

## Producer Statement PS1 – BOWMAC® Screw Bolt M10 x 140mm

**ISSUED BY:** MiTek New Zealand Limited

**IN RESPECT OF:** BOWMAC® Screw Bolt M10 x 140mm

**DESCRIPTION:** BOWMAC® screw bolts M10 x 140mm are identified with blue hexagonal heads and a marking “BOWMAC” stamped on the head. They are manufactured from heat treated carbon steel with a nominal tensile strength  $f_u = 1000$  MPa and yield strength  $f_y = 900$  MPa. They have a nominal shank diameter of 10mm. The shank length is 140mm of which 95mm is threaded. They are protected with nominal zinc plating of 5 micron.

**USES:** Can be used as proprietary post fixed bottom plate anchor and in conjunction with GIB HandiBrac® for fixing proprietary bracing systems to concrete and timber floors.

**CHARACTERISTIC WITHDRAWAL STRENGTH:**

- 1) In Header Block Concrete = **20.4 kN**
- 2) In Timber 140x45 SG8 on edge = **12 kN**
- 3) Internal Rib Raft Slab 85mm thick = **19.8 kN** (*adjusted for 20 MPa concrete*)
- 4) Edge of Rib Raft Slab 35mm edge distance = **17.9 kN** (*adjusted for 20 MPa concrete*)

**REFERENCE TESTS:**

- 1) BRANZ Test Report ST0895 Proprietary Bottom Plate Anchor for MiTek New Zealand Limited 12-10-2012
- 2) MiTek NZ Test Report for BOWMAC® Screw Bolt in Timber Joist, December 2012
- 3) MiTek tests on Firth Rib Raft slab CH31755-1; 13/07/2022
- 4) MiTek tests on Firth Rib Raft slab CH31755-2; 13/07/2022

On behalf of MiTek New Zealand Limited and subject to:

**1) Fixing to concrete floor or concrete masonry header block**

- 1.1. Minimum concrete strength shall be 17.5 MPa
- 1.2. Minimum edge distance to centre of screw bolt shall be 55mm
- 1.3. Minimum embedment depth in concrete shall be 88mm
- 1.4. Drill 10mm diameter hole x 95mm minimum depth and clean out dust and debris
- 1.5. For 100mm slab apply silicone sealant to bottom of hole to prevent water ingress, or increase slab to 120mm minimum under bracing walls
- 1.6. In sea-spray zones, masonry header block shall be waterproofed/weather-proofed to the requirements of NZS4210:2001

**2) Fixing to timber floor**

- 2.1. Minimum timber grade shall be MSG8, VSG8 or SG8
- 2.2. Moisture content of timber joist shall be less than 18%
- 2.3. Minimum joist size shall be 140x45 mm on edge
- 2.4. Minimum embedment depth in joist shall be 66mm
- 2.5. Drill 8mm diameter hole x 74mm minimum depth near centreline of joist

**3) Fixing to Rib Raft Slab**

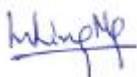
- 3.1. Minimum concrete strength shall be 20 MPa
- 3.2. Minimum edge distance to centre of screw bolt shall be 35mm
- 3.3. Minimum embedment depth in concrete edge shall be 88mm
- 3.4. Drill 10mm diameter hole x 95mm minimum depth into edge beams or ribs
- 3.5. For internal slab drill 10mm hole through slab
- 3.6. In sea-spray zones, external face of edge beams shall be waterproofed/weather-proofed

**4) General Requirements**

- 4.1. BOWMAC® screw bolts can be used in **ALL ZONES** in a “**Closed**” environment in accordance with Table 4.1 of NZS3604:2011
- 4.2. Installation shall be in accordance with the manufacturer’s technical literature “BOWMAC Bottom Plate Screw Bolt” and “GIB HandiBrac® Panel Hold-Down Bracket” brochure packed with product
- 4.3. All proprietary products meeting their performance specification requirements

I BELIEVE ON REASONABLE GROUNDS that the use of BOWMAC® screw bolts in buildings if constructed in accordance with the drawings, specifications, and other documents provided, will comply with Clause B1 and B2 of the NZ Building Code.

For and on behalf of MiTek New Zealand Limited



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