



# MPT Meshclad Technical Manual

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## MPT MESHCLAD SYSTEM

MPT MESHCLAD Exterior Cladding Cavity System

### Introduction

MPT MESHCLAD is a plastering system for external polystyrene application, installed over an approved drained cavity, comprising cement-based breathable mineral plasters, alkali resistant fiberglass mesh and assorted PVC flashings and trims. The polystyrene sheets are mechanically fixed over a 20mm cavity to timber or steel framing.

MPT MESHCLAD is a three-coat plaster system incorporating embedded fiberglass reinforcing mesh and selected finish coats.

The main plaster component of MPT MESHCLAD is BONDCOAT plaster which provides a tough, durable and crack resistant base coat when used in conjunction with fiberglass reinforcing mesh.

### BRANZ Appraisal

BRANZ Appraisal No.445 (2016) MPT Meshclad Cavity System

MPT MESHCLAD has been appraised by BRANZ as an external wall cladding system for buildings within the following scope:

- the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1; and,
- with a risk score of 0-20, calculated in accordance with NZBC Acceptable Solution E2/AS1, Table 2; and,
- situated in NZS 3604 Wind Zones up to, and including Extra High.

MPT MESHCLAD has also been appraised as an external cladding system for weathertightness and structural wind loading when used as an external wall cladding system for buildings within the following scope:

- the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 with regards to building height and floor plan area; and,
- constructed with timber or steel framing subject to specific engineering design; and,
- situated in specific design wind pressures up to a maximum design differential ultimate limit state (ULS) of 2.5kPa.

MPT MESHCLAD must only be installed on vertical surfaces (except for tops of parapets, sills and balustrades, which must have a minimum 10° slope and be waterproofed in accordance with the Technical Literature).

The system is appraised for use with aluminium window and door joinery that is installed with vertical jambs and horizontal heads and sills. (The performance of MPT MESHCLAD relies on the joinery meeting the requirements of NZS 4211 for the relevant Wind Zone or wind pressure.)

## Building Regulations

The MPT MESHCLAD Cavity System if designed, used, installed and maintained in accordance with the statements and conditions of the BRANZ Appraisal and the guidelines in the MPT Technical Manual, will meet the following provisions of the New Zealand Building Code (NZBC):

**Clause B1 STRUCTURE:** Performance B1.3.1, B1.3.2 and B1.3.4. The MPT MESHCLAD Cavity System meets the requirements for loads arising from self-weight, wind, impact and creep [i.e. B1.3.3 (a), (h), (j) and (q)].

**Clause B2 DURABILITY:** Performance B2.3.1 (b), 15 years, B2.3.1 (c), 5 years and B2.3.2. The MPT MESHCLAD Cavity System meets these requirements.

**Clause E2 EXTERNAL MOISTURE:** Performance E2.3.2. The MPT MESHCLAD Cavity System meets this requirement.

**Clause F2 HAZARDOUS BUILDING MATERIALS:** Performance F2.3.1. MPT MESHCLAD Cavity System meets this requirement and will not present a health hazard to people.

## Technical Specification

### Insulation Boards

EPS Boards- 40, 60, or 75mm thick. Class H or Class S expanded polystyrene, manufactured to AS 1366, Part 3, supplied in sheets ranging in length from 2.4m up to 3.6m. Sheets are typically 1.2m wide.

Cavity Battens and spacers are manufactured from heavy duty polystyrene. Nominal profile is 20mm thick x 50mm wide, solid design. Packers can alternatively be vented and bevelled.

### Fixings for Framing

Timber Framing – Hot dipped galvanised flat head nails of the following sizes, fitted with 41mm diameter MPT plastic washers: 90 x 3.55mm for 40mm thick; 110 x 3.80mm for 60mm thick insulation boards. Nails and washers to be driven sub-flush.

Steel Framing – minimum 6-gauge AS 3566 Corrosion Class 4 self-drilling screws in NZS 3604 defined Exposure Zones B, C and D with MPT washers. The screw length must allow a minimum 10 mm penetration through the steel framing

### Adhesives

A polystyrene compatible adhesive is required for gluing PVC extrusions to the insulation board. Petros Holdings Ltd recommends the use of products such as Sika Panelbond or Holdfast Nail Power (Adhesives must be non-solvent based to prevent dissolution of the polystyrene).

### Sealants

Petros Holdings Ltd recommends the use of a BRANZ appraised sealant. Where gaps to be filled are substantial a PEF backer rod should be used to form the sealant joint.

