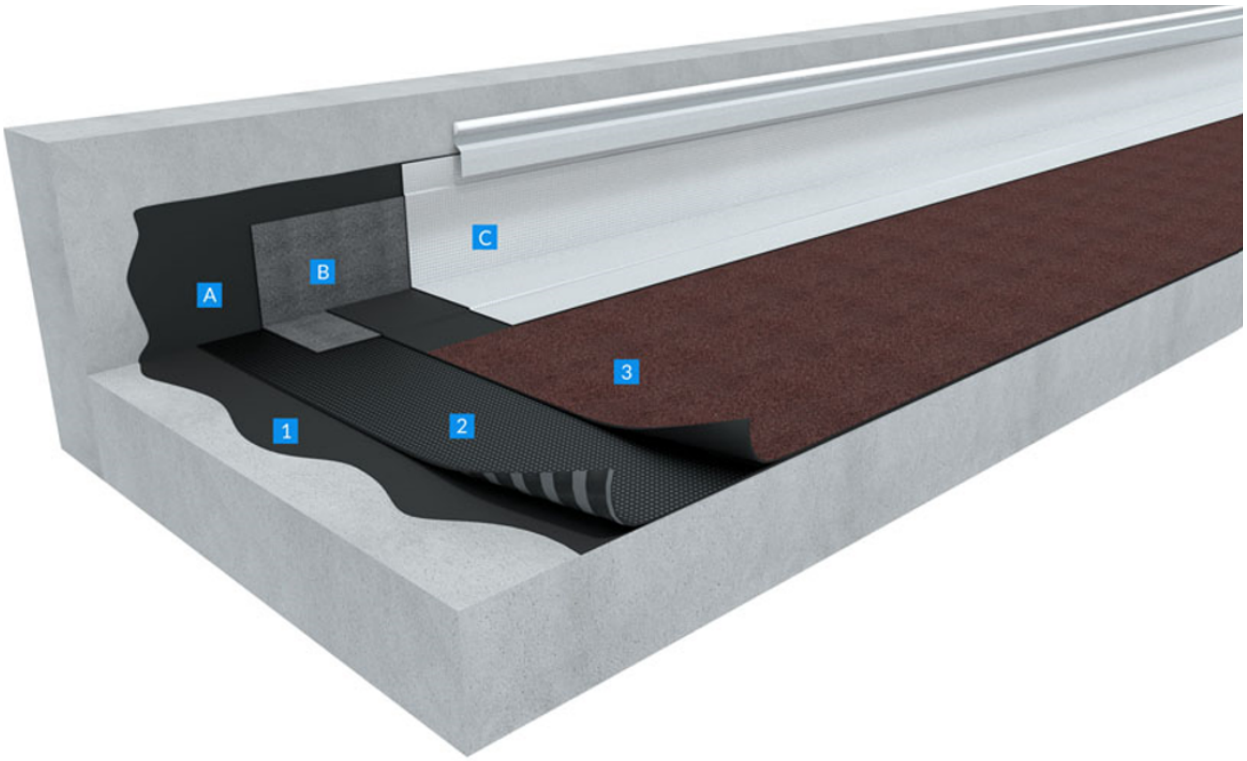
Non-accessible exposed roofs - maintenance access only
Double layer bitumen waterproofing system:
ADEPAR JS + PARAFOR SOLO GS – NOx-Activ® air depolluting solution

Substrate & Use of roof	Finishing	Standard warm roof / inverted roof
Concrete Technical roofs with M & E equipment	Mineral granule	Without insulation



- **Substrate**
  The load bearing structure (trapezoidal metal sheet, concrete or wooden) must comply with all associated national standards and regulations, ensuring that the load bearing capacity is sufficient for any additional loads imposed upon the construction. It is important to consider the possibility of future deflection of the construction when designing roof drainage.

