

Proposed scope of work for INSUWRAP PVC Waterproofing System for Covered Roofs

1. Sloping Screed:

Sloping screed will be installed over concrete deck. The screed can be sand cement or lightweight concrete.

2. Separation layer:

Separation layer of Polyethylene (minimum 150 micron) will be installed over the sloping screed if the concrete surface is not smooth enough to receive the waterproofing membrane over it. Another similar separation layer can be installed over the waterproofing membrane before installation of thermal insulation according to its type.

3. Waterproofing membrane:

3-1 General:

PVC membrane 1500 WMR (1.5 mm thick) reinforced with high tenacity polyester mesh will be used as a waterproofing membrane. For up-stands the membrane will be ultra violet rays resistant (1500 WMR-UV). It will be loose laid on the horizontal surface and bonded to vertical up-stands with Insurbond-106 contact adhesive. The membrane will be terminated on up-stands with aluminum flashing 50 mm x 1 mm. Ultra violet resistant sealant will be applied on the upper edge of flashing to insure the tightness of fixation.

3-2 **Installation:**

3-2-1 **Horizontal Surface:**

The overlaps of PVC membranes (1500 WMR) should be a minimum of 50 mm welded with hot air guns. As much as practically possible the joints will not be against the direction of flow.

3-2-2 **Up-stands:**

Ultra violet resistant reinforced membrane 1500 WMR-UV (1.50mm thick) will be bonded to up-stands using Insurbond-106 contact adhesive and terminated with aluminum flashing and sealant.

3-2-3 **Corners:**

Additional round piece of PVC membrane will be welded by hot air guns to all inside and outside corners to double reinforce these critical points of the roofs.

3-2-4 **Pipes:**

The dressing of PVC or metal pipes will be by using Insurbond-106 contact adhesive for gluing the ultra violet resistant PVC waterproofing membrane to the pipe, which penetrates the roof deck.

Top termination will be by using metal clamp and sealant. The finishing line of the membrane and the clamp will be kept at least 100 mm or more above the finished level of roof.

3-2-5 **Roof Drains:**

The dressing of drains will be done properly. The membrane will be installed to few centimeters inside the drainpipe.

3-3 **Water Test:**

After installation of water proofing membranes the roof will be flooded with water for a minimum of 24 hours. In case of any leakage the source of leakage will be determined, water will be drained and repair works will be carried out in the affected area. As per requirements water test will be repeated on full roof or part of it.

4. **Thermal Insulation:**

Thermal insulation can be extruded polystyrene or any other required material by the client or the consultant.

5. **Protection layer:**

Protection layer will be Polypropylene non-woven, weighing a minimum of 140 gm/m².

6. **Finishing layer:**

Finishing layer can be one of the following types according to client requirements and roof purpose:

- 6-1 Spread gravel all over the roof (50-mm thick).
- 6-2 Gravel 50 mm thick with walkways made of pre-cast concrete tiles.
- 6-3 Loose laid tiles (Tiles will be terminated 15 cm before all up-stands). This gap of 15 cm will be filled with gravel.
- 6-4 Tiles on mortar bed.