3 TP - SECTION 3 – SEPARATOR SHEETS & AUXILIARY LEVELING SURFACES

3.1 Separator Sheets

3.1.1 **General**

3.1.1.1 Separator sheets are materials used to separate roofing system components, to prevent material incompatibility or to prevent adhesion.

3.1.1.2 Thermoplastic membranes are incompatible with asphalt, coal tar, heavy oils, roofing cements, creosote and some wood preservatives, these materials must be removed or covered with an acceptable separator sheet.

3.1.2 **Wood Decks**

3.1.2.1 Uninsulated Systems

3.1.2.1.1 Separator sheets are not required for uninsulated fully adhered thermoplastic membrane systems.

3.1.2.1.2 Separator sheets are not accepted for uninsulated ballasted or mechanically fastened thermoplastic membrane systems, refer to auxiliary leveling surface requirements

3.1.2.1.3 Follow the membrane manufacturer's application recommendations when mechanically fastening with screws.

3.1.2.2 Insulated Systems

3.1.2.2.1 For conventional insulated thermoplastic roofing systems over wood decks, the vapour retarder membrane will serve as the separator sheet.

3.1.3 **Concrete Decks**

3.1.3.1 Cast-in-place Concrete Decks

3.1.3.1.1 Separator sheets are not required over cast-in place decks.

3.1.3.1.2 Priming of the concrete surface with an asphalt primer is optional.

3.1.3.2 Precast Concrete Decks

3.1.3.2.1 A separator sheet is not required when adhering thermoplastic membranes directly to precast concrete decks, except at deck joints.

3.1.3.2.2 Where joints between precast concrete deck sections are grout filled, a separator sheet shall cover joints. Installed dry, a 150mm (6”) wide strip of coated or modified bituminous base sheet shall continuously cover the grouted deck joints.

3.1.3.2.3 When precast deck sections do not contain grout keys, continuously cover joints by installing a one half (1/2) roll minimum 457mm (18”), width strip of a coated base sheet. Adhere one side of the separator sheet to within 150mm (6”) of the deck joint centre line with asphalt or a compatible adhesive.

3.1.4 **Steel Decks**

3.1.4.1 Separator sheets are not required over steel decks.

3.1.4.2 Hot bitumen shall not be used to adhere roofing materials directly to steel decks.

3.2 Auxiliary Leveling Surfaces

3.2.1 **General**

3.2.1.1 An auxiliary leveling surface is a material used to provide a smooth substrate to which roofing system components can be adhered.

3.2.1.2 ARCA accepted auxiliary leveling surfaces may be comprised of a minimum 9.5mm (3/8") thick Fibre Reinforced Gypsum Panel (ASTM C1278-17), 12.7mm (1/2") thick Glass Mat Gypsum Substrate (ASTM 1177), 12.7mm (1/2") thick Gypsum Board (ASTM C1396), 12.7mm (1/2") Fiber-Mat Reinforced Cementitious Board (ASTM 1325), 12.7mm (1/2") thick plywood, or 12.7mm (1/2") thick O.S.B. when not used as a thermal barrier.[5]

3.2.1.3 For loose-laid and ballasted designs the auxiliary leveling surface may be loose-laid.

3.2.1.4 The existing substrate type and condition will determine the auxiliary leveling surface type.[6]

3.2.1.5 Where required by the current National Building Code – Alberta Edition, a thermal barrier may be used as an auxiliary leveling surface.

3.2.1.6 Deck fills are not permitted with fully adhered thermoplastic membrane systems.

3.2.1.7 When torching over heat sensitive substrates or insulation, all joints must be covered with 150mm (6") 1.5mm (60mil) self-adhesive fire tape.

3.2.1.8 The attachment method of the auxiliary leveling surface may be determined by a building code requirement, wind-uplift design requirement or system replacement requirement.[7]

3.2.2 **Wood Decks**

3.2.2.1 For dimensional lumber decks an accepted auxiliary leveling surface shall be mechanically fastened to completely cover the lumber decking.

3.2.2.2 When using roofing nails for attachment, use a minimum of one (1) nail per square foot of surface area.

3.2.2.3 When using drywall screws for attachment, use a minimum of twenty (20) per 1200mm x 2400mm (4' x 8') sheet.

3.2.2.4 When using screws and plates for attachment, use a minimum of eight (8) per 1200mmx2400mm (4' x 8') sheet.

3.2.2.5 Mechanical fasteners (nails or screws) must be of sufficient length to penetrate a sheathing material by a minimum of 19mm (3/4") beyond the lower surface and a minimum of 25mm (1") into dimensional lumber.[8]

3.2.2.6 An auxiliary leveling surface is not required for smooth surfaced plywood decks.

3.2.2.7 Some thermoplastic membrane manufacturers may not accept oriented strand board (O.S.B.) as the substrate for fully adhered membrane systems.

3.2.3 **Steel Decks**

3.2.3.1 For uninsulated and protected membrane designs an accepted auxiliary leveling surface (excluding perlite and wood fiber boards) shall completely cover the steel decking prior to membrane application.

3.2.3.2 The auxiliary leveling surface may be attached to the steel decking using one of the following attachment methods:

[5] TP 3.2.1.2 Revised June 16, 2022 (TB-2022-04)
[6] TP 3.2.1.4 Revised March 4, 2026 (TB-2026-01)
[7] TP 3.2.1.8 Added March 4, 2026 (TB-2026-01)
[8] TP 3.2.2.5 Revised October 20, 2026 (TB-2026-02)

3.2.3.2.1 Continuous beads or a full roller coating of an adhesive applied to the top flanges of the steel deck in accordance with the adhesive manufacturer's application rates.

3.2.3.2.2 Minimum twenty (20) self tapping drywall screws per 1200mm x 2400mm (4' x 8') sheet fastened through the top flange of the steel decking. Where drywall screws break the gypsum board paper covering, install a replacement screw in approximately the same location. Additional fasteners may be required to meet wind uplift standards.

3.2.3.2.3 When using screws and plates for attachment, use a minimum of eight (8) per 1200mmx2400mm (4' x 8') sheet fastened through the top flange of the steel decking. Additional fasteners may be required to meet wind uplift standards.

CAUTION: Attachment methods for steel deck are experienced based. ARCA has not conducted formal wind studies.

3.2.3.3 Hot bitumen shall not be used to adhere roofing materials directly to steel decks.

3.2.3.4 To qualify for an ARCA 15 Year Warranty Certificate, a minimum 12.7mm (1/2") glass faced gypsum auxiliary leveling surface shall be either mechanically fastened or adhered with an ARCA accepted adhesive to the structural deck.[9]

3.2.4 **Concrete Decks**

3.2.4.1 An auxiliary leveling surface is not required over concrete decks.

3.2.4.2 Damaged and deteriorated concrete decks shall be repaired to provide a smooth substrate for roofing system application.

[9] TP 3.2.3.4 Revised February 27, 2025 (TB-2025-01)