  - **Preparation:** The bearing elements and substrates must comply with local technical standards.
    After proper cleaning of the roof area, a complete control shall be carried out by the Contractor. Slope and planarity shall be carried out with the following tolerances:

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- **Slope:**
  Exposed roofs: Minimum slope requirement, 2 % on concrete deck and 3 % on wooden deck (depending on type of terrace, please contact BMI Technical Department).
  - Water pounding areas shall be identified clearly.
- **Levels**:
  Tolerances for planarity shall be:
  - 10 mm with a 2 m straight edge.
  - 3 mm with a 200 mm straight edge.
- **Surface**:
  Prepare substrate surfaces thoroughly prior to application of new roofing materials. This is particularly important for refurbishment applications. Providing a smooth, even, sound, free of dust, grease and oil, foreign chemicals, curing compound, clean and dry substrate minimises the likelihood that underlying deficiencies will cause premature deterioration or even failure of the new roofing system.

  Concrete or wooden:
  Masonry bearing elements and substrates in compliance with local technical standards.
  Are not accepted: slope screeds of lightweight concrete.

- **Upstands/Parapets**
  Siplast Primer: cold-applied, quick drying, universal elastomeric bitumen primer. Approx. coverage 0.15 litre/m² on steel and approx. coverage 0.30 litre/m² on concrete (depending on concrete porosity, please consult the supplier's technical documentation).
  Parequerre: Nonwoven polyester-reinforced modified SBS elastomeric bitumen angle strip. Cut in 0.25m or 0.33 m wide strips for use as a reinforcement angle on upstands. Torched at the junction of the parapet with the main area.
  Paradial S: 3.7 mm thick, glass fibre-reinforced modified SBS elastomeric bitumen cap sheet protected by embossed thermo-stable aluminium foil. It is used as a cap-sheet layer for vertical upstands waterproofing works and in a double-layer system for non-accessible roofs. Thermofusible film on the underside surface, nominal width 70 mm on the longitudinal selvedge. Fully torched.

  OR alternatively, **Parafor Solo GS:** polyester reinforced, modified SBS elastomeric bitumen cap sheet with self-protected coloured mineral granules or slate flakes, grooved underside surface with PROFIL SYSTEM (SIPLAST patented), which highly improves the installation efficiency. Thickness on the longitudinal selvedge: 4 mm, fully torched.

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- **Waterproofing**
  Siplast Primer: cold-applied, quick drying, universal elastomeric bitumen primer. Approx. coverage 0.30 litre/m² on concrete (depending on concrete porosity, please consult the supplier's technical documentation).
  Adepar JS: self-adhesive, partially-bonded, polyester composite-reinforced, 2.65 mm thick modified SBS elastomeric bitumen underlayer membrane. Torchable upper surface with macro-perforated fusible film and self-adhesive side overlapping (protected by silicon kraft paper). Underside with self-adhesive edges and strips for partial bonding (protected by siliconised peel-off film). Cold applied.
  Parafor Solo GS: polyester reinforced, modified SBS elastomeric bitumen cap sheet with self-protected coloured mineral granules or slate flakes. Grooved underside surface is designed with PROFIL SYSTEM (SIPLAST patented), which highly improves the installation efficiency (homogenous film burn out, total and well-visible compound melting - automatic check for the operator), thanks to the surface grooving and selvedge scarifying.
  Thickness on the longitudinal selvedge: 4 mm
  Nominal thickness (for information only): 5 mm

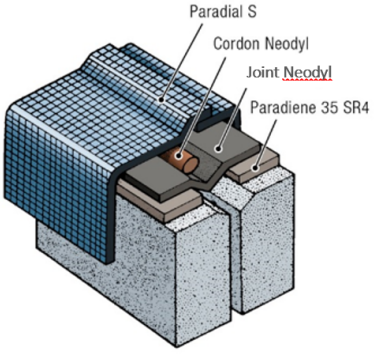
  Fully torched on top of the underlay membrane. Air depolluting the **NOx-Activ®** version with White Noxite is also available.

  This high performance membrane is used as a single layer or top layer of a double-layer torch applied waterproofing systems for non-accessible and technical roofs. Designed for new works and refurbishment works on approved substrates. It can be also used for vertical parapets waterproofing and miscellaneous works.