### Flashing Tapes and Airseals

An airseal is to be installed into all window openings to minimise the risk of airflows carrying water into the window cavity.

Prior to window installation the building wrap shall be cut and dressed into the window opening and flexible sill and jamb tapes shall be applied as shown in the MPT Installation details.

An airseal shall be provided between the reveal and the wall underlay and taken around the timber framing.

Airseals shall be made of self-expanding polyurethane foam over a backing rod.

Sill trims and jambs must be flashed along their full length. Refer to the MPT installation details.

### **uPVC Flashings and Accessories**

The following uPVC flashings and accessories are available with the MPT system and are supplied by Petros Holdings Limited:

- Pre-meshed head flashings to accommodate depths of 40mm, 60mm and 75mm EPS sheets
- Pre-meshed sill flashings to accommodate depths of 40mm, 60mm and 75mm EPS sheets
- Pre-meshed jamb flashings to accommodate depths of 40mm, 60mm and 75mm EPS sheets
- Corner soakers to accommodate depths of 40mm, 60mm and 75mm EPS sheets
- U-channels to accommodate depths of 40mm, 60mm and 75mm EPS sheets
- Cavity vent caps (aka Cavity closers or Cavity bottom caps) for a standard 20mm cavity
- Pre-meshed corner beads
- Pre-meshed drip-edges
- Pre-meshed expansion joints

Secondary (usually aluminium) head flashings are supplied by the joinery manufacturer.

### **Reinforcing Mesh**

Hard and soft woven alkali resistant fiberglass meshes with a 4 x 4mm, or 5 x 5mm mesh size weighing approximately 160g/m<sup>2</sup>.

## **Plaster and Finish Coats**

### **First Coat:**

#### **BOND COAT**

- Is a factory mixed adhesive render and is suitable as a bonding and meshing coat on polystyrene.
- On polystyrene, BOND COAT is used as a mesh coat of approximately 5mm thickness, thereby providing a bonding surface for further coats of plaster.
- BOND COAT is suitable for plastering machines or manual application (drill mixed only).
- BOND COAT is manufactured using selected aggregates, cement and a range of additives. Sand and particle size range 0-1.0mm.
- A 20kg bag of BOND COAT yields approximately 4 m<sup>2</sup> at 4-5mm thickness.

### **Second Coat:**

#### **SKIM COAT**

- Is an all-purpose skimming render primarily designed as a levelling coat applied over BOND COAT.
- SKIM COAT can also be laid up as a preparation coat, ensuring a high standard of finish for subsequent finishing coats.
- SKIM COAT can be trowelled to a thickness of 2mm and is suitable for commercial plastering machines or manual application (drill mixed only)
- SKIM COAT is manufactured using selected aggregates, cement and mineral additives. Sand particle size range 0-1.0mm.
- A 20kg bag of SKIM COAT yields approximately 10 m<sup>2</sup> at 2mm thickness.

## Final Coat Finishes:

All MPT plaster finishes are suitable for painting. To complement the vapour-permeability of its plaster coats, Peros Holdings Ltd recommends the use of vapour permeable 100% acrylic-based exterior house paints over their MPT MESHCLAD plaster to give the desired finished colour to the exterior walls and to make the system weathertight.

The chosen paint system must comply with any of Parts 7, 8, 9 or 10 of AS 3730. Paint colours must have a light reflectance value of 40% minimum, regardless of gloss value. The paint systems must be applied in accordance with the paint manufacturer's instructions.

Petros Holdings Ltd recommends one coat of 'lime-stop' paint and two coats of high-build or elastomeric paint. Whatever paints are chosen, they must be applied in accordance with the manufacturer's technical datasheets and must meet the performance requirements of the NZ Building Code.

## ABOBECOAT – Adobe/Undulating

- Is a factory mixed dry plaster and can be applied as a final coat on top of a base coat (such as MPT SKIMCOAT).
- ADOBECOAT is specifically formulated as a fine sponge finish and is ideally suited where an adobe or undulating finish is required.
- It is suitable for commercial plastering machines or can be applied manually when mixed by drill or machine.
- Can be applied from 1 - 5mm thick and during setting the applied areas may be sponged or brushed with water to achieve the required finish.
- Can be easily worked to any desired effect, from bold rustic and undulating textures to smooth sponge finishes.
- A 20 kg bag of ADOBECOAT yields approximately 3 - 4m<sup>2</sup> at 4 - 6mm thickness.

