

# Building Product Information Sheet

## Class 1

**Product Name:**

Thunderbolt Pro Tie - Down Anchor

**Date of Report:**

08 / 09 / 2023

**Product Line:**ICCONS ThunderBolt<sup>®</sup> SXTB**Product Description and its intended use:**

ICCONS Thunderbolt<sup>®</sup>PRO Tie-Down Anchor is the quickest and easiest way to provide uplift capacity for residential timber frame construction. The revolutionary hi-low cutting thread profile provides market leading tensile load performance for uplift applications. Installation is quick and easy, simply drill, clean the hole and screw in the anchor.

**Key technical specifications:**

- Product type: Tie-Down Anchor
- Finish options: Galvanised (40 microns minimum thickness)
- Material: High tensile Boron steel
- Internal thread: M12
- Head type: Hex head, oversized flanged head
- Anchor size, dimensions vary based on size, see document 'Thunderbolt Pro Tie Down Tech data Sheet' for the full specifications list, available in the link below:

[https://sestofasteners.co.nz/products/thunderbolt-pro-tie-down-anchor?\\_pos=2&\\_sid=1a420c7fb&\\_ss=r](https://sestofasteners.co.nz/products/thunderbolt-pro-tie-down-anchor?_pos=2&_sid=1a420c7fb&_ss=r)

**Product Identifier**ThunderBolt<sup>®</sup>Pro Tie-Down Anchor**Place of Manufacture:**

Overseas

**Manufacturer:**

ICCONS PTY LTD

**Importer:**

Sesto Fasteners Limited

Address: 5e Piermark Drive  
Rosedale, Auckland  
Postcode: 0632  
Website: [www.sestofasteners.co.nz](http://www.sestofasteners.co.nz)  
Email: [orders@sestofasteners.co.nz](mailto:orders@sestofasteners.co.nz)  
Phone: +64 94158564  
NZBN: 9429041704103

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## Relevant Building Code Clauses:

- B1 Structure: Performance clauses B1.1, B1.2, B1.3.1, B1.3.2, B1.3.3, B1.3.4
- B2 Durability: Performance clauses B2.2, B2.3.1(a), B2.3.2
- C6 Structural Stability (Fire Safety): Performance clauses C6.1, C6.2
- F2 Hazardous Building Materials: Performance clause F2.3.1

## Statement on how the building product is expected to contribute to compliance:

- B1 Structure: clauses B1.1, B1.2, B1.3.1, B1.3.2, B1.3.3, B1.3.4:
    - ICCONS Thunderbolt Pro-SXTB bolts comply with AS 5216:2021 (Design of post-installed and cast-in fastenings in concrete). Refer to document 'NCC FAQ' in link below for further information:  
<https://sestofasteners.co.nz/collections/screwbolts/products/screwbolt-hex-galv?variant=37578216538281>
    - ICCONS Thunderbolt Pro-SXTB bolts have been ETA assessed for cracked concrete and fire performance (ETA-18/0643). Refer to the ETA document 'ThunderBolt®PRO-XTB European Technical Assessment Approval' (dated 1 November 2018) in link below for further information:  
[https://sestofasteners.co.nz/products/screwbolt-csk-galv?\\_pos=1&\\_sid=ef5209877&\\_ss=r](https://sestofasteners.co.nz/products/screwbolt-csk-galv?_pos=1&_sid=ef5209877&_ss=r)
    - ICCONS Thunderbolt Pro-SXTB bolts are evaluated for their performance under C1 and C2 seismic categories. Fasteners seismically qualified under category C1 contain seismic tension and shear loads while fasteners qualified under category C2 contain seismic tension, shear and displacement information. Qualifications for C1/C2 ratings and ETA options for ICCONS Thunderbolt Pro-SXTB bolts are available depending on size. Refer to document 'ThunderBolt®PRO Catalogue' in the link below for the specific rating qualifications granted per part:  
<https://sestofasteners.co.nz/collections/screwbolts/products/screwbolt-hex-galv?variant=37578216538281>
    - The potential for hydrogen embrittlement corrosion has been controlled in the manufacturing process of the ThunderBolt®PRO-XTB, removing the risk of Hydrogen assisted corrosion cracking. Refer to document 'ThunderBolt®PRO-XTM Technical Information' in link below for further information:  
[https://sestofasteners.co.nz/products/screwbolt-csk-galv?\\_pos=1&\\_sid=ef5209877&\\_ss=r](https://sestofasteners.co.nz/products/screwbolt-csk-galv?_pos=1&_sid=ef5209877&_ss=r)
    - The ThunderBolt®PRO TieDown Anchor has been engineered to minimise expansive forces allowing the anchor to be used close to the concrete edge.
    - 10 Hardened Thread Cutting Teeth reduce installation torque and ensure deep thread formation in the hardest base materials.
    - 15° HI-LOW double lead thread has been optimised to provide fast installation while maintaining a high level of thread engagement
    - Asymmetric thread profile provides unparalleled “bite” in concrete.
    - Chamfered tip centres anchor and aids installation.
    - Underside of head features Anti-rotation design to resist loosening and improves Dynamic Load Performance.
    - Idea for close-to-edge applications due to minimal expansion force.
    - Oversized flanged head resists base plate pullover.
    - Tie-Down Anchor Uplift capacity: 20 MPa Concrete
    - Refer to document 'Thunderbolt Pro Tie Down Tech data Sheet' for full design specifications, available in the link below:  
[https://sestofasteners.co.nz/products/thunderbolt-pro-tie-down-anchor?\\_pos=2&\\_sid=1a420c7fb&\\_ss=r](https://sestofasteners.co.nz/products/thunderbolt-pro-tie-down-anchor?_pos=2&_sid=1a420c7fb&_ss=r)
  - B2 Durability: Performance clauses B2.2, B2.3.1(a), B2.3.2:
    - Available in galvanised finish for corrosion resistant applications.
    - Two-step heat treatment manufacturing process provides greater ductility and quick installation in all base material strengths (Heat Treated 1DB21).
    - Mechanically galvanised plating to 40 microns minimum thickness.
  - C6 Structural Stability (Fire Safety): Performance clauses C6.1, C6.2:
    - ICCONS Thunderbolt Pro-SXTB bolts have been ETA assessed for fire performance (ETA-188/0643). Refer to document 'ThunderBolt®PRO-XTM European Technical Assessment Approval' in link below for testing data (Table C6 and C7):  
<https://sestofasteners.co.nz/collections/screwbolts/products/screwbolt-hex-galv?variant=37578216538281>
  - F2 Hazardous Building Materials: Performance clause F2.3.1:
    - ICCONS Thunderbolt Pro-SXTB bolts are safe when handled.
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## Limitations on the use of the building product:

