BRANZ Appraised
Appraisal No. 496 [2016]

MPT FIBRECLAD SYSTEM

Appraisal No. 496 (2016)

This Appraisal replaces Appraisal No. 496 (2005).

Amended 23 July 2019

BRANZ Appraisals

Technical Assessments of products for building and construction.

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Product

1.1 MPT Fibreclad is a jointing and exterior plaster system for use as a finishing system for Monotek® Sheet - Cavity Construction.

1.2 The system consists of a fibreglass mesh reinforced jointing plaster, followed by a 1.0 - 5.0 mm thick levelling plaster with 400 mm wide fibreglass mesh reinforcing over sheet joints, followed by a 1 - 3 mm thick finishing plaster. The plaster system is finished with a high-build acrylic exterior paint system.

Scope

2.1 MPT Fibreclad has been appraised for use as a jointing and exterior plaster system for Monotek® Sheet - Cavity Construction on 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.

2.2 MPT Fibreclad has also been appraised for use as a jointing and exterior plaster system for Monotek® Sheet - Cavity Construction on 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 framing subject to specific engineering design; and,
- situated in specific design wind pressures up to a maximum design differential ultimate limit state (ULS) of 2.5 kPa; and,
- within the scope limitations of BRANZ Appraisal No. 466 (2005) Monotek® Sheet - Cavity Construction.

2.3 Monotek® Sheet - Cavity Construction must be used, designed and installed as described in BRANZ Appraisal No. 466 (2005) and the Monotek® Sheet - Cavity Construction Technical Literature.

2.4 Installation of components and accessories supplied by Petros Holdings Ltd must be carried out only by Petros Holdings Ltd approved applicators.

Building Regulations

New Zealand Building Code (NZBC)

3.1 **In the opinion of BRANZ, the MPT Fibreclad System if designed, used, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet or contribute to meeting the following provisions of the NZBC:**

Clause B2 DURABILITY: Performance B2.3.1 (b), 15 years and B2.3.1 (c), 5 years. MPT Fibreclad meets these requirements. See Paragraphs 10.1 and 10.2.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. MPT Fibreclad when used to finish Monotek® Sheet - Cavity Construction meets this requirement. See Paragraphs 8.1-8.3 and 13.1 and 13.2.

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

3.2 This is an Appraisal of an **Acceptable Solution** in terms of New Zealand Building Code compliance. MPT Fibreclad meets the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.7.4.

3.3 MPT Fibreclad has been appraised for use as a jointing and exterior plaster system for Monotek® Sheet - Cavity Construction, which is an **Alternative Solution** in terms of New Zealand Building Code compliance.

Technical Specification

4.1 System components and accessories supplied by Petros Holdings Ltd for MPT Fibreclad are:

Primers

- **APCO Enviroseal** is a solvent based clear coating. It is used to seal the face of the Monotek sheets and joints prior to plastering.

Plasters

- **Bondcoat Jointing Plaster** is a Portland cement-based adhesive render comprising Silica sand and mineral additives. It is trowel applied to the joints of the Monotek® sheets and is used as the bedding compound for both layers of joint reinforcing mesh. Bondcoat jointing plaster is supplied in 20 kg bags.
- **Skimcoat** is a Portland cement-based plaster comprising Silica sand and mineral additives. It is trowel or pump applied as a levelling coat in a 1.0 - 5.0 mm layer. Skimcoat is supplied in 20 kg bags.
- **Adobecoat, Floatcoat, Spongecoat, Scratchcoat Medium and Scratchcoat Coarse** are Portland cement-based finishing plasters comprising Silica sand, hydrated lime and mineral additives. The plasters are trowel or pump applied as finishing coats and are worked during curing to achieve the required finish. The plasters are supplied in 20 kg bags.

Paint System Specification

- **MPT Earthtone Limebuster** is a 100% acrylic penetrating sealer for application over finishing plasters to promote adhesion of the MPT Earthtone Elastomeric finish. It is supplied in 10 litre pails and is applied by brush, roller or airless spray. MPT Earthtone Limebuster must not be applied within the first 3 days after plastering, and must not be left exposed for more than 3 days before being over coated.
- **MPT Earthtone Elastomeric Finish** is a ready-to-use, tintable, high-build acrylic exterior paint for application over MPT Earthtone Limebuster. It is supplied in 10 litre pails, and may be brush, roller or spray applied. The paint colour selected must have a light reflectance value (LRV) of 40% minimum regardless of gloss value.

Accessories

- **Reinforcing mesh** - alkali resistant fibreglass mesh with a nominal mesh size of 4.0 mm square and an approximate weight of 150 g/m^2. The mesh is supplied in rolls 100 mm wide.

4.2 Accessories supplied by the approved applicator for MPT Fibreclad are:

- **Waterproof membrane tapes** - tapes covered by a valid BRANZ Appraisal for use as waterproofing membranes over tops of plastered balustrades, fixing blocks and the like.
- **Flexible sealant** - sealant complying with NZBC Acceptable Solution E2/AS1, or sealant covered by a valid BRANZ Appraisal for use as a weather sealing sealant for exterior use.

