Asphaltech Inverted Roof System (PMR)

Product Technical Statement: 109071

miproducts

An inverted roof or Protected membrane roof protects and insulates the building below.
View miproducts listing

masterspec partner

Level of assurance needed to demonstrate NZ Building Code Compliance

HIGH

Supporting documentation should include technical information by manufacturer and either a BRANZ or independent Appraisal or CodeMark

Asphaltech confirms that this minimum level of assurance has been met or exceeded by the following:
CodeMark
CM70012

Company Contact Details

ASPHALTECH WATERPROOFING

Company:	Asphaltech Limited
Physical Address:	28B Parkway Drive Mairangi Bay AUCKLAND
Postal Address:	PO Box 300681 Albany AUCKLAND
Telephone:	64 09 4759725
Email:	info@asphaltech.co.nz
Website:	www.asphaltech.co.nz

Technical Statement

Product Description

Pacoflex is a durable external waterproof membrane. When complete allows for the selection of various thickness of insulation to help thermal gain within the building. This system also protects the finished roof. A range of aesthete finishes can then be laid directly on the insulation from ballast stone to paving slagbs

Pacoflex is a polymer modified mastic asphalt. It comprises of limestone aggregates bound together by asphalt cement and advanced polymers

The system must be laid on a concrete , plywood or suitable insulation substrate. A separation layer is required between the substrate and mastic asphalt topping, which is formed in two 10 mm layers. For an inverted roof system , Geo-textiles , drainage cells , XPS insulation, paving slabs and pebbles are applied over the mastic asphalt system.

Scope of use

The inverted system or protected membrane roof (PMR) is applied on flat to moderately sloped roofs.

It is suitable in new or existing commercial buildings. It can be laid on a range of substrates but mainly concrete due to the weight loading of the system.

Due to its durability and seamless nature mastic asphalt can be laid to minimal falls including Zero and has been applied on many New Zealand buildings,. Mastic asphalt is laid 20 mm thick and is monolithic therefore it cannot be penetrated by roots and is suitable for potable water.

New Zealand Building Code (NZBC)

The product will, if employed in accordance with the supplier's installation and maintenance requirements, assist with meeting the following provisions of the building code:

- **Clause B1 Structure:** Performance B1.3.1, B1.3.2, B1.3.3, B1.3.3(b), B1.3.3(c), B1.3.3(f), B1.3.3(h), B1.3.3(m), B1.3.3(q), B1.3.4
- **Clause B2 Durability:** Performance B2.3.1(a), B2.3.1(b), B2.3.2(a)
- **Clause C6 Structural stability:** Performance C6.2
- **Clause D1 Access routes:** Performance D1.3.3(d)
- **Clause E1 Surface water:** Performance E1.3.1, E1.3.3(a), E1.3.3(b), E1.3.3(c), E1.3.3(d), E1.3.3(e), E1.3.3(f)
- **Clause E2 External moisture:** Performance E2.3.1, E2.3.2, E2.3.7
- **Clause F2 Hazardous building materials:** Performance F2.3.1

Notes

Complies with the Building Code of New Zealand: If installed and maintained in accordance with the conditions of this certificate, the Asphaltech Mastic Asphalt Roof Waterproofing and Paving System will comply with;

B1 Structure B1.3.1; B1.3.2; B1.3.3 (b), (c), (f), (h), (m), (q); B1.3.4

B2 Durability - B2.3.1 (a), (When Concealed) or B2.3.1 (b) (not concealed).B2.3.2(a)

*concealed when used as a substrate incorporated in a green warm or inverted roof.

D1 Access Routes D1.3.3 (d)

E2 External Moisture - E2.3.1; E2.3.2; E2.3.7

F2 Hazardous Building Materials - F2.3.1 And will contribute to compliance with; B1 Structure - B1.3.3 (d); (n)

Evidence

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The product meets the requirements set out in the following documents, or relevant parts of cited standards within the documents:

Codemark AQ-070318

BBA, IKO Roof Waterproofing systems Pacoflex Approval Inspection Testing Certification 17/5449 07/09/2017.

