

Mapeplan TU

Building Product Information Requirements Compliance Statement

Date: 4/12/2023 (version 1)

Product Name: **Mapeplan TU**
Product Identifier: **Mapeplan TU**

Product line

Mapeplan TU is a PVC- P synthetic waterproofing membrane, single layer system for waterproofing underground structures.

Product Description

Mapeplan TU is a single layer PVC-P membrane with an orange signal layer, applied as a waterproofing barrier in deep excavation, tunnel and hydraulic works subject to hydrostatic pressure. For example it can be used in

- Drill and Blast tunnel waterproofing
- Open cut tunnel waterproofing
- General underground structures waterproofing

Mapeplan TU is supplied in rolls of

- 2mm thickness
- 2m wide and 20m long
- Colour: orange with black underside

There are several ancillary products in the Mapeplan TU system including:

- Polydren PP - nonwoven geotextile used as a compensation, levelling, protection, and filtering layer
- Polyfond Kit Drain – laminated HDPE protection and drainage system
- Mapeplan ADS 210 – one component adhesive for double coating PVC- P synthetic waterproofing membranes
- Mapeplan Tape PVC 500 – glass reinforced PVC tape with non-woven polyester fabric strip to one side, allowing the junction of PVC to liquid or bituminous membranes

MBP (NZ) Ltd.

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WE SUPPLY THE FOLLOWING MAPEI GROUP BRANDS AND SYSTEMS:



For a complete range of suitable ancillary products, for specific engineering design, please refer to the Mapeplan TU – Technical datasheet (7617-22020-GB)

Alternatively request support at

www.mapei.com/nz/en/technical-and-commercial-support

Scope and Design Requirements

Drill & Blast and Open Cut tunnel waterproofing

A qualified structural engineer familiar with tunnel design should check and confirm the compatibility of the product with other building components and environmental conditions. Additional specialist engineering support and product selection guidance can be reached at:

www.mapei.com/nz/en/technical-and-commercial-support

General underground structures waterproofing

Mapeplan TU can be used for

- buildings subject to non-specific design under floor slabs complying with NZS 3604 and behind concrete masonry basement walls and under floor slabs complying with NZS 4229
- Within buildings subject to specific design with substrates of insitu or precast concrete complying with NZS 3101 or concrete masonry complying with NZS 4230 and 4210.

A Geotechnical ground report must be conducted for each project, specific to ground water, soil types and contamination. Particular attention must be sought to highlight potential risks – in flood zone – flood plane prone areas with the correct systems and methods specified.

Conditions and limitations of use

All building work must be undertaken by MBP (NZ) Ltd approved applicators. Where the work involves Restricted Building Work, this must also be completed by, or under the supervision of, a Licensed Building Practitioner (LBP) with the relevant License class.

Relevant Building Code Clauses

The following New Zealand Building Code clauses are relevant to Mapeplan TU

B2 Durability — B2.3.1 (a)

E2 External moisture — E2.3.2, E2.3.3, E2.3.7

F2 Hazardous building materials — F2.3.1

Pathway to compliance

The following standards, to which Mapeplan TU conforms, support its compliance with the above building code clauses.

BS EN 1849-2:2019 - Flexible sheets for waterproofing. Determination of thickness and mass per unit area, plastics, and rubber sheets for roof waterproofing

BS EN 1928:2000 – Flexible sheets for waterproofing. Bitumen, plastic, and rubber sheets for waterproofing. Determination of watertightness.

BS EN ISO 527-3:2018 – Determination of tensile properties for films and sheets

- Behaviour after immersion in water at 55 C for 7 days
- Tensile Strength
- Elongation at break

BS EN 1110:2010 – Flexible sheets for waterproofing. Determination of flow resistance at elevated temperature. After 2 hours at 70 C

BS EN 495-5:2013 – Flexible sheets for waterproofing. Determination of foldability at low temperatures. Tested at -30 C

DIN 16726 – Behaviour after immersion in acid solution. Aqueous solution at 5-6% of sulphuric acid after 28 days at 23 degrees C.

DIN 16726 - Behaviour after immersion in alkaline solution. Saturated solution of milk of lime after 28 days at 23C.

BS EN ISO 11925-2:2020 – Reaction to fire tests. Ignitability of products subjected to direct impingement of flame, single flame source test.

BS EN 13501-1:2018. Fire Classification products and building elements. Classification using data from reaction to fire tests. Mapeplan TU conforms to Class C

Contributions to Compliance

Clause B2 DURABILITY: Performance B2.3.1 (a) not less than 50 years.
Mapeplan TU membrane meets this requirement.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.3. Mapeplan TU membranes meets this requirement.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1.
Mapeplan TU membrane meets this requirement.

Supporting Documentation

The following additional documentation supports the above statements:

Mapeplan TU - datasheet 7617-2-2020-GB

<https://www.mapei.com/nz/en/landing-page-mapeplan-tu>

Mapeplan TU - technical manual MK6482030(GB)3/16

<https://www.mapei.com/nz/en/landing-page-mapeplan-tu>

Mapeplan TU - EPD 03/12/21

<https://www.mapei.com/nz/en/landing-page-mapeplan-tu>

For further information supporting Mapeplan TU claims refer to our website.

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Warnings and Bans

Mapeplan TU is not subject to a warning or ban under section 26 of the Building Act 2004.

Version History

Version number	Written by	Reviewed by	Date issued	Changes from previous version
v1 4/12/2023	JP	PT	11/12/2023	New document