



SPEEDFLOOR

Faster Lighter Easier

Durability

‘When supplied and installed in accordance with the manufacturer's specifications and design parameters, the Speedfloor steel joist system can reasonably be expected to meet the performance criteria set out in clause B2, Durability of the New Zealand Building Code for a period of not less than 50 years.’

The durability of a galvanized coating is dependent on the thickness of the zinc coating, the general environment and the level of maintenance carried out over the life of the product. Consideration must be given of these factors when specifying Speedfloor to determine the longevity the structural solution.

Reference and use of the attached NZ Steel Durability Statement is available for users of the Speedfloor steel joist system.

If any doubt exists on the suitability of Speedfloor in a corrosive zone, approval should be sought in writing, as Speedfloor accepts no liability for the product other than when used in accordance with the manufacturer’s specification. Further clarification of protective coatings and corrosivity zones should be sought from AS/NZS 2312:2002 and HERA Report R4 -133:2005.



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Axxis® durability statement



DURABILITY STATEMENT

Axxis® steel for framing

Axxis® steel used for framing will have a durability of 50 years when used and maintained as referred to below.

Scope: Residential and similar types of construction (including fully enclosed offices, apartment buildings and school classrooms) erected in New Zealand with a minimum 50 year design life.

Axxis® steel for framing used for wall framing, roof framing and mid floors within a closed building envelope will achieve the 50 year durability requirement of New Zealand Building Code Clause B2 Durability when it is located in a lined dry internal environment, with an effective thermal break used with roof and wall frames in accordance with NASH N11 House Insulation Guide.

All other applications including sub-floor framing, battens, purlins and girts are excluded from this Durability Statement and are covered by the Galvsteel™ (galvanised steel) Durability Statement available on request from New Zealand Steel.

This Durability Statement does not apply to any composite wall or composite roof systems whether or not the system includes AXXIS® steel. Composite systems include AXXIS® steel embedded into concrete panels.

The above statements are subject to the following:

1. Specifications

Zinc coating weight;	275g/m ² (Z275).
Complying with;	AS 1397:2011.
Steel grade;	G250, G300, G450, G500 and G550.
Steel thickness range;	0.55mm to 1.55mm.
Bend diameter;	G250 & G300 ≥2T G450, G500 & G550 ≥8T (where T = total coated thickness).

2. Fixing, Handling and Maintenance according to the following publications:

- a) New Zealand Steel Limited, *Specifiers and Builders Guide*, and *Installers Guide* (refer www.nzsteel.co.nz for most current version).
- b) *NZ Metal Roof & Wall Cladding, Code of Practice*, (refer www.metalroofing.org.nz for most current version and updates).
- c) Instructions and literature published by individual purlin and steel framing manufacturers.
- d) NASH Handbook Best Practice for Design and Construction of Residential and Low-Rise Steel Framing
- e) NASH N11 House Insulation Guide. - Version 2.2 – April 2012.



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3. Additional Fixing, Handling and Design Requirements.

- a) The bottom plate detail must ensure that the bottom plate remains dry in service and is not subject to water ingress from internal or external sources. Damp-proof course (DPC) must be used and be at least 10mm wider than the steel building element.
- b) Separation methods as described in the NZMRM Code of Practice 2.7 are required between AXXIS® steel and any incompatible materials which include, but are not limited to, timber treated with copper based preservative, concrete, copper and other dissimilar metals and also materials which may be moisture bearing during the life of the building.
- c) Site storage conditions must ensure that the Axxis® steel for framing is kept dry when in a stacked condition and must be free of corrosion prior to installation.
- d) Prior to installation of external and internal linings AXXIS® steel for framing must be clean, dry, corrosion free, clear of debris and swarf.
- e) During storage and erection the Axxis® steel for Framing must be kept as dry as possible and the building closed in as soon as practicable to limit exposure to the elements. (As a guide, this should be within 3 weeks in marine or geothermal environments and within 12 weeks in moderate environments.)
- f) AXXIS® steel used in frames must be carried and not dragged when being moved.
- g) AXXIS® steel must not be exposed to spatter from any welding activity.
- h) Wall wraps and roof underlays must comply with the requirements of NZS2295:2006 *Pliable, permeable building underlays* for use with steel framing.

4. Maintenance

Regular inspections of accessible AXXIS® steel roof framing must be carried out and at the first sign of a breakdown of the galvanising coating, maintenance undertaken as described below will extend the durability of the sections.

Maintenance is necessary when the galvanised coating ceases to provide sacrificial protection to the steel base, or where the appearance is no longer aesthetically acceptable.

Rust staining or the growth of rust spots usually indicates the breakdown of galvanised coating. Where accessible, at the first sign of breakdown, the surface should be treated with an appropriate maintenance coating system. All maintenance should be carried out in accordance with AS/NZS 2312:2002 (Incorporating Amendment No. 1) [a] and HERA Report R4-133:2005 [b].

5. Alternative building types

Where AXXIS® steel for framing is used for building types not covered in the scope of this document, refer to New Zealand Steel for the Galvsteel™ Durability Statement.

6. Contacting New Zealand Steel

It is important you contact the Technical Manager at New Zealand Steel on 0800 100 523 if you require specialist advice, clarification or assessment in relation to the use of AXXIS® steel for framing within the scope of this Durability Statement. If you believe there is an issue with the durability of AXXIS® steel used for a project within the scope of this Durability Statement, you must advise New Zealand Steel as soon as you become aware of the issue and before proceeding with any project still under construction.

7. References

- a) AS/NZS 2312:2002 (Inc Incorporating Amendment No. 1), *Guide to the protection of structural steel against atmospheric corrosion by the use of protective coatings*.
- b) Clifton, G.C. and El Sarraf, R. *New Zealand Steelwork Corrosion Coatings Guide* (HERA Report R4-133) 2011.
- c) Compliance Document for New Zealand Building Code – Clause E2 – External Moisture
- d) NZS2295:2006 *Pliable, permeable building underlays*
- e) NZMRM Code of Practice Version 2.



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Disclaimer

With New Zealand Steel Limited's commitment to continuous improvement, information provided in this Durability Statement may be subject to modification. At the time of publication we believe the information contained in this document is the best available. Nonetheless, we reserve the right to modify any product, technique equipment or statement to reflect improvements in the manufacture and application of AXXIS® steel for framing. The information is supplied without prejudice to New Zealand Steel Limited's standard terms and conditions of sale. In the event of any conflict between this information and the standard terms and conditions, the standard terms and conditions shall prevail.

This edition of the AXXIS® steel for framing Durability Statement supersedes all previous editions. It is important to check you have the latest edition of the Durability Statement by referring to www.axxis.co.nz or contacting New Zealand Steel Limited on 0800 100 523.

Axxis® is a registered trademark of New Zealand Steel Limited

May 2012 (replaces March 2011 version)

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8. Product Declaration by frame supplier

I certify that AXXIS® steel by New Zealand Steel has been used to manufacture the framing for the following project;	
Project name;	
Site address;	
Supplier business name;	
Supplier business address;	
Coil numbers of material used on job;	
Date Axxis® steel was delivered to site.	
Name (authorised supplier representative);	
Signed (authorised supplier representative);	
Date;	