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## AS 1684.2–2010

Residential timber-framed construction (Incorporating Amendment Nos 1 and 2)

Part 2: Non-Cyclonic Areas



This Australian Standard® was prepared by Committee TM-002, Timber Framing. It was approved on behalf of the Council of Standards Australia on 21 December 2009. This Standard was published on 21 June 2010.

The following are represented on Committee TM-002:

- A3P
- Association of Consulting Engineers, Australia
- Australian Building Codes Board
- Australian Institute of Building
- Building Research Association of New Zealand
- CSIRO Manufacturing and Infrastructures Technology
- Engineered Wood Products Association of Australasia
- Engineers Australia
- Forest Industries Federation (WA)
- Frame and Truss Manufacturers Association Australia
- Housing Industry Association
- Master Builders, Australia
- New Zealand Timber Industry Federation
- Scion
- South Australian Housing Trust
- Timber and Building Materials Association, NSW
- Timber Development Association, NSW
- Timber Queensland

Additional Interests:

• Mr Peter Juniper

This Standard was issued in draft form for comment as DR AS 1684.2.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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AS 1684.2—2010 (Incorporating Amendment Nos 1 and 2)

Australian Standard<sup>®</sup>

## **Residential timber-framed construction**

# Part 2: Non-cyclonic areas

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#### PREFACE

This Standard was prepared by the Joint Standards Australian/Standards New Zealand Committee TM-002, Timber Framing, to supersede AS 1684.2—2006.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

This Standard incorporates Amendment No. 1 (June 2012) and Amendment No. 2 (October 2013). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

The objective of this Standard is to provide the building industry with procedures that can be used to determine building practice, to design or check construction details, and to determine member sizes, and bracing and fixing requirements for timber-framed construction in non-cyclonic areas.

The objectives of this