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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 10B21 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:
1) Proprietary post fixed bottom plate anchor.
2) In conjunction with GIB HandiBrac® for bracing system hold-down 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 = 17.5 MPa
1.2. Minimum edge distance to centre of screw bolt = 55mm
1.3. Minimum embedment depth in concrete = 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 to 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 or Waffle Slab
3.1. Minimum concrete strength = 20 MPa
3.2. Minimum concrete edge distance to centre of screw bolt = 35mm (from inside face of any edge insulation)
3.3. Minimum embedment depth in concrete edge = 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 (min. 85mm thick)
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 MiTek'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

In Ling Ng
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Date: 26 March 2025