

MapeWrap C UNI-Ax System

Building Product Information Requirements Compliance Statement

Date: 06/10/2023 (version 1)

Product identifier: **MapeWrap C UNI-AX System**

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Product Description

MapeWrap C UNI-AX System is a high strength uni-directional carbon fibre fabric with high modulus of elasticity, used in conjunction with epoxy resins, for structural and seismic strengthening of reinforced concrete and masonry structures.

MapeWrap C UNI AX is a 600g/m² fabric available in widths 10cm, 20cm, 40cm and 60cm.

There are several ancillary products in MapeWrap C UNI-AX system.

- Adesilex PG1
- Adesilex PG2
- MapeWrap Primer 1
- MapeWrap 3I
- Vagalighther

Please refer to the technical data sheet for areas of use, performance parameters and application procedure for this system.

Relevant Building Code Clauses

The MapeWrap C Uni-AX system complies with the following clauses of the New Building Code:

B1 Structure - B1.3.1, B1.3.2, B1.3.3 (a,b,f), B1.3.4

B2 Durability - B.2.3.1 (a)

C6 Structural Stability - C6.2, C6.3, C6.4

F2 Hazardous Building Materials: F2.3.1

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WE SUPPLY THE FOLLOWING MAPEI GROUP BRANDS AND SYSTEMS:



Contributions to Compliance

Refer to the ICC ESR 3499 test report for the independent assessment of the compliance of MapeWrap C UNI-AX with these clauses of the New Zealand Building Code.

- A qualified Structural Engineer should review the relevant NZ building code clauses stated in this document in conjunction with the International Code Council's ESR 3499 certification to confirm compliance in the context of the project's requirements.
- Epoxy products used in the MapeWrap C UNI-AX system are hazardous during mixing and application. Therefore, appropriate health and safety precautions should be used during application. Once the products are cured they are not hazardous and do not give rise to harmful gases or substances when exposed.

Scope of Use and Design Requirements

- Designing of strengthening works and their location in the structure should be specifically undertaken by a qualified Structural Engineer.
- FRP Structural strengthening design on reinforced concrete structures should be undertaken in accordance with ACI 440.2-23. However, the design may need some modifications to ensure compliance with requirement of NZS 3101:2006 and NZS 1170:2002
- FRP Structural strengthening design on masonry structures should be undertaken in accordance with ACI 440.7R-10 taking into account also NZS4230-2004 & NZS1170:2002
- In the case of fire the structural performance of the MapeWrap C UNI-AX system should comply with principles of clause 9.2.1 of ACI 440.2-23
- The MapeWrap C UNI-AX system is a structural strengthening system suitable to strengthen reinforced concrete elements / members such as beams, columns or slabs damaged by physical-mechanical action, for the confinement of axial / flexural loaded concrete elements and for seismic strengthening of structures in earthquake zones.
- The MapeWrap C Uni AX system can be used on all types of reinforced concrete building e.g. commercial, residential, education or healthcare buildings.
- Building location can be any wind, snow, seismic or corrosion zones.
- A qualified Structural Engineer must check and confirm the compatibility of the MapeWrap C Uni-AX system with other building components in the project.

Conditions and Limitations of Use

- A qualified Structural Engineer should confirm the suitability of MapeWrap C UNI-AX System for applications outside those detailed on the Technical Data Sheet.
- A qualified Structural Engineer should design the MapeWrap C UNI -AX System in accordance with ACI 440.2-23 or an equivalent acceptable Design Standard.
- MapeWrap C UNI -AX System should only be applied by MBP (NZ) Ltd approved applicators who have been trained for application of the MapeWrap System.

Supporting Documentation

The following additional documentation supports the above statements:

MapeWrap C UNI AX - Technical Data Sheet

(Design & Installation) Version 01, 2016

<https://www.mapei.com/nz/en/products-and-solutions/products/detail/mapewrap-c-uni-ax>

MapeWrap C UNI AX – ICC ESR Evaluation Report

ICC-ESR 3499 Evaluation Report - Issued in Feb 2022

<https://icc-es.org/report-listing/esr-3499/>

Contact Details

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Warnings and Bans

MapeWrap C UNI AX is not subject to a warning or ban under section 26 of the Building Act 2004.

Version History

Version number	Written by	Checked by	Date issued	Changes from previous version
VI 06/10/2023	PM	PT	17/05/2024	New document