



INTERBLOC+

MSE SPECIFICATION GUIDE

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INTERBLOC+ MSE PERFORMANCE,
MANUFACTURING STANDARDS, AND
DESIGN REQUIREMENTS



01 PRODUCT DESCRIPTION

Interbloc+ offers quick installation, helping you save time and reduce labour costs. Designed for outstanding strength and resilience, they deliver long-lasting durability. With certified lifting capabilities and a fully engineered system, safety is a core priority.

Their timeless fascia makes them an excellent choice for public-facing projects, providing both structural integrity and visual appeal. Partnering with Interbloc+ means enhancing every project with efficiency, strength, and elegance.

02 CODE COMPLIANCE

Manufacturing:

Interbloc and Interbloc+ modular units shall be made of high quality concrete from approved manufacturer and complying to the following standards:

- i. NZS 3014: Specification for concrete production
- ii. The durability requirements in NZS 3101: Concrete structures standard
- iii. NZS 3112.1: Methods of test for concrete-Tests relating to fresh concrete
- iv. NZS 3112.2: Methods of test for concrete-Tests relating to the determination of strength of concrete

Design:

The design of Interbloc and Interbloc+ modular unit retaining wall system shall comply to the following standards:

- i. New Zealand Building Code Clause B1: Structure-Verification Method 4: Foundations
- ii. Earthquake geotechnical engineering practice Module 6: Earthquake resistant retaining wall design
- iii. Earthquake geotechnical engineering practice Module 1: Overview of the guidelines.
- iv. NZS 3101: Concrete structures standard
- v. NZTA Bridge Manual
- vi. ASNZS 1170.0: Structural design actions-Part 0: General principles.
- vii. NZS 1170.5: Structural design actions-Part 5: Earthquake actions-New Zealand



FOR MORE INFORMATION GO TO

[HTTPS://HELP.ENVIROCON.CO.NZ/](https://help.envirocon.co.nz/)

03 DESIGN

Actions:

- a. Actions on an Interbloc and Interbloc+ modular unit retaining wall system shall be calculated according to ASNZS 1170 and shall account for all types of surcharges behind the wall.
- b. Load combinations as presented in ASNZS 1170.0 shall be implemented in both the static and earthquake cases.
- c. Interbloc and Interbloc+ modular unit retaining wall system shall not be designed to take accidental, impact, or ballistic loads.

Verification:

- a. Verification of Interbloc and Interbloc+ modular unit retaining wall system shall be based on geotechnical parameters obtained after a geotechnical investigation by a qualified geotechnical engineer.
- b. The wall shall be verified against the six ultimate limit states presented in New Zealand Building Code B1/VM4 and Module 6.
- c. The calculated safety factors from the verification process shall confirm to the requirements of the project based on the structure importance level and the recommendations of the geotechnical engineer.
- d. The verification of the wall shall be approved by a qualified chartered professional structural or geotechnical engineer.
- e. The global stability of the wall shall be verified by a qualified geotechnical engineer.

04 INSTALLATION

Wall:

- a. The Interbloc and Interbloc+ modular unit retaining wall system shall be constructed over compacted hardfill or other suitable subbase materials to ensure the construction of a vertical wall over a stable plan.
- b. Any unsuitable soil below the compacted hardfill must be removed subject to the recommendation of a qualified geotechnical engineer.
- c. No permanent structures other than the structures accounted for in the design process shall be constructed within proximity of the wall.
- d. Measures shall be taken to prevent the erosion of the passive soil layer in front of the wall toe if the passive pressure is to be deployed.

Backfill:

- a. The backfill shall be crushed non-rounded aggregates as recommended in section 7.1 of Module 6.
- b. The backfill shall consist of typically GAP20, or GAP40 drainage metal in 200mm compacted layers.
- c. No fines concrete can be used as backfill material if specified.

Backfill:

- a. For the purpose of filtration and separation, appropriate non-woven geotextile shall be installed as per manufacturer recommendations.
- b. The drainage system within the backfill shall be completed using appropriate subsoil drain with connection to approved discharge point on site.





+64 0800 468 375
www.envirocon.co.nz

At Envirocon, we lead the way in sustainable construction with our innovative precast concrete block system, designed to support the circular economy by transforming surplus concrete into durable, reusable building solutions.

As the country's first accredited construction product stewardship scheme, we create ultra-low embodied carbon products that can be reused, recycled, or repurposed at the end of their life, and our buyback guarantee keeps concrete in circulation and out of landfills.