## FLOATCOAT – Float/Sponge/Texture

- Is a factory mixed dry plaster and can be applied as a final coat on top of a base coat.
- Has been specifically formulated for finishing by plastic trowel or sponged with water.
- Can also be sprayed through a hopper gun to achieve a fine to medium finish.
- Is applied manually when mixed by drill or machine and can be applied to a thickness of 1.0mm-2.0mm.
- Optimum working time is approximately 3-5 minutes following application to the wall surface.
- A 20kg bag of FLOATCOAT yields approximately 8 m<sup>2</sup> at 2mm thickness.

## SPONGECOAT\* – Sponge

- Is a factory mixed dry plaster and can be applied as a final coat on top of a base coat.
- Specifically formulated as a medium sponge finish to maintain texture beneath several layers of paint.
- Can be applied to a minimum thickness of approximately 1.5mm and during setting the applied areas may be sponged or brushed with water to achieve the required finish.
- A 20kg bag of SPONGECOAT yields approximately 6 - 8m<sup>2</sup>.

## SCRATCHCOAT MEDIUM\* – Scratch/Drag

- Is a factory mixed dry plaster and can be applied as a final coat on top of a base coat.
- Specifically formulated as a medium texture drag of random scratch coat. Grain size varies from 0.5 - 3mm to produce the required texture pattern.
- During setting the applied areas are worked with a polystyrene or hard plastic float in circular or vertical directions.

- A 20kg bag of SCRATCHCOAT Medium yields approximately 6 m<sup>2</sup>.

## SCRATCHCOAT COARSE\* – Scratch/Drag

- Is a factory mixed dry plaster and can be applied as a final coat on top of a base coat.
- Specifically formulated as a coarse scratch or drag finish. Grain size varies from 0.5-4mm to produce the required texture pattern.
- During setting the applied areas are worked with a polystyrene or hard plastic float in a circular or vertical direction.
- A 20kg bag of SCRATCHCOAT Coarse yields approximately 6 m<sup>2</sup>.

\*these products are made-to-order.

## Spray Textures

- FLOATCOAT, SPONGECOAT, and ADOBECOAT can be sprayed through a hopper gun or similar to produce varying grades of textures, from fine to very coarse. Variations are produced by sand particle size, nozzle size, and varying air volume.
- For further information regarding sprayed textures contact Petros Holdings Ltd.

## Important Information regarding MPT Plasters

- Do not under any circumstances add foreign substances other than clean water to premixed mineral plasters.
- Do not add further water to any MPT plaster/water mixture more than 2 hours after original mixing.
- Any plastered surface must be protected from rain and bright sunlight for at least 12 hours after application.
- Always allow 24 hours drying time prior to applying further coats of plaster.
- All MPT Plasters have high water vapour permeability (breathability)
- All MPT plasters are cement based, non-acrylic plasters - containing only natural materials and additives.
- All plasters are packed in 20kg plastic lined paper bags and can be stored in a dry place for up to 6 months.

## Design Information

### General

MPT MESHCLAD is a plastered cladding system installed over a nominal 20mm (minimum) cavity to timber or steel framing. The structure supporting the cladding must be designed and constructed to meet the relevant performance criteria of the New Zealand Building Code. Wall studs must be set at 600mm centres maximum with nogs at 800mm centres maximum. Designers must ensure that structures do not contain detail or design features where water ponding may occur.

A minimum slope of 10 degrees is required to all plastered sills and copings, and where required by the installation details, a waterproof membrane system or water management facility is to be specified. Punchings in the ventilated cavity closure provide a minimum ventilation opening area of 1000mm<sup>2</sup> per lineal metre in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.3(b)

Petros Holdings Ltd recommends the use of breathable building wrap in keeping with the vapour permeability characteristics of the plaster coats. Unlined gables and walls must incorporate a

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rigid sheathing or an air barrier which meets the requirements of NZBC Acceptable Solution E2/AS1, Table 23. For attached garages, wall underlays must be selected in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.3.4. Where rigid wall underlays are used, the cavity batten fixing lengths must be increased by a minimum of the thickness of the underlay.

Where penetrations through the MPT MESHCLAD system are wider than the cavity batten spacing allowance must be made for airflow between adjacent cavities. A minimum 10mm gap must be left between the bottom of the vertical cavity batten and the flashing to the opening.

Weather proofing around aluminium joinery openings, penetrations, construction and expansion joints, base and wall junctions must be given particular attention by designers and installers.

