



Ancon MBT ET Coupler and MBT Headed Anchor

Building Product Information Sheet

Ancon MBT ET Couplers and MBT Headed Anchors are for the mechanical connection of deformed steel reinforcing bars in concrete elements. They are manufactured from plain carbon steel and are available in sizes to suit common reinforcing bar diameters 12mm to 40mm. They are designed for use on concrete embedded reinforcing bar, repair or retrofit works.

MBT ET Couplers are for connecting reinforcing bars of the same diameter. The bars ends are supported within the coupler by two serrated saddles. Bars are locked in place by lockshear bolts, the heads of which shear off when the predetermined tightening torque is reached. Products are identified by reference to product code and bar size (e.g. MBT12C).

MBT Headed Anchors are for connecting to the end of a single reinforcing bar to provide anchorage in the concrete. They comprise half an MBT ET Coupler with a steel plate welded to one end which carries the tension load of the bar when it is bearing against the concrete. Products are identified by reference to product code and bar size (e.g. MBTHA12H).

Composition

- MBT ET Couplers and MBT Headed Anchors are manufactured from plain carbon steel.

Supporting documentation

- Full product details, including installation guidelines, are presented in supporting technical documentation. See: Ancon Reinforcing Bar Couplers and Anchors (New Zealand Edition). Available from: <https://www.ancon.co.nz/downloads/technical-literature>

Product Identifier

- MBT_ _C, MBTHA_ _H

Relevant Building Code clauses:

- Clause B1 Structure - B1.3.1, B1.3.2, B1.3.3, B1.3.4
- Clause B2 Durability - B2.3.1 (a)
- Clause F2 Hazardous Building Materials - F2.3.1

Contributions to Compliance:

Clause B1 Structure

- B1.3.1, B1.3.2, B1.3.3, B1.3.4.** The capacity of MBT ET Couplers has been independently tested to the requirements of NZS3101:2006 A3 using Grade 500E reinforcing bars manufactured to AS/NZS4671. The results demonstrate couplers in sizes **12mm to 20mm** meet all relevant requirements of NZS3101, including:
 - Clauses 8.6.11.1, 8.6.11.3 and 8.7.5.2 (a, b) — tensile strength and slip;
 - Clauses 8.6.11.1 and 8.7.5.2 (b) — coupler sleeve strength;
 - Clause 8.6.11.4 — material type and resistance to brittle fracture; and
 - Clause 8.9.1.3 — cyclic load performance.
- Testing demonstrates that couplers in sizes **25mm to 40mm** satisfy only some of the of the requirements of NZS3101, including:
 - Clause 8.7.5.2 (b) — slip;
 - Clauses 8.6.11.1 and 8.7.5.2 (b) — coupler sleeve strength; and
 - Clause 8.6.11.4 — material type and resistance to brittle fracture.
- MBT Headed Anchor performance is expected to align with the demonstrated performance of MBT ET Couplers of equivalent size.

Manufacturer and Importer Details:

Place of Manufacture:	Overseas
Manufacturer (1):	Leviat Limited, President Way, President Park, Sheffield S4 7UR, United Kingdom
Manufacturer (2):	Leviat Sdn Bhd, 28 Jalan Anggerik Mokara 31/59, Kota Kemuning, 40460 Shah Alam, Selangor, Malaysia
Importer Name:	Leviat New Zealand Limited
Importer Address:	246D James Fletcher Drive, Otahuhu, Auckland, 2024
Importer Website:	www.leviat.com/en-nz
Importer Email:	info.nz@leviat.com
Importer Phone:	+64 9 276 2236
Importer NZBN:	9429031339056

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- MBT ET Couplers and Headed Anchors have been tested to show compliance with several international standards, including ACI 318 and BS8597.

Clause B2 Durability

- **B2.3.1 (a).** MBT ET Couplers and MBT Headed Anchors will meet the provisions of B2.3.1 (a) of not less than 50 years subject to concrete cover and assessment of intended use (exposure conditions) and appropriate material specification by the responsible engineer.

Clause F2 Hazardous Building Materials

- **F2.3.1.** MBT ET Couplers and MBT Headed Anchors meet the performance requirements of F2.3.1.

Limitations on the use of the building product:

- MBT ET Couplers and MBT Headed Anchors in sizes 25mm to 40mm DO NOT satisfy all the strength, slip and seismic performance requirements of NZS3101.
- MBT ET Couplers and MBT Headed Anchors have been tested in New Zealand using reinforcing bars complying with AS/NZS4671, Grade 500E only. MBT Couplers have not been tested in New Zealand with other steel reinforcing materials and grades with different profiles, including ReidBar™.
- MBT ET Couplers and MBT Headed Anchors have not been tested for use in situations as presented in NZS3101, Clause 8.9.3.1(b) where high cycle fatigue is a consideration.

Design requirements to support appropriate use:

- MBT ET Couplers and MBT Headed Anchors shall be used subject to the specific engineering design of a Chartered Professional Engineer.
- Consideration must be shown to the size of the MBT ET Coupler or MBT Headed Anchor and their placement within the concrete element to ensure concrete cover to the requirements of NZS3101, Clause 3.11.3 is achieved.
- MBT ET Couplers and MBT Headed Anchors should not be located immediately adjacent to or in ductile or limited ductile plastic regions as stipulated in NZS3101, Clause 8.9.1.1(a).

Installation requirements:

- MBT ET Couplers and MBT Headed Anchors shall be installed by a competent manufacturer or contractor in accordance with Leviat technical documentation and the specific engineering design and guidance of a Chartered Professional Engineer.
- Installation guidelines are available in the supporting technical documentation.

Maintenance requirements:

- MBT ET Couplers and MBT Headed installed in concrete building elements will not normally require maintenance. However, remedial work on the concrete element will be required to restore integrity in those instances where concrete cover has been lost or compromised over time or through damage, or where there exists an elevated risk of corrosion resulting from the degradation or damage of sealants or other waterproofing measures used at construction joints or other vulnerable areas.

Warnings or ban:

- This product is not subject to any warning or ban under section 26 of the Building Act 2004