



*Make it better*

# Building Product Information

## Structural Timber

### Manufacturer:

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Class 1 : Building Product Information

New Zealand Structural Timber Version: RS2023-1, September 2023

**Declaration:** Red Stag Timber Limited provide this declaration to satisfy the provisions of Schedule 1 of the **Building (Building Product Information Requirements) Regulations 2022**.

### Product and intended use – Radiata Pine and Douglas Fir

Timber produced from solid wood used in building and construction.

Structural timbers are commonly referred to as studs, bottom and top plates, joists, bearers, rafters, purlins, beams and lintels according to their application and use in a building. Examples of typical uses of structural timber are:

- 1 exterior and interior wall framing
- 2 roof trusses
- 3 sub floor and mid floor framing
- 4 deck sub frames.

Structural timbers are available in a range of conditions and sizes the most common being:

**Grade:** SG6, SG8, SG10 and SG12 - the most common grade used in construction is SG8, grade refers to timber strength and stiffness.

**Hazard class:** H1.2, H3.1, H3.2 - the most common hazard class for structural timber is H1.2 timber used in situations protected from the weather such as wall framing. H3.2 timber can be used as bottom plates.

**Moisture content:** structural timber is normally kiln dried to 16% but ambient conditions in use will cause variations from this.

**Surface:** structural timber is available as rough sawn or planer gauged. Dimensions (actual): standard dimensions of kiln dried gauged structural timber are: face: 45, 70, 90, 140, 190, 240, 290mm / edge: 20, 35, 45, 70, 90mm / standard dimensions for rough sawn (ungauged) structural timber are: face: 25, 50, 75, 100, 125, 150, 175, 200, 250, 300mm (350mm may be available) edge: 25, 50, 75, 100, 125mm (150mm may be available) Standard structural timber lengths: 2.4m to 6.0m in increments of 0.3m. Non-standard lengths may be available on special order.

### Product identifier

Each piece is stamped at 1.5m intervals with (1) "Red Stag Timber" logo, (2) the SG grade, the grading standard, the grading third party auditor's logo, (3) the treatment plant number, the preservation number, the Hazard Class, and the preservation third party auditor's logo.

### Relevant building code clauses

B1 Structure – By testing and comparison with Acceptable Solution B1/AS1 and verification methods (VM) as specified in NZS3622:2004 Verification of timber properties.

B2 Durability – By testing and comparison with Acceptable Solution B2/AS1 and verification methods (VM) as specified in AS/NZS1604:2021 Preservative treated wood-based products.



### Contribution to compliance

**B1 Structure** - the products shall meet the requirements of Clause B1 of the Building Regulations 1992, Schedule 1 the Building Code in particular clauses B1.1, B1.2, B1.3.1, B1.3.2, B1.3.3 and B1.3.4. B1.1 - safeguarding people from injury and loss of amenity and protection of other property. B1.2 - functional requirements of buildings throughout their lives. B1.3.1 - low probability when used in a building in accordance with NZS3604.2011 Timber framed buildings or NZS/AS1720 Part 1.2022 Timber structures of rupturing, becoming unstable, losing equilibrium or collapsing throughout their lives.

B1.3.1 - low probability when used in a building in accordance with NZS3604.2011 Timber framed buildings or NZS/AS1720 Part 1.2022 Timber structures of rupturing, becoming unstable, losing equilibrium or collapsing throughout their lives. B1.3.2 - low probability when used in accordance with NZS3604.2011 Timber framed buildings or NZS/AS1720 Part 1.2022 Timber structures of causing loss of amenity through undue deformation, vibratory response, degradation or other physical characteristics throughout their lives when the building is in use. B1.3.3 - when used in accordance with NZS3604.2011 Timber framed buildings or NZS/AS1720 Part 1.2022 Timber structures, account is taken of all the physical conditions that are likely to affect the stability of the building element or building. B1.3.4 - when used in accordance with NZS3604.2011 Timber framed buildings or NZS/AS1720 Part 1.2022 Timber structures, allowance is made for: i consequences of failure / ii intended use of the building / iii variation in the properties of materials and site characteristics / iv accuracy limitations inherent in methods used to predict the stability of buildings. For greater detail refer to Clause B2.3.1 of the Building Regulations 1992. When preservative treated to the specifications set out in AS/NZS1604.2021 Preservative treated wood-based products structural timber of NZ Radiata pine or Douglas fir will comply with B2 Durability requirements.

**B2 Durability** – structural timber shall meet the requirements of Clause B2 of the Building Regulations 1992, Schedule 1 of the Building Code, specifically to the building elements having, with normal maintenance, to continue to satisfy the performance requirements of the Building Code. In particular clauses: B2.3.1(a) - the life of the building, being not less than 50 years. B2.3.1(b) - 15 years in some circumstances where building elements are moderately difficult to access or replace. B2.3.1(c) - 5 years in some circumstances where elements are easy to access and replace. For greater detail refer to Clause B2.3.1 of the Building Regulations 1992. When preservative treated to the specifications set out in AS/NZS1604.2021 Preservative treated wood-based products structural timber of NZ Radiata pine or Douglas fir will comply with B2 Durability requirements.

### Building product limitations

1 Structural timber treated to H1.2 should not be used where it will be exposed to the outdoor environment. 2 Structural timber should not be used where it will be subject to loadings that are above design limits as specified in NZS3604.2011 Timber framed buildings or NZS/AS1720 Part 1.2022 Timber structures.

### Design requirements

When used in construction, particularly work deemed to be Restricted Building Work (RBW) as defined in the Building (Definition of Restricted Building Work) Order 2011 it's use should be in accordance with the specifications set out in NZS3604.2011 Timber framed buildings or NZS/AS1720 Part 1.2022 Timber structures.

### Installation requirements

When used in Restricted Building Work as defined in the Building (Definition of Restricted Building Work) Order 2011 Structural timber must be installed by a Licensed Building Practitioner with appropriate certification.

### Maintenance requirements

Ensure that structural timber, particularly timber treated to H1.2, is not exposed to continuous wetting or subject to high levels of moisture especially when used in applications that are hidden from clear view or are not readily accessible for regular inspection. For advice on maintenance please visit: <https://www.redstagtimber.co.nz/products/new-zealand-products/technical-information/timber-briefs/>

### Warnings or bans under section 26 of the Building Act 2004

Structural timber is not subject to a warning or ban in terms of S26 of the Building Act 2004.