The bottom edge of the finished polystyrene must be kept clear of paved ground, such as footpaths and mowing strips, by a minimum of 100mm and unpaved ground by a minimum of 175mm. The ground clearance to finished floor levels as set out in NZS 3604 must be adhered to at all times. Adherence to these requirements is the responsibility of the owner / builder.

## Wind Zones

MPT MESHCLAD is suitable for construction in all NZS 3604 defined Wind Zones, up to and including Extra High, and specific design wind pressures up to and including design differential 2.5 kPa ULS.

EPS Sheets must be fixed through the cavity battens and cavity spacers to the wall framing at centres specified in Table 1 and Table 2.

**Table 1: EPS Sheet Fixing Centres for Edges and Intermediate Studs**

NZS 3604 Wind Zone with studs at maximum 600 mm centres	Fixing centres (mm)
Low	300 <sup>1</sup>
Medium	300 <sup>1</sup>
High	300 <sup>1</sup>
Very High	200 <sup>2</sup>

<sup>1</sup> One fixing is required into each dwang and top and bottom plates at mid-dwang length.

<sup>2</sup> Fixings are also required into each dwang at 200 mm centres and top and bottom plates at mid-dwang length.

**Table 2: EPS Sheet Fixing Centres for Edges and Intermediate Studs - NZS 3604 Wind Zone Extra High and Specific Design Wind Zones**

NZS 3604 Wind Zone Extra High and specifically designed buildings up to 2.5 kPa ULS wind pressure with studs at maximum 400 mm centres		
Maximum vertical fixing centres (mm) along studs	Maximum horizontal fixing centres (mm) along top and bottom plates	Maximum horizontal fixing centres (mm) along dwangs
150	200	150

### Impact Resistance

MPT MESHCLAD employs the use of two options for reinforcing mesh for standard and high-stress applications. Consideration must be given to the impact resistance required in commercial applications and Petros Holdings Ltd recommends that a double layer of reinforcing mesh (160g/m<sup>2</sup>) embedded in a 5mm coat of BONDCOAT be used in high-stress applications. For standard applications, a single layer of reinforcing mesh (160g/m<sup>2</sup>) embedded in a 5mm coat of BONDCOAT is satisfactory.

### Durability

When installed and maintained in accordance with the instructions of Petros Holdings Ltd, MPT MESHCLAD will meet the provisions of NZBC B2.3.1 (b) 15 years for the cavity system and plaster finish, and code compliance with NZBC Clause B2.3.1 (c), 5 years for the exterior paint system, subject to the paint manufacturer's specification.

### Control of Internal Fire and Smoke Spread

Polystyrene used with the system must meet the flame propagation criteria of AS1366.3 as specified in NZBC Acceptable Solution C/AS1 paragraph 4.2.2 and NZBC Acceptable Solutions C/AS2 to C/AS6 paragraph 4.17.2. The completed wall system, which may or may not include a surface lining product enclosing the EPS sheet from the adjacent occupied space, must achieve the Group Number for internal surface finish requirements as specified in the relevant NZBC Acceptable Solutions C/AS1 to C/AS6.

### Control of External Fire Spread

The MPT Meshclad Cavity System is suitable for use on buildings with an SH Risk Group classification, a building height of ≤ 10m and at a distance of ≥ 1.0m to the relevant boundary. Refer to NZBC Acceptable Solutions C/AS2 – C/AS6 paragraph 5.8.1 for the specific exterior surface finishes requirements for other building risk groups.

When buildings in all risk groups, apart from SH, are of the three storeys maximum permitted by NZBC Acceptable Solution E2/AS1, Paragraph 1.1 (a), and when the cladding system extends to cover the walls of all three floors, the requirements for barriers to vertical fire spread in accordance with NZBC Acceptable Solutions C/AS2 to C/AS6 Paragraph 5.7.17 must be met. NZBC Acceptable Solution C/AS2 – C/AS6, Figure 5.8 gives an acceptable detail for barriers, however these do not consider NZBC Clause E2 requirements. Design of the barrier joint must be specifically detailed by the designer to meet the NZBC, including blocking of the cladding cavity and wall framing cavity, and installation of flashing and sealing systems to collect and direct any moisture to the outside of the cladding system at that point.

## Prevention of Fire Occurring

Separation or protection must be provided to MPT Meshclad from heat sources such as fire places, heating appliances, flues and chimneys. Part 7 of NZBC Acceptable Solutions C/AS1 – C/AS6 and NZBC Verification Method C/VM1 provide methods for separation and protection of combustible materials from heat sources.