BSI Quality Management System !SO 9001;2008

BS: 8218:1998 Code of practice for mastic asphalt roofing. UKAS Tested in relation to fire.

BS: 6229: 2003 Flat roofs with continuously supported coverings. Code of practice

In accordance to European standard: BS EN 13108-6:2006 Accepted as New Zealand Standard Bituminous mixtures. Material specifications. Mastic asphalt

BRE Digest 144: 1972 (Durability) Pacoflex life serviceability up to 50 years

Moisture resistance tested to UK National Building Regulation Section C.2 UKAS Accredited

Not toxic once cured see IKO Product Safety Sheet

Supporting Evidence

The product has and can make available the following additional evidence to support the above statements:

CodeMark
CM70012

Use in Service History

Mastic asphalt is the oldest waterproofing in the world. It has been used successfully in New Zealand for over 100 years or latest polymer systems have more durability, flexability and ease of application than old variety's of mastic asphalt.
Asphaltech product has been used in New Zealand now for 10 years featuring on a range of large apartment buildings, Car parks , old heritage buildings and modern shopping centers.

TVNZ re-roof 2600m2 , The ANZ towe , Bellus Apartments and Chambers in Station to name a few of our most recent projects.

Product Criteria

Design requirements

This covers the use of the Asphaltech Mastic Asphalt Roof Waterproofing and Paving System as a waterproof roofing membrane and as a waterproofing and paving system for elevated decks and car parks for cars, light commercial and heavy goods vehicles.

The Asphaltech Mastic Asphalt Roof Waterproofing and Paving System may be used where the minimum gradient of the substrate structure is completely flat (less than 1:80) including nominally zero pitch.

The system can be configured to be:

- Suitable for direct foot traffic ·
- A suitable substrate external pavers, tiles or concrete for pedestrian traffic, and for pavers or tiles on paver supports, for use on terraces, balconies or podium.
- A car park trafficable surface.
- Part of a green roof system.

Part of a insulated roof system .

Installation requirements

The Asphaltech Mastic Asphalt Roof Waterproofing and Paving System must be installed using the traditional techniques for mastic asphalt described in the relevant Clauses of BS 8218: 1998, and in accordance with the Asphaltech Technical Manual and Details

Timber substrate structures may be designed in accordance with NZS3604 as a heavy roof, provided the mastic asphalt membrane does not exceed 22 mm. All plywood sheets must be CCA treated to H3.2. The plywood must be a minimum of 17mm thickness complying with AS/NZS 2269.0

Concrete and other specifically designed substrates must be designed in accordance with verification method B1/VM1 using the structural design actions in AS/NZS1170

A separation layer is required between the substrate and mastic asphalt topping

The substrate must be dry, with no sharp projections.

All

All work must be carried out by Asphaltech Waterproofing Suppliers Ltd approved applicators.

Maintenance requirements

All maintenance surveys should be carried out yearly and in the Autumn.

• It is important to check that roof outlets are functioning and gratings are not blocked. Remove debris from the roof but do not flush silt or dead leaves down outlets. In areas where taller trees are adjacent to the roof, inspections may be required more frequently.

• Note the general condition of the waterproofing finishes and report any damaged areas immediately.

• Check waterproofing to roof light kerbs.

• Check roof light domes for signs of damage or deflection.

• Check perimeter details and up stands, ensuring that the metal capping, flashing's, edge trims and mortar pointing to chase details are secure.

• Check flashing's to expansion joints and that the all components are secure.

• Check the up stand flashing's to plant support legs/up stands.

• Check the up stands and flashing's to pipe penetrations.

• Examine all mastic seals and repair/replace as necessary. • Check walkways and around access

Warrantees
20 Year System Guarantee

Company Product Information

Environmental
Mastic asphalt 100% Recyclable

Mastic Asphalt industry was the first in gain carbon Neutral

As mastic asphalt has a longer life cycle than most products it is therefore more sustainable.

Quality Assurance
ISO 9001 (Quality Management)

Videos
mastic asphalt roofing

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