

## Product

### **ProtecRSS THERMAL BARRIER BOARD** (butt edge, bitumen coated on top and bottom)

## Specification

### **Steel Deck – Fully Adhered**

**Note: The following are suggested specification paragraphs for use when specifying ModulR TS products as part of a conventional roofing membrane assembly. The information is organized and presented to assist in the writing of the project specification. For further consultation please contact ModulR TS or refer to the N.B.C., Canadian Roofing Contractors Association Specification Manual, ULC, or Factory Mutual.**

## **PART 1 GENERAL**

### **.1 REFERENCE STANDARDS**

- .1 ASTM C-726 Standard specification for Mineral Fiber Roof insulation Boards
- .2 ASTM C303 Standard for Dimensions and Density of Preformed block Type Thermal Insulation
- .3 CAN/ULC S-102 Surface Burning Characteristics
- .4 CAN4-S114-M80 Test for Determination of Non-Combustibility in Building Materials
- .5 N.R.C. Wind Roof Calculator ([http://irc.nrc-cnrc.gc.ca/bes/prsi/calc\\_new/rciintro\\_e.html](http://irc.nrc-cnrc.gc.ca/bes/prsi/calc_new/rciintro_e.html))

## **PART 2 WARRANTY**

- .1 The membrane product manufacturer will issue a written and signed document in the owner's name, certifying that the roofing membranes are free of manufacturing defects for a period of ten (10) years, starting from the date of acceptance. This warranty will cover the removal and replacement of defective roof membrane products, including labour.

## **PART 3 PRODUCTS**

### **.1 Steel Deck**

### **.2 ProtecRSS Thermal Barrier Board (vapour barrier support)**

- .1 Layer of 1" (25mm) rigid mineral board of an actual density 11 lbs cu. ft. (176 kg/m<sup>2</sup>), nominal density not acceptable, manufactured from basalt rock and steel slag to ASTM C726. Top side saturated with bitumen and light coating of sand.
- .2 Board Size 4' x 4' x 1" (1220mm x1220mm x 25mm) butt edge.
- .3 Acceptable Product: "**ProtecRSS THERMAL BARRIER BOARD COATED 2 SIDES**", manufactured by ModulR TS.

### **.3 Primer for Self Adhesive Applied Membranes**

- .1 Emulsion based primer for Self Adhesive Applied Membranes to provide enhanced adhesion.

### **.4 Adhesives**

- .1 Adhesives to provide wind up lift resistance as prescribed by N.B.C or FM.

### **.5 Vapour Barrier (Options)**

- .1 Hot Mop 2 ply 15 lb. felt.
- .2 Torched Mod. Bit. membrane.
- .3 Self Adhesive membrane.

THERMAL BARRIER BOARD  
Steel Deck - Fully Adhered

**.6 Cold Adhesive**

- .1 Ensure compatibility of Cold Adhesive with **ProtecRSS Overlay / Protection Board** and insulation.

**.7 Insulation - Flat or Tapered (Options)**

- .1 (Option 1) **ProtecRSS Composite**, manufactured by ModulR TS (see **ProtecRSS Composite** Specification sheet)
- .2 (Option 2) Polyisocyanurate (RSI / R-Value -Thickness \*\*mm/\*\*\*)
- .3 (Option 3) Polystyrene
- .1 Expanded Polystyrene (RSI / R-Value -Thickness \*\*mm/\*\*\*)
- .2 Extruded Polystyrene (RSI / R-Value -Thickness \*\*mm/\*\*\*)

**.8 ProtecRSS Overlay / Protection Board** (not required if using "COMPOSITE INSULATION")

- .1 Layer of 1" (25mm) rigid mineral board of an actual density 11 lbs.cu. ft. (176 kg/m<sup>3</sup>) nominal density not acceptable, manufactured from basalt rock and steel slag to ASTM C726. Top and bottom sides saturated with bitumen and light coating of sand.
- .2 Board Size 4'x4'x1" (1220mmx1220mmx25mm) shiplap edge
- .3 Acceptable Product: "**ProtecRSS OVERLAY PROTECTION BOARD**" manufactured by ModulR TS (for Polyiso) or "**ProtecRSS OVERLAY PROTECTION BOARD COATED 2 SIDES**" manufactured by ModulR TS (for expanded and extruded polystyrene).

