

Specification



Project Name:

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J41 REINFORCED BITUMEN MEMBRANE ROOF COVERINGS

To be read with Preliminaries/ General conditions.

TYPES OF ROOF COVERING F.M. GLOBAL APPROVED SYSTEM

- 110 BUILT-UP REINFORCED BITUMEN MEMBRANE WARM DECK ROOF COVERING CLASS 1 I-90 STANDARD.
- Substrate: Jorisode profiled galvanised steel deck laid to falls. Gauge min. 0.75.
 - Preparation: Clean surface & remove debris.
 - Vapour control layer: Permamate Ultra F.M. foil laminate vapour barrier.
 - Insulation: Paratherm F.M. PIR rigid roof board by Moy Materials Ltd.
 - Overlay to insulation: Eraboard S 20mm F.M. Perlite coverboard.
 - Waterproof covering:
 - System manufacturer: Imper Italia.
 - First layer: 3mm Top/S modified bitumen F.M. reinforced base sheet.
Attachment: Fully bonded as Clause 740.
 - Intermediate layer: N/A.
Attachment: N/A.
 - Top layer/ Capsheet: 4mm Paralon Ard/S granular surfaced F.M. modified bitumen 4.5kg cap sheet.
Colour: Anthracite.
Attachment: Fully bonded as Clause 740.
 - Flashings and detail work: Install as per manufacturers' typical details and architects drawing to F.M. Standard. 4470.
 - Surface protection: Paralon Ard/S granular walkway membrane where specified.
 - Accessories: Harmer cast aluminium roof outlets, Ital Profili pipe collars and cowls as per drawings.
- 130 BUILT-UP REINFORCED BITUMEN MEMBRANE COLD DECK ROOF COVERING AGRÉMENT CERTIFIED SYSTEM.
- Substrate: Plywood concrete recover.
 - Preparation: Prime with Impertene Primer.
 - Waterproof covering:
 - System manufacturer: Imper Italia.
 - First layer: 3mm Top/S modified bitumen reinforced base sheet.
Attachment: Fully bonded as Clause 740.
 - Intermediate layer: N/A.
Attachment: N/A.
 - Top layer/ Capsheet: 4mm Paralon Ard/HS granular surfaced Agrément Certified modified bitumen 4.8kg cap sheet.
Colour: Select.
Attachment: Fully bonded as Clause 740.
 - Flashings and detail work: Install as per Moy Materials Ltd typical details and architects drawings.
 - Surface protection: N/A.
 - Accessories: Harmer or Ital Profili roof outlets.

PERFORMANCE

210 ROOF PERFORMANCE

- General: Secure, free draining and weathertight.

225 AVOIDANCE OF INTERSTITIAL CONDENSATION: WARM AND INVERTED ROOFS

- Determine: Interstitial condensation risk of roof construction as recommended in BS 5250, annex D.
- Vapour control layer: If necessary, provide a suitable membrane so that damage and nuisance from interstitial condensation do not occur.

230 INSULATION

- Requirement: Determine type and thickness of insulation and integral or separate overlay to satisfy the following criteria:
 - Thermal transmittance of roof (maximum): To meet current regulations.
 - Compressive strength of insulation (minimum) at 10% compression: 32kg.
 - Finished surface: Suitably even, stable and robust to receive roof covering.
 - Insulation compliance: To relevant British Standard, or Agrément certified.

240 ATTACHMENT OF ROOF COVERING

- Requirement: Determine methods of attachment to resist wind loads. Provide for relative movement of materials and effects of vapour pressure. Do not reduce performance of vapour control layer.
- Wind loads: Calculate to BS 6399-2, Standard Method or Eurocode Standard or FM Global windstorm project classification

PRODUCTS

322 PRIMER

- Type: Bitumen.
- Manufacturer: Imper Italia.
 - Product reference: Impertene.

335 ANGLE FILLETS

- Material: Paratorch or Perlite.
 - Size (minimum): 50mm.
- Restriction: Fillets under torch-on bitumen membranes to be non-combustible.

345 PERIMETER TRIMS

- Type: GRP or aluminium.
- Manufacturer: Areco.
 - Product reference: AF.
- Colour: Select.
- Size: Select.
 - Lengths (maximum): 3 m.

