

SPECIFICATION:

Jaydex "C.O.S.I." Insulated Membrane Assembly for a Concrete Roof

ROOFING SOLUTION

NOVA170C

OCT 2009

INTRODUCTION

This Specification is for the preparation and installation of the **Jaydex "C.O.S.I. Roof"** Insulated Membrane Roof (Assembly) to a concrete roof/decks topside.

The **Jaydex C.O.S.I Roof** is composed of a 3mm plain membrane applied directly to a concrete substrate under a 80 mm thick to 100mm thick extruded polystyrene panel with its upper surface laminated with a polymer modified bitumen membrane, which features a non woven polyester reinforcement and incorporating a 50 mm seldge overlap.

The final cap sheet membrane is then applied over this membrane surface.

NB: Thermal Conductivity of the entire system is; R = 2.98 80mm; R = 3.33 90 mm; R = 3.69 100mm (Thickness of panel mm).

SUBSTRATE PREPARATION

Concrete shall be correctly formed to falls and adequately cured, all ridges protrusions stone flush and all depressions gauge patched with modified sand cement. Concrete to be finished to NZS3114:1980 U2. Only wood or bull float manually to create an even surface finish (no power floats are to be utilised)

Timber fillets 20mm x 20mm minimum shall be installed at all vertical and horizontal junctions. Falls to be a 1:30 minimum for Roof Areas and 1 in 100 minimum for any associated Internal Gutters as per E2/AS1.

APPLICATION OF BASESHEET AND CAPSHEET MEMBRANES

Primer

One coat of **Bitumen Primer** is applied at a spreading rate of approx. 8 sqm/litre, by brush or roller and allowed to dry.

Membrane To Roofs

All internal and external corners containing vertical to horizontal transitions shall have plain membrane gusset torched into place before the base sheet of **Jaydex Novaflex 3mm** is applied directly onto the pre-primed substrate. Torch seal separately all end and side joints to ensure correct closure.

Membrane To Gutters

Where gutters are part of the roof line the **Jaydex Novaflex** membrane should be installed to the gutters prior to membrane installation to the Roof Area.

Insulation To Roof

The Thermal panels are firstly loose laid over the membrane area to be covered to ensure wastage is kept to a minimum. All Thermal panels are numbered accordingly, removed and stacked into manageable piles.

One coat of Elastik adhesive is then applied over the base sheet followed immediately by the placement of the Thermal panels.

All panel selvage overlaps are then torched down to create a continuous weather tight surface. The Thermal panels are then individually mechanically fixed to the concrete substrate by 2 proprietary symmetrically fasteners placed fasteners per panel.

Cap Sheet to Roofs

Torch down **Jaydex Polibit Mineral 4mm** capsheet membrane directly onto the panelled membrane top surface. Torch seal separately all end side overlap joints of the final capsheet system to ensure correct closure.

Earth / Stone overlay (optional). The “**C.O.S.I. Roof**” can be then left as is to create an un-ballasted insulated roof membrane system or can be overlaid with earth or stones to create a ballasted insulated roof membrane system with a natural outlook. In the event of a stone / earth overlay a Registered Engineer would require to verify that the extra dead weight loading is within acceptable structural limitations of the roof substrate and / or a structural framework of the building.

Note: In the event of an earth/stone overlay no mechanical fixings are required to lock down the Thermal Insulation Panels as mentioned earlier.

Earth Overlay Option

Proprietary perforated purpose made retainers must be installed around all drainage outlets and along internal gutter edge lines. A proprietary drainage cell/sheet system incorporating a geotextile overlay is installed over the already applied insulated membrane system. A sandy loam earth overlay or specified planting mix (to a specified thickness (150mm) is then manually placed over the drainage medium.

Stone Aggregate Overlay Option

Proprietary perforated retainers and/ or Concrete Pavers on *Jaydex Corner Supports* must be installed around all drainage outlets and along internal gutter edge lines. A proprietary drainage cell/sheet system normally of plastic composition must be installed over the applied membrane followed by a geotextile cloth overlay. Rounded river stones and /or stone aggregate are then manually placed on top of the geotextile cloth. In the case of aggregate the drainage medium must be applied up against all membrane upstands to the anticipated height of the laid aggregate.

Over Coating

In the event **Jaydex Polibit Plain 4mm** is used in lieu of **Jaydex Polibit Mineral**. The total membrane area is subsequently over coated with a single coat of Jaydex Alumicote followed by two coats of **Jaydex Aquaseal** or conversely two coats of **Jaydex Alumicote** bitumen/aluminium paint to create a silvery reflective finish.

Note: This would only apply when no subsequent earth/ stone overlay is applied over the insulated membrane system.

Drainage Outlets

Jaydex possess Outlets of tough light composition and of various aperture sizing. These units incorporating flanges to ensure watertightness can drain water away through parapets, deck / roof inverts and from internal gutters. Jaydex also possess sump units to cater for both the overflow and outlet function in the same unit.

Warranty

When Jaydex Licensed Contractors apply this insulated membrane system in accordance with this specification a standard warranty will be issued for up to twenty five (25) years.

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