



SD Aluminium Structural Bolts & Screw Range

Designated Building Product - Class 1
BPIR Declaration - V1. 08.2025

Declaration

SD Aluminium Limited has prepared this declaration to meet the requirements of Schedule 1(d) of the Building (Building Product Information Requirements) Regulations 2022.

This declaration applies to the [Structural Bolts & Screws Range](#) as a designated building product, Class 1.

It confirms that the information provided is based on our technical documentation, manufacturing processes, and supporting evidence, and is, to the best of our knowledge, accurate and complete at the time of publication.

Product / System

- Name* - **SD Aluminium Structural Bolts & Screws Range**
Identifier - Coach Screws, Coach Bolts & Nuts, Engineering Bolts & Nuts, Full Thread Bolts, Through Bolts (with Nuts & Washers), Hex Nuts / Self-lock Nuts, Threaded Rods
Line -

Description

The SD Aluminium Structural Bolts & Screws range comprises high-strength fasteners for load-bearing and structural applications. This group includes:

- Coach Screws
- Coach Bolts & Nuts
- Engineering Bolts & Nuts
- Full Thread Bolt
- Through Bolts (with Nuts & Washers)
- Hex Nuts / Self-lock Nuts / Hex Nut
- Threaded Rod

Manufactured from hot-dip galvanised steel for corrosion resistance, these fasteners offer high pull-out strength and vibration resistance. Their designs allow for efficient installation, with options for quick-setting expansion mechanisms or direct-thread engagement into the masonry.

Size Range

- **Coach Screws** - Dia: M6-M12, Length: 50mm - 300mm
- **Coach Bolts & Nuts** - Dia: M10-M12, Length: 50mm - 400mm
- **Engineering Bolts & Nuts** - Dia: M10-M16, Length: 30mm - 300mm
- **Full Thread Bolt** - Dia: M8-M10, Length: 20mm - 25mm
- **Through Bolts (with Nuts & Washers)** - Dia: M10-M16, Length: 60mm - 230mm
- **Hex Nuts / Self-lock Nuts / Hex Nut** - Dia: M6-M20
- **Threaded Rod** - Dia: M6-M24, Length: 1000mm



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Scope Of Use

The SD Aluminium Structural Bolts & Screws range is suitable for structural and general-purpose fastening where a secure, high-strength connection is required. This group includes coach screws, coach bolts & nuts, engineering bolts & nuts, full thread bolts, through bolts with nuts & washers, hex nuts, self-lock nuts, and threaded rods.

Applications include:

- *Timber framing and structural bracing.*
- *Fixing heavy timber posts, beams, or ledgers to timber or steel.*
- *Attaching steel plates, brackets, or other hardware to structural members.*
- *Assembling steel frameworks, machinery, and heavy-duty platforms.*
- *Civil and industrial structures including bridges, retaining walls, and equipment mounting.*

They are suitable for use in dry interior, exterior, and exposed coastal environments when the material and coating are selected appropriately:

- *Stainless Steel 304 – General exterior use in non-coastal environments.*
- *Stainless Steel 316 – Harsh and coastal environments requiring maximum corrosion resistance.*
- *Hot-Dip Galvanised Steel – General exterior use; avoid prolonged exposure to saltwater spray.*

Installations, Conditions of Use, and Limitations

- All fasteners must be installed into structurally sound timber, steel, or other suitable substrates capable of withstanding the design loads for the intended application.
- For coach screws, drill pilot holes to the manufacturer's recommended diameter to prevent timber splitting and ensure correct thread engagement.
- For bolts, through bolts, and threaded rods, use correctly sized washers and nuts to distribute load evenly and prevent embedment.
- Tighten using suitable tools (wrench, socket, or spanner) and apply torque according to specifications to avoid over-tightening or thread damage.
- Select material grade and coating to match environmental exposure zone and required service life.
- Avoid direct contact with incompatible metals that may cause galvanic corrosion; if unavoidable, use barriers such as nylon washers, sealants, or protective coatings.
- Over-torquing may strip threads, damage substrates, or reduce holding capacity.
- Standard galvanised products are not recommended for severe marine or highly corrosive environments without additional protection.
- Any cutting of galvanised or stainless bolts/rods must be followed by application of corrosion protection to the exposed ends.



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Relevant Building Code Clauses

B1	Structure	<i>B1.3.1, B1.3.2, B1.3.3(c, f, h, j, m), B1.3.4</i>
B2	Durability	<i>B2.3.1(a), B2.3.2(a, b)</i>
F2	Hazardous Building Material	<i>F2.3.1, F2.3.3</i>

Contributions To Compliance

The SD Aluminium Fastener range contributes to compliance with the following New Zealand Building Code (NZBC) clauses, when installed in accordance with manufacturer instructions and good trade practice:

- *B1 Structure – Provides secure mechanical fixing between timber, steel, masonry, and composite materials. Correct fastener selection and installation ensures the building elements remain stable under expected loads including wind and seismic actions.*
- *B2 Durability – Fasteners are manufactured from galvanised steel, stainless steel, or zinc-coated steel, with optional specialty coatings. When appropriately selected for the environment (interior, exterior, or coastal), the fasteners will remain durable for the minimum 50-year (structural) or 15-year (non-structural) building life as required by the NZBC.*
- *F2 Hazardous Building Materials – Fasteners are made from materials that do not present a health hazard when used as intended.*

Further technical information to support compliance is available from SD Aluminium upon request.

Maintenance Requirements

- To ensure long-term performance and compliance with the intended use, all fasteners should be:
- Inspected periodically – at least once every 12 months for interior applications and every 6 months for exterior, coastal, or industrial environments. Look for signs of corrosion, loosening, wear, or mechanical damage.
- Cleaned regularly – remove dirt, salt deposits, and other contaminants with fresh water and a soft brush. In marine or industrial areas, rinse every 1–3 months to reduce corrosion risk. Avoid harsh abrasives or acidic cleaners.
- Retightened when necessary – check and tighten fixings to the correct torque, ensuring threads are not stripped and substrates are not damaged.
- Protected from dissimilar metals – avoid direct contact with incompatible metals that may cause galvanic corrosion. Where unavoidable, use a suitable barrier such as nylon washers, sealants, or protective coatings.
- Repaired or replaced immediately – if the fastener shows significant corrosion, distortion, head damage, or thread wear, it must be replaced with an equivalent or higher-grade product.
- Maintained after building work – following construction or renovation, clean off all swarf, concrete splatter, and debris to prevent localised corrosion.
- Protected from aggressive environments – for installations near swimming pools, fertiliser storage, or chemical plants, additional cleaning and protective coatings may be required.
- Documented – for critical structural applications, keep a maintenance record including inspection dates, actions taken, and replacement details.



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Company Information

Legal name of the manufacturer: SD Aluminium Ltd
Manufacture location: New Zealand
Manufacture address for service: 6 John Glenn Avenue, Rosedale, Auckland 0632
Manufacturer NZBN: 9429047563094
Manufacture website: www.sdaluminum.co.nz/



Branch Locations & Contact Details

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