- 395 VAPOUR CONTROL LAYER
- Type: Foil laminate or bitumen.
 - Manufacturer: Lexcor or Imper Italia.
 - Product reference: _____ .
 - Thickness: 2 ply or 3kg.
 - Vapour resistance: Good to positive.
- 430 WARM DECK ROOF INSULATION
- Type: Roofing grade.
 - Manufacturer: Kingspan / Moy Materials Ltd.
 - Product reference: Paratherm / Paratorch.
 - Grade: PIR.
 - Edges: Square.
 - Thickness: To meet current U-Value.
 - Facing: Tissue, foil or bitumen.
- 455 PERLITE OVERLAY TO WARM DECK ROOF INSULATION
- Standard: To EN 13169
 - Manufacturer: Sitek.
 - Product reference: Eraboard S.
 - Grade: Perlite.
 - Thickness: 20mm.
- 480 PIPE COLLARS & COWL
- Manufacturer: Ital Profili.
 - Product reference: Dutral Article 114 or D57.
 - Size: Variable.
- 485 ROOF VENTILATORS
- Manufacturer: Ital Profili.
 - Product reference: Dutral Article 49.
 - Size: 110.

EXECUTION GENERALLY

- 515 ADVERSE WEATHER
- General: Do not lay coverings in high winds, wet or damp conditions or in extremes of temperature unless effective temporary cover is provided over working area.
 - Unfinished areas of roof: Keep dry. Protect edges of laid membrane from wind action.
- 520 INCOMPLETE WORK
- End of working day: Provide temporary seal to prevent water infiltration.
 - On resumption of work: Cut away tail of membrane from completed area and remove from roof.
- 530 APPLYING PRIMERS
- Coverage per coat (minimum): 4m² / litre.

- Surface coverage: Even and full.
- Coats: Fully bond. Allow volatiles to dry off thoroughly between coats.

SUBSTRATES/ VAPOUR CONTROL LAYERS/ WARM DECK ROOF INSULATION

610 SUITABILITY OF SUBSTRATES

- Substrates generally: Secure, clean, dry, smooth, free from frost, contaminants, voids and protrusions.
- Preliminary work: Complete including:
 - Grading to correct falls.
 - Formation of upstands, kerbs, box gutters, sumps, grooves, chases and expansion joints.
 - Fixing of battens, fillets and anchoring plugs/ strips.
- Moisture content and stability of substrate: Must not impair roof integrity.

670 LAYING VAPOUR CONTROL LAYER

- Attachment: Securely bond or nail to substrate.
- Side and end laps: 100mm min.
- Joints in second layer (where applicable): Stagger by half a membrane.
- Penetrations: Fully seal using bonding or taping methods recommended by manufacturer.
- Edges of insulation at roof edges, abutments, upstands, kerbs, penetrations and the like: Enclosed with vapour control layer:
 - Dressed up sufficiently, providing 50 mm (minimum) seal when overlapped by the roof covering; or
 - Turned back 150 mm (minimum) over the insulation and sealed down.

680 LAYING WARM DECK ROOF INSULATION

- Setting out:
 - Long edges: Fully support and run at right angles to parapets.
 - End edges: Adequately support.
 - Joints: Butt together.
 - End joints: Stagger.
- Bedding: Full bed of bonding compound.
- Mechanical fixing: To BS Std. or Eurocode Std. or FM Global windstorm classification.
- Protection to exposed edges of insulation: Reduced thickness treated timber batten, outer edge chamfered at changes in level.
- Completion: Boards must be in good condition, well fitting and stable.

690 LAYING OVERLAY TO WARM DECK ROOF INSULATION

- Setting out: Stagger to break joint with insulation.
 - Joints: Butt together.
- Bedding: Full bed of bonding compound.
- Mechanical fixing: To F.M. Global or Eurocode Std.

WATERPROOF MEMBRANES/ ACCESSORIES

- 740 TORCH-ON BONDING OF REINFORCED BITUMEN MEMBRANES
- Bond: Full over whole surface, with no air pockets.
 - Excess compound at laps of top layer/ capsheet: Leave as continuous bead.

- 747 SELF-ADHESIVE BONDING OF REINFORCED BITUMEN MEMBRANES
- Bond: Full over whole surface, with no air pockets.

COMPLETION

- 910 INSPECTION
- Interim and final roof inspections: Submit reports.
- 920 ELECTRONIC ROOF INTEGRITY TEST
- Testing authority: As instructed by architect.
 - Timing of test: On completion of cap sheet.
 - Condition of roof prior to testing:
 - Complete to a stage where integrity can be tested.
 - Surface: Clean.
 - Test results and warranty: Submit on completion of testing.
- 940 COMPLETION
- Roof areas: Clean.
 - Outlets: Clear.
 - Work necessary to provide a weathertight finish: Complete.
 - Storage of materials on finished surface: Not permitted.
 - Completed membrane: Do not damage. Protect from chemicals, traffic and adjacent or high level working.