Handling and Storage

5.1 Handling and storage of all materials supplied by Petros Holdings Ltd or the approved applicator, whether on or off site, is under the control of Petros Holdings Ltd approved applicators. Dry storage must be provided on site for the fibreglass mesh and bags and pails of plaster mix. uPVC flashings and profiles must be protected from direct sunlight and physical damage, and should be stored flat and under cover.

5.2 Plaster must be used within the designated shelf life from the date of manufacture.

Technical Literature

6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for Monotek® Sheet - Cavity Construction and MPT Fibreclad. The Technical Literature must be read in conjunction with this Appraisal. All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

Design Information

Fibre Cement Substrates

Monotek® Sheet - Cavity Construction

7.1 Monotek® Sheet -Cavity Construction must be designed and installed in accordance with BRANZ Appraisal No. 466 (2005) and the Monotek® Sheet -Cavity Construction Technical Literature.

General

8.1 Timber wall framing and cavity battens must have a moisture content of 20% or less at the time of the commencement of the MPT Fibreclad system.

8.2 At ground level the bottom edge of the MPT Fibreclad system must be kept clear of paved surfaces, for example footpaths, by a minimum of 100 mm and unpaved surfaces by 175 mm in accordance with NZBC Acceptable Solution E2/AS1, Table 18.

8.3 At balcony, deck or roof/wall junctions, the bottom edge of the MPT Fibreclad system must be kept clear of any adjacent surface, or above the top surface of any adjacent roof flashing by a minimum of 50 mm in accordance with Monotek® Sheet - Cavity Construction Technical Literature.

Control Joints

9.1 Control joints in the MPT Fibreclad system must be constructed in accordance with the Monotek® Sheet -Cavity Construction Technical Literature, and be provided as follows:

- Vertical control joints - at maximum 5.4 m centres, or where the cladding system abuts different cladding types.
- Horizontal control joints - at maximum 5.4 m centres and at inter-storey floor levels.

Durability

10.1 MPT Fibreclad meets the performance requirements of NZBC Clause B2.3.1 (b), 15 years for the jointing and plaster system, and the performance requirements of NZBC Clause B2.3.1 (c), 5 years for the exterior paint system.

Serviceable Life

10.2 MPT Fibreclad installations are expected to have a serviceable life of at least 15 years provided the paint finish system is maintained in accordance with this Appraisal.

Maintenance

11.1 Regular cleaning [at least annually] of the MPT Fibreclad Plaster System is recommended to remove grime, dirt and organic growth, to maximise the life and appearance of the coating. Grime may be removed by brushing with a soft brush, warm water and detergent.

11.2 Annual inspections must be made to ensure that all aspects of the plaster system remain in a sound and weatherproof condition. Any damaged areas or areas showing signs of deterioration which would allow water ingress, must be repaired immediately. Sealant, paint coatings or the plaster system must be repaired in accordance with the instructions of Petros Holdings Ltd. Any damage to the substrate must be repaired and the advice of James Hardie New Zealand must be sought.

11.3 Recoating of the paint system will be necessary throughout the life of the plaster system. The interval between recoats depends on the paint colour, orientation and quality of the application, and will be at approximately 8-10 yearly intervals in accordance with the instructions of Petros Holdings Ltd.

11.4 Minimum ground clearances as set out in this Appraisal must be maintained at all times.

[Note: Failure to adhere to the minimum ground clearances given in this Appraisal and the Technical Literature will adversely affect the long term durability of MPT Fibreclad.]

Control of External Fire Spread

12.1 The MPT Fibreclad Plaster System is suitable for use on buildings with an SH Risk Group classification, a building height of ≤ 10 m and at a distance of ≥ 1.0 m 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.

External Moisture

13.1 The MPT Fibreclad Plaster System, when installed and maintained in accordance with this Appraisal and the Technical Literature will meet code compliance with NZBC Clause E2.3.2.

13.2 The detailing of junctions between the MPT Fibreclad Plaster System and external joinery, other wall penetrations, e.g. meter boxes, and other cladding and roofing junctions, are the responsibility of James Hardie New Zealand for compliance with the NZBC. These details have not been assessed as part of this Appraisal but are covered by the Monotek® Sheet - Cavity Construction Appraisal.

Installation Information

Installation Skill Level Requirements

14.1 Installation must always be carried out in accordance with the MPT Fibreclad Plaster System Technical Literature and this Appraisal, by or under the supervision of, a Licensed Building Practitioner [LBP] with the relevant Licence Class.

14.2 Installation and finishing of components and accessories supplied by Petros Holdings Ltd and the approved applicators, must be completed by trained applicators, approved by Petros Holdings Ltd.

System Installation

MPT Fibreclad Plaster System

15.1 The MPT Fibreclad Plaster System must be installed in accordance with the Technical Literature.

15.2 The MPT Fibreclad Plaster System must only be applied when the air and substrate temperature is within the range of +5°C to +30°C.