## External Moisture

When installed according to directions and provisions of Petros Holdings Ltd, MPT MESHCLAD will meet the performance requirements of NZBC E2.3.2. Junctions between the cladding and the external joinery, at control joints and around window penetrations must be detailed to ensure the cladding system is installed and maintained weathertight. Sills, parapet tops and balustrade caps must be sloped a minimum of 10° from the horizontal if a plaster finish is required to these areas; however, in the case of parapets and balustrades, Petros Holdings Ltd, recommends the use of metal cappings.

The bottom edge of the insulation boards must over-lap past the edge of the concrete floor, wall plate or bearer by a minimum of 50mm and must be no closer than 175mm to unfinished ground, or 100mm to paved ground.

## Weathertightness Principles

Joinery heads must be protected by a head flashing.

In all Wind Zones, internal air seals are required around all penetrations installed in the gap between the reveal lining and framing at the line of the internal lining.

Jambs shall be sealed and utilise the MPT jamb flashing for recessed joinery. These must be installed on the top of the cavity batten.

Sills of recessed joinery must use the MPT uPVC sill flashing which is installed on top of the vertical cavity battens and extended at least 20mm beyond the line of the jamb.

MPT Corner Soakers must be used at the junctions of the MPT jamb flashings and the MPT sill flashings.

A BRANZ appraised sealant must be used to make weathertight seals between the joinery and the cladding, around holes for services and at junctions with dissimilar materials. The sealant manufacturer’s instructions for applications must be followed.

## Energy Efficiency

Calculations in accordance with NZS 4214 require that the ventilated air gap and the thermal resistance of each layer between the ventilated air gap and outside air be de-rated by a factor of 0.45. Therefore, in this system, unless better information is available for a specific design case, the R-value of the EPS sheet must be taken as set out in Table 3.

**Table 3: Board R-values (including 0.45 de-rating)**

	Thickness		
	40 mm	60 mm	75 mm
EPS Class S (White)	R0.6	R1.12	R1.52
EPS Class H (White)	R0.66	R1.21	R1.63
EPS Class H (Graphite infused)	R0.85	R1.48	R1.96

## **Water Vapour**

MPT MESHCLAD comprises plaster coats which have high vapour permeability (breathability). MPT MESHCLAD is not a barrier to the passage of water vapour and, when correctly installed, will not create or increase the risk of damage resulting from condensation.

## **Hazardous Building Materials**

When MPT MESHCLAD is used and installed in accordance with technical literature from Petros Holdings Ltd, the product will not present a health hazard to people; therefore the provisions of NZBC F2.3.1 will be met.

## **Electrical Cables**

PVC sheathed electrical cables must be prevented from direct contact with the polystyrene. When cables must penetrate the EPS, the cable must be directly supported by passing through an electrical conduit.

## **Control Joints**

Control joints shall be provided on all walls over 20 metres long and 6 metres high unless specified to be at more frequent intervals by the designer; where EIFS cladding covers different structural materials, like wood to concrete; at abutments to different cladding materials, and over movement control joints in the underlying structure.

Control joints shall always be located over structural supports.

Where applicable, Designers must specify the location of all construction joints.

## **Inter-storey Drained Joints**

Inter-storey junctions must be constructed in accordance with the Technical Literature. Inter-storey joints must be provided to limit continuous cavities to the lesser of 2-storeys or 7 metres in height, in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.1.9.4(b).

## **Installation / Application**

Installation must be carried out in accordance with the technical drawings and the guidelines from Petros Holdings Ltd. Only Petros Holdings Ltd Approved Applicators, who have been assessed as an LBP (Licensed Building Practitioner) and hold LBP registration, may carry out the installation of MPT MESHCLAD.

## **Substrate and Accessories**

### **Wall Underlay and Flexible Sill and Jamb Tapes**

The selected wall underlay and flexible sill and jamb tape system must be installed by the building contractor in accordance with the underlay and tape manufacturer's instructions and the provisions of the NZBC prior to the installation of the cavity battens and the rest of the MPT Meshclad system. Flexible wall underlay must be installed horizontally and be continuous around corners. Underlay must be lapped 75mm minimum at horizontal joints and 150mm minimum over studs at vertical joints. Generic rigid wall underlay materials must be installed in accordance with NZBC Acceptable Solution E2/AS1 and be overlaid with a flexible wall underlay. Proprietary systems shall be installed in accordance with the manufacturer's instructions. Particular attention must be paid to the installation of the wall underlay and sill and jamb tapes around window and door openings to ensure a continuous seal is achieved and all exposed wall framing in the opening is protected.

