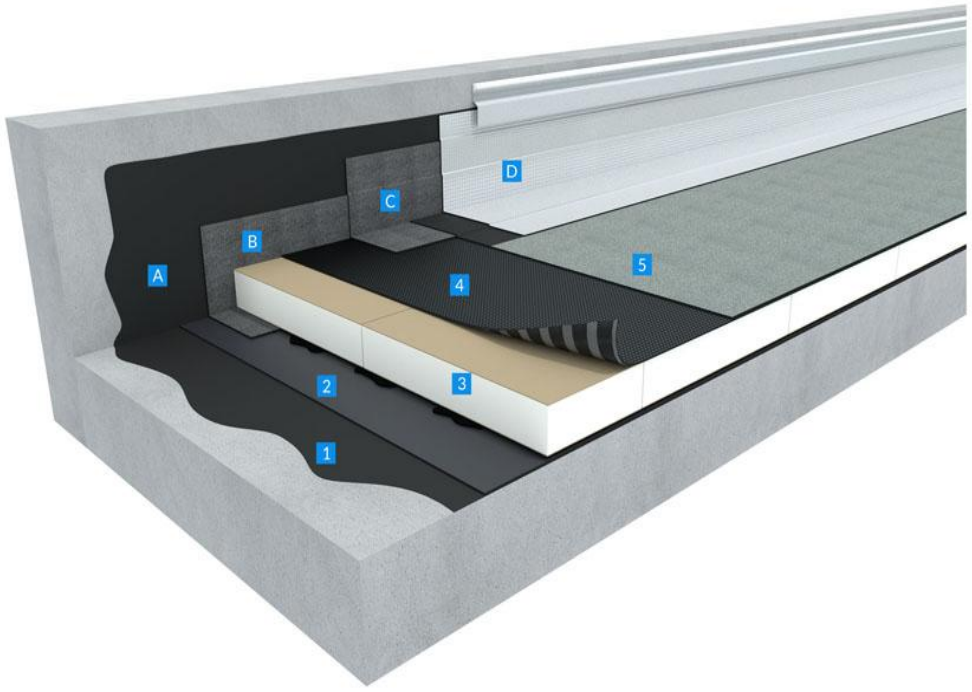
Non-accessible exposed roofs with coloured mineral surface
Double layer bitumen waterproofing system:
ADEPAR JS + PARADIENE 40.1 GS – NOx-Activ® air depolluting solution

Substrate & Use of roof	Finishing	Standard warm roof / inverted roof
Concrete deck Non-accessible exposed roofs such as industrial buildings, logistic platforms and commercial buildings.	Mineral granule surface	Warm roof (Insulation under waterproofing)



- **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 shall be carried out by the Contractor. Slope and planarity shall be carried out with the following tolerances:

- **Slope:**
  Exposed roofs: Minimum slope requirement: 2 % on concrete 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 meters 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:
  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 0.25 m or 0.33 m wide strips for use as 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, **Supradial GS:** 3.5 mm thick on the longitudinal selvedge (without mineral finish), modified SBS elastomeric bitumen cap sheet with composite reinforcement, protected by embossed aluminium foil with coloured mineral finished upper surface, thermofusible film on the underside. Fully torched.

- **Vapor Control layer**
  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).

Irex Profil: Glass fleece-reinforced modified SBS elastomeric bitumen vapour control layer, fully torched.

- **Insulation**
  Polyisocyanurate boards (PIR) and polyurethane rigid foam (PUR) with composite reinforced facing, glued with **PUR Glue,** or mechanically fixed. Consult the supplier's technical documentation and local regulations.
  Expanded polystyrene boards (EPS), glued with **PUR Glue** or mechanically fixed. In case of use of EPS boards, apply **ADEALU** which is modified self-adhesive bitumen tape surfaced with a composite aluminium-polyester (Grey or coloured) foil, at the junction of first layer of waterproofing and the parapet before torching the reinforcement angle (Parequerre). ADEALU is used as a flame barrier for EPS insulation.
  Consult the supplier's technical documentation and local regulations.

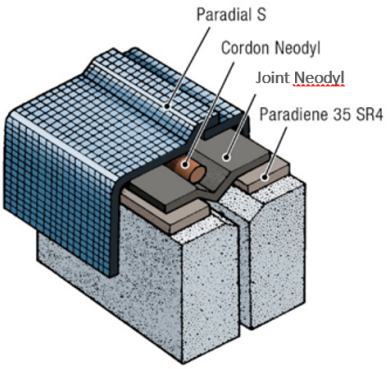
- **Waterproofing**
  Adepar JS: self-adhesive, partially-bonded, polyester composite-reinforced, 2.65 mm thick modified SBS elastomeric bitumen underlayer membrane. Torchable upper surface with macro-perforated fusible film and self-adhesive side overlapping (protected by silicon kraft paper). Underside with self-adhesive edges and strips for partial bonding (protected by siliconised peel-off film). Cold applied.
  Paradiene 40.1 GS: glass fibre-reinforced, modified SBS elastomeric bitumen cap sheet with self-protected coloured mineral granules or slate flakes, thermofusible film on the underside. Bitumen of the underside surface is grooved (patented Profil System). Thickness on the longitudinal selvedge: 3.0 mm. Fully torched on top of the first underlayer membrane.
  Air depolluting the **NOx-Activ®** version with White Noxite is also available.

- **Walkways*:**
  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 under surface. Fully torched on top of the cap sheet.
  **Useful tip: For visible walkways, choose a different and contrast color membrane than the roofing cap sheet.*

- **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.

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 aluminum 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.

- **Details**

All details shall be finalized before roofing works start:

Rainwater drains shall be well located, in sufficient number 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).