**.9 Cants**

- .1 Rigid mineral wool fibre cants manufactured from basalt rock and steel slag to ASTM C726. Top side saturated with bitumen and light coating of sand.
- .2 Acceptable Product: "**CANTRSS**" manufactured by ModulR TS

**.10 Roof Membrane (Options)**

- .1 Modified Bitumen Membrane
- .1 Torch Applied
- .2 Hot Applied
- .3 Self Adhered
- .4 Cold Applied
- .2 B.U.R.
- .1 Hot Applied
- .2 Cold Applied

**PART 4 EXECUTION**

**.1 Steel Deck**

**.2 ProtecRSS Thermal Barrier Board (vapour barrier support)**

- .1 Apply adhesive as prescribed by adhesive manufacturer.
- .2 Install ProtecRSS Thermal Barrier Board tightly and stagger joints.

**.3 Primer for Self Adhesive Applied Membranes**

- .1 Install over roof deck substrate prior to the installation of the Self Adhesive Vapour Barrier Membrane.
- .2 Apply primer as recommended by the manufacturer.
- .3 Primer must be compatible to the Self Adhesive Vapour Barrier Membrane.

**.4 Vapour Barrier (Options)**

- .1 Mop 2 ply 15 lb. Felt as per CRCA SO-VR-1
- .2 Torch Applied as per manufacturer's instructions.
  - .1 Apply directly onto clean substrate.
  - .2 Overlap side laps and end laps as per manufacturer's instructions..
  - .3 Turn-up Vapour Barrier sheet on vertical surfaces.
  - .4 All laps and vertical penetrations to be flashed as per manufacturers details.
- .3 Self-Adhered.
  - .1 Apply directly onto clean primed substrate by removing silicone cover sheet.
  - .2 Overlap side laps and end laps as per manufacturer's instructions..
  - .3 Turn-up Vapour Barrier sheet on vertical surfaces.
  - .4 All laps and vertical penetrations to be flashed as per manufacturers details.

**.5 Insulation**

- .1 (Option1) **ProtecRSS Composite Insulation**
  - .1 Mop hot asphalt at a rate of 25 lbs per<sup>2</sup> (1.2kg/m<sup>2</sup>) or apply cold adhesive as per manufacturers recommendation.
  - .2 Press "**ProtecRSS Composite System**" into place with insulation joints tightly together.
  - .3 Do not install more insulation that can be completely roofed in one day.
  - .4 Temporarily seal the roof from water penetration with a cut-off seal at the end of each work day.
  - .5 Remove cut-off when commencing work.
  - .6 Install tapered insulation as per shop drawings.
  - .7 Install only as much insulation as can be covered in the same day.
- .2 (Option2) Polyisocyanurate
  - .1 Mop vapour barrier with hot asphalt at a rate of 25 lbs per<sup>2</sup> (1.2kg/m<sup>2</sup>) or apply cold adhesive as per manufacturers recommendation.
  - .2 Install tapered insulation as per approved shop drawings.
  - .3 Stagger joints between insulation layers.
  - .4 Install only as much insulation as can be covered in the same day.
  - .5 **ProtecRSS OVERLAY PROTECTION BOARD** (not required if using "ProtecRSS Composite System")
    - .1 Mop hot asphalt at a rate of 25 lbs per<sup>2</sup> (1.2kg/m<sup>2</sup>) or apply cold adhesive as per manufacturers recommendation.
    - .2 Install "**ProtecRSS OVERLY / PROTECTION BOARD**" tightly together over insulation, stagger joints between layers.
    - .3 Joints between layers should be staggered by a minimum of 12".
- .3 (Option3) Polystyrene (expanded or extruded)
  - .1 Mop hot asphalt at a rate of 25 lbs per<sup>2</sup> (1.2kg/m<sup>2</sup>) or apply cold adhesive as per manufacturers recommendation.
  - .2 Install tapered insulation as per approved shop drawings.
  - .3 Stagger joints between insulation layers.
  - .4 Install only as much insulation as can be covered in the same day.
  - .5 **ProtecRSS OVERLAY PROTECTION BOARD COATED 2 SIDES** (not required if using "ProtecRSS Composite System")
    - .1 Back mop "**ProtecRSS OVERLY / PROTECTION BOARD COATED 2 SIDES**" with hot asphalt at a rate of 25 lbs per<sup>2</sup> (1.2kg/m<sup>2</sup>) or apply cold adhesive as per manufacturers recommendation.
    - .2 Install "**ProtecRSS OVERLY / PROTECTION BOARD COATED 2 SIDES**" panels tightly together over insulation, stagger joints between layers.
    - .3 Joints between layers should be staggered by a minimum of 12".

**.6 Cants**

- .1 Install cants at vertical walls of the perimeter parapet and roof top curbs with a full coverage of compatible adhesive.

THERMAL BARRIER BOARD  
Steel Deck - Fully Adhered

**.7 Roof Membrane**

- .1 Modified Bitumen Membrane.
  - .1 Install as per manufacturer's instructions
- .2 B.U.R.
  - .1 Install as per CRCA Technical Manual or manufacturer's instructions.