

# THERMOPLASTIC ROOFING

## SECTION 1 - ROOF DECKS

### 1.1 GENERAL

- .1 The roof deck provides the structural support for the roofing system. Roof decks shall be designed in accordance with the Alberta Building Code to support design and construction loading.
- .2 The surface of roof decks must be sufficiently clean, dry and sound to receive roofing materials, so proper adhesion and attachment may take place.
- .3 Where electrical conduits, fittings, bolts and plates project above the deck surface, a smooth substrate plane shall be provided to receive roofing materials. Correction to the substrate plane in the proximity of the projections must be addressed on an individual project basis.
- .4 Roof deck perimeters shall be structurally supported. Deck openings require additional structural framing to support and to prevent excess deflection of the surrounding decking.
- .5 For mechanically attached membranes, the roof deck type, thickness and structural attachment must comply with the membrane manufacturer's requirements for minimum fastener pull out values and fastener density.

### 1.2 WOOD DECKS

#### 1.2.1 Dimensioned Lumber Decks

- .1 Dimensioned lumber decks may be constructed from sawn lumber, planks or ship lapped boards.
- .2 For uninsulated and protected membrane design thermoplastic roofing systems, a mechanically fastened auxiliary leveling surface must completely cover dimensioned lumber decks.

#### 1.2.2 Sheathing Decks

- .1 Plywood and oriented strand board (O.S.B.) sheathing shall be manufactured for exterior application.
- .2 Fully adhered and mechanically attached thermoplastic systems may be installed directly to minimum 16mm (5/8") thick plywood or O.S.B. sheathing provided that the decking is secured with screws and plates as nailing is not permitted.

### 1.3 CONCRETE DECKS

- .1 Cast-in-place and pre-cast concrete decks shall have a smooth dry surface and shall be adequately cured prior to roofing application.
- .2 Pre-cast concrete deck grout keys shall be grout filled.

- .3 The maximum differential height permitted without correction between pre-cast concrete deck members is 6mm (1/4"). Height differences greater than 6mm (1/4") but no larger than 19mm (3/4") shall be corrected using cementitious grout or fill feathered to a maximum slope of 1:50 (1/4"/ft.). When height differences exceed 19mm (3/4"), a topping coat shall be applied to correct the deck surface.
- .4 Above deck projections such as anchor bolts and plates shall be feather grouted to provide a smooth roofing substrate.

#### **1.4 STEEL DECKS**

- .1 Steel deck flutes shall be reasonably free of snow, ice and debris, prior to thermoplastic roofing application.
- .2 Unsupported deck openings are restricted to a maximum dimension of 200mm (8").

#### **1.5 STRAMIT DECKS**

- .1 Stramit is a structural and/or insulating panel manufactured from straw fibre in 50mm (2") or 64mm (2 1/2") thickness as roof deck and/or insulation.
- .2 Prior to re-roofing over stramit decks, ARCA Administration must be notified of the existing structural condition of the stramit decking.

#### **1.6 DECK FILLS**

- .1 Water based cementitious insulating fills comprised of mixtures of cement/gypsum and insulation/vermiculite are not accepted decks for Warranty Certificate issuance.
- .2 Bituminous deck fills comprised of bitumen and vermiculite are accepted for Warranty Certificate issuance when completely covered with an approved separator sheet or auxiliary leveling surface.
- .3 The finished surface of bituminous deck fills shall be smooth and uniform.