Inspections

15.3 The Technical Literature must be referred to during the inspection of MPT Fibreclad installations.

Finishing

15.4 The paint manufacturers' instructions must be followed at all times for application of the paint finish. The plaster must be completely dry before commencing painting.

15.5 The MPT Earthtone paint system must only be applied when the air and substrate temperature is within the range of +10°C to +45°C.

Health and Safety

16.1 Safe use and handling procedures for the components that make up the MPT Fibreclad system are provided in the relevant manufacturer's Technical Literature.

Basis of Appraisal

The following is a summary of the technical investigations carried out:

Tests

17.1 The following testing has been completed by BRANZ:

- The MPT Fibreclad System has been tested to BRANZ EM 4 over Monotek® sheet.
- BRANZ expert opinion on NZBC E2 code compliance for Monotek® Sheet - Cavity Construction was based on testing and evaluation of all details within the scope of the Monotek® Sheet -Cavity Construction Appraisal and as stated within this Appraisal. Monotek® Sheet -Cavity Construction was tested to E2/VM1. The testing assessed the performance of the foundation detail, window head, jamb and sill details, meter box head, jamb and sill details, vertical and horizontal control joints, internal and external corners and balustrade to wall junction with a plastered cap. In addition to the weathertightness test, the details contained within the Monotek® Sheet - Cavity Construction Technical Literature have been reviewed, and an opinion has been given by BRANZ technical experts that the system will meet the performance levels of Acceptable Solution E2/AS1 for drained cavity claddings.

Other Investigations

18.1 A durability opinion has been given by BRANZ technical experts.

18.2 Site visits have been carried out by BRANZ to assess the practicability of installation, and to examine completed installations.

18.3 The Technical Literature for MPT Fibreclad has been examined by BRANZ and found to be satisfactory.

Quality

19.1 The manufacture of the MPT Fibreclad plasters has been examined by BRANZ, including methods adopted for quality control. Details regarding the quality and composition of the components and accessories used with the system were obtained by BRANZ and found to be satisfactory.

19.2 The quality system of Petros Holdings Ltd has been assessed and registered as meeting the requirements of the Telarc Q-Based Code by Telarc, Registration Number 807.

19.3 Quality on site is the responsibility of the Petros Holdings Ltd approved applicator.

19.4 Designers are responsible for the building design, and building contractors are responsible for the quality of installation of framing systems and joinery, wall underlays, flashing tapes, airseals, joinery head flashings, cavity battens, Monotek® sheets etc. in accordance with the instructions of James Hardie New Zealand.

19.5 Building owners are responsible for the maintenance of MPT Fibreclad in accordance with the instructions of Petros Holdings Ltd.

Sources of Information

- NZS 3604: 2011 Timber-framed buildings.
- BRANZ Evaluation Method No. 4 [2005] Test procedure for coating and jointing systems for flush finished fibre cement sheet cladding, June 2005.
- BRANZ Appraisal No. 466 [2005] issued 15 August 2005, Monotek® Sheet - Cavity Construction.
- Acceptable Solutions and Verification Methods for New Zealand Building Code External Moisture Clause E2, Ministry of Business, Innovation and Employment, Third Edition July 2005 [Amendment 6, 14 February 2014].
- Ministry of Business, Innovation and Employment Record of Amendments for Compliance Documents and Handbooks.
- The Building Regulations 1992.

Amendments

Amendment No. 1, dated 23 July 2019

This Appraisal has been amended to update the Appraisal Holder from APCO Coatings [NZ] Ltd to Petros Holdings Ltd.

BRANZ

In the opinion of BRANZ, the MPT Fibreclad System is fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided it is used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to Petros Holdings Ltd, and is valid until further notice, subject to the Conditions of Appraisal.

Conditions of Appraisal

1. This Appraisal:
   a) relates only to the product as described herein;
   b) must be read, considered and used in full together with the Technical Literature;
   c) does not address any Legislation, Regulations, Codes or Standards, not specifically named herein;
   d) is copyright of BRANZ.
2. Petros Holdings Ltd:
   a) continues to have the product reviewed by BRANZ;
   b) shall notify BRANZ of any changes in product specification or quality assurance measures prior to the product being marketed;
   c) abides by the BRANZ Appraisals Services Terms and Conditions.
   d) Warrants that the product and the manufacturing process for the product are maintained at or above the standards, levels and quality assessed and found satisfactory by BRANZ pursuant to BRANZ's Appraisal of the product.
3. BRANZ makes no representation or warranty as to:
   a) the nature of individual examples of, batches of, or individual installations of the product, including methods and workmanship;
   b) the presence or absence of any patent or similar rights subsisting in the product or any other product;
   c) any guarantee or warranty offered by Petros Holdings Ltd.
4. Any reference in this Appraisal to any other publication shall be read as a reference to the version of the publication specified in this Appraisal.
5. BRANZ provides no certification, guarantee, indemnity or warranty, to Petros Holdings Ltd or any third party.

For BRANZ

Chelydra Percy
Chief Executive

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28 July 2016