, eliminating the gravels described in the soft protection while keeping the geotextile as separation and protection layer.
- Expansion joint of 2 cm wide should be provided in bays of 3x3 m and filled with **weber jointseal PU** or **weber jointseal PU MC**.

*N.B. In case of hard protection it is recommended to replace the Primer of the horizontal area with a separation layer made of Fiberglass mesh. Hence, torching of membrane will occur only over the overlaps in order to provide a fully independent system.*

## 2-c Thermally insulated roofs and terraces (Inverted roofing system)

### Recommended products



Geotextile white PET

+



XPS board

In case of thermal insulation is required, use extruded polystyrene (XPS) of thickness depending on the amount of thermal conduction (U-value) designed.

In all cases the XPS boards of a density around 30 to 35 kg/m<sup>3</sup> have to be used. They are laid and staggered over the waterproofing membrane.

An underlay of **Geotextile white PET** should precede the laying of XPS in order to play the role of separation layer.