## Ventilation and Drainage Cavity

Internal reveal liners on all joinery must be sized to allow for framing and cavity depth, plus 2-3mm clearance for fitting of the sill and jamb flashings.

Head flashings must be wide enough to allow fixing of the rear upstand directly to the lintels. An airseal, comprising of expanding foam and PEF rod, is installed at the completion of the joinery installation. The head flashing upstand is to be flashed to the wall underlay with flexible flashing tape of minimum 50mm wide overlap.

50mm x 20mm battens, of solid design are fixed with 30mm galvanised clouts to all studs and horizontally at the soffit junction.

Vented or solid and bevelled packers, 100mm long, are installed to nogs and top and bottom plates to provide fixing for insulation boards as required by Table 1 and Table 2.

Where studs are at greater than 450 mm centres and a flexible wall underlay is being used, a building underlay support must be installed over the underlay at maximum 300 mm centres horizontally to prevent the wall underlay bridging the cavity during installation of any internal bulk insulation. Alternatively, an additional row of solid vertical battens can be used between the studs to prevent bulging of the wall underlay.

Note: Where the stud spacing is less than 450mm centres, the use of polypropylene strap or additional cavity battens between the studs is not required.

MPT MESHCLAD technical details show that the location and placement of cavity battens around the joinery enables sill and jamb flashings to be installed to the outer plane of the cavity.

The cavity and cladding over the joinery heads is capped with MPT proprietary caps to provide ventilation, and to allow drainage of any water that finds its way into the cavity.

## Fixing of Insulation Boards

Recessed joinery, including all flashings, must be fixed in place prior to fixing the cavity battens and polystyrene sheets.

All sheet edges must be supported and fixed to framing - except at the base where they can hang 50mm below the supporting framing.

Additional framing may be required at the soffits, around openings and at internal corners for the support and fixing of sheet edges.

Fixing centres must not be more than 200mm centres around door and window penetrations. Refer to Table 1 and Table 2 for fixing centres around the edges and in the body of the sheet in each Wind Zone or wind pressure.

All fixings must use an MPT MESHCLAD 41mm ABS washer.

When adhering insulation boards to concrete or masonry substrates, ensure that the surface is clean and dust-free.

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uPVC flashings, trim profiles and control joints must be installed prior to plastering.

Joinery, soffits, decking, paving and any other finished surfaces, within close proximity to the plastered areas, are to be masked for protection from plaster splashes or over-spray.

Surface “humps” in the polystyrene due to minor variations in wall framing can be removed by sanding or shaving flat prior to plastering.

Where polystyrene has been exposed to sunlight over a long period the resultant yellow powdering caused by oxidation must be removed by sanding or brushing.

MPT plasters can only be applied when the temperature range is between 5°- 30°C.

BONDcoat mesh coat is to be applied at 5mm thick, in bands of 1.0m, 1.2m, or 1.3m depending on the width of the reinforcing mesh used.

When trowelling mesh into BONDcoat, ensure the fiberglass mesh is trowelled in such a way that it remains to the exterior surface of the plaster and that it is over-lapped at least 50mm where it is joined. Diagonal reinforcing strips must be applied to all corners of windows, doors and other exterior openings. These must be at least 100mm wide and of 160g/m<sup>2</sup> hard mesh at 4 x 4mm or 5 x 5mm mesh size.

For commercial application a heavy-duty mesh, supplied by Petros Holdings Ltd, is set into a plaster bed of BONDcoat at 5mm thickness.

A skim and levelling coat of MPT SKIMcoat must be applied at a minimum thickness of 1.0mm once the mesh coat has set sufficiently and prior to the application of a finish coat.

## Handling and Storage

Handling and storage of all materials during delivery or on site is the responsibility of the Petros Holdings Ltd Approved Applicator. Bags of plaster mix require storage in dry conditions, preferably off the floor on pallets or dunnage. PVC extrusions and polystyrene boards must be stored out of direct sunlight and in a location where physical damage is avoided. Discard any plaster that is 6 months beyond manufacture date.

## Maintenance

Petros Holdings Ltd recommends regular checking of the system annually for cleanliness and integrity of the applied finish coatings. Washing with detergent and warm water will remove most dirt or grime build-up not washed away by rain. Checks must also be made of sealant applications and flashed joints to ensure that weather-tightness has been maintained. Unstable or suspect areas must be stripped out and the sealant and/or plaster replaced. Petros Holdings Ltd supply plaster and technical support to assist with any repair work.