  Parafor Solo GS is approved by **FM Global** (FM Standard 4470) for use in Siplast Class 1 insulated steel roof deck constructions, subject to FM conditions and limitations.

- **Expansion joints:** Expansion joints have especially to be planned by the architects and are project specific.

  Recommendation: The expansion joints will be prepared in compliance with the **Neodyl System** technical assessment. The Neodyl System comprises **Cordon Neodyl**, **Joint Neodyl (Bande Neodyl)** lyred-shaped waterproofing strips and a protection system (metallic surfaced Paradial S torched or Supradial GS; or protective slabs). It will have a kerb, raised flat, flat, with upstands-in certain cases.



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The Neodyl System is used for structural expansion joints on pedestrian accessible roofs, roof gardens and non-accessible exposed roofs. Suitable for all roof substrates.

Application:

- ➔ Apply **Siplast Primer** on each joint side
- ➔ 3.5 mm thick, polyester reinforced **PARADIENE 35 S R4** modified SBS elastomeric bitumen membrane, torched on top of the Siplast Primer
- ➔ Unreinforced lyre-shaped strip **Joint NEODYL** fully torched on Paradiene 35 S R4 membranes to the edge of the chamfer
- ➔ Place **Cordon NEODYL** (⌀ 30 mm) in the lyre of Joint Neodyl strip
- ➔ Protection: with a top layer of **PARADIAL S**, 3.7 mm thick modified SBS elastomeric bitumen membrane with glass fibre reinforcement, self-protected by a thermo-compensated aluminium foil, fully torched. Alternatively, the Supradial GS membrane can be torched. Protection can also be done by paving tiles, depending on expansion joints and project requirements.

- **Walkways* / technical zone circulation:**
  For walkways and technical circulation areas;
  PARATECH: surfaced with coloured ceramic granules or slate flakes (Anthracite or Brown colors), polyester reinforced, modified SBS bitumen walkway membrane is fully torched on top of the cap sheet or glued with **COLLE PAR**,

  OR alternative walkway membrane;
  Parafor 30 GS: polyester reinforced, modified SBS elastomeric membrane with mineral granule or slate-finished upper surface and a thermofusible film underside. Fully torched on top of the cap sheet.
  **Recommendation: Choose a different and contrast color for the visible walkway membrane than the roofing cap sheet.*

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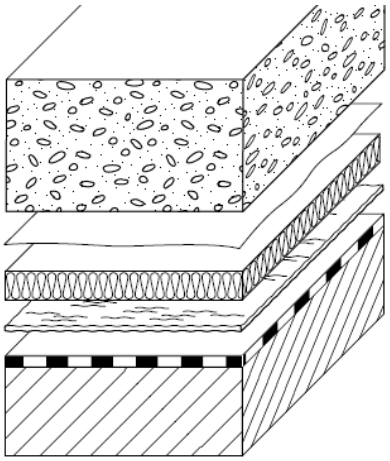
Protection of roof perimeter walkways for facade access & maintenance devices:



Reinforced concrete paving:
Mixed with a water-reducing plasticizer

Separation layer:

- Synthetic film 100 µ.
- 0.02 m thick, Class F expanded polystyrene panels (EPS)
- Non-woven separation layer: **Canopia Filtre**.

Splitting the paving: Minimum 20 mm joints at every 5-m maximum in line with reliefs and emergencies.
Joint filler with root-proof and suitable against deformation alternate.
Note: These protection works are out of the waterproofing company's scope.

- **Details**

  All details shall be finalized before roofing works start:

  Rainwater drains shall be well located in sufficient numbers and ready to receive waterproofing membranes.

  Expansion joints shall be located at the highest roof points, on reinforced concrete curbs chamfered as shown on drawings.

  All pipes, cables and other penetrations shall be in place. Provision for proper waterproofing of roof equipment and machinery shall be made.

  All parapets shall be in place, with provision for groove or counter flashing at an acceptable height (150 mm above finished roof level).

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