- Following AS1684-1999 a minimum 50 x 50 x 3.0mm washer to be used with ICCONS® ThunderBolt PRO Tie-Down Anchor. Published load capacities relate only to anchor performance and incorporate a strength reduction factor of  $\Phi=0.6$  for concrete.
- Refer to document 'Thunderbolt Pro Tie Down Tech data Sheet' for limitations of use, available in the link below:  
[https://sestofasteners.co.nz/products/thunderbolt-pro-tie-down-anchor?\\_pos=2&\\_sid=1a420c7fb&\\_ss=r](https://sestofasteners.co.nz/products/thunderbolt-pro-tie-down-anchor?_pos=2&_sid=1a420c7fb&_ss=r)
- Minimum concrete slab edge distances vary based on anchor size. Comply with the minimum concrete slab edge distances listed in the document above (page 2).
- Use the correct diameter drill bit, drill to the required anchor embedment depth plus at least one anchor diameter deeper.
- Ensure hole is drilled perpendicular to the concrete surface with maximum deviation of up to 5° degrees. Failure to do so may cause anchor breakage
- Clean dust and other material from the hole before installation.
- DO NOT use a worn drill bit outside of drill bit tolerance specification. Worn Drill bits will affect the anchor installation either during installation or post installation.
- When installing with an Impact screw gun do not exceed the recommended torque specifications, failure to comply may result in anchor breakage.
- When securing the screwbolt, do not over tighten and exceed the recommended clamping torque requirements, failure to comply may result in anchor breakage.
- ICCONS Thunderbolt PRO bolts cut a thread in the base material drilled hole during installation and do not require an installation torque setting to ensure proper installation.

## Design requirements that would support the use of the building product:

- ICCONS Thunderbolt Pro Tie-Down Anchors have been designed for use in the following applications:
    - Ideal for providing uplift capacity for residential timber frame construction.
    - Ideal for close-to-edge applications due to minimal expansion force.
  - Applicable base materials include:
    - Concrete
    - Brick
    - Block
    - Timber
    - Marble
    - Stone
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## Installation requirements:

Refer to documents 'Thunderbolt Pro Tie Down Tech data Sheet', 'Thunderbolt Clamping Torque Impact Driver Spec Sheet' for installation instructions, available in the link below:

[https://sestofasteners.co.nz/products/thunderbolt-pro-tie-down-anchor?\\_pos=2&\\_sid=1a420c7fb&\\_ss=r](https://sestofasteners.co.nz/products/thunderbolt-pro-tie-down-anchor?_pos=2&_sid=1a420c7fb&_ss=r)

- Suitable for installation with impact drivers.

Installation steps:

1. With the correct diameter drill bit, drill a hole to a depth of at least one diameter of the anchor deeper than the required embedment.
  2. Clean dust and other material from the hole.
  3. Install with either a socket or cordless impact driver. Apply pressure against the fixing and rotate to engage the first thread
  4. Continue to tighten the anchor until flanged head is firmly seated against fixture. Installation complete!
- Specific installation requirements such as baseplate thickness and embedment depth varies based on the size of tie-down anchor used. Refer to document 'Thunderbolt Pro Tie Down Tech data Sheet' in the link above for installation requirements per part.
  - Excessive torque during installation may damage the anchor. Training, expertise and good judgment is required. Always adhere to anchor installation max. impact torque tool settings.
  - Use the correct diameter drill bit.
  - DO NOT use a worn drill bit outside tolerance specification.
  - Ensure the hole is drilled perpendicular to the concrete, with a maximum deviation up to 5 degrees. Failure to do so may cause anchor breakage.
  - Clean dust and other materials from the hole. Use ICCONS Blow Pump for a perfect result.
  - Use a torque wrench or an impact driver
  - Ensure correct clearance hole in the fixture
  - Apply pressure against the fixing
  - Rotate to engage the first thread
  - Tighten the anchor until it is firmly seated
  - When using an impact driver DO NOT overtighten! Follow the torque guidance table, failure to comply may result in anchor breakage. Refer to ICCONS TDS for further information, available in the link below:  
<https://www.iccons.com.au/support/downloads?type=tech>

## Maintenance requirements:

N/A, no on-going maintenance required.

## Is the building product subject to warning or ban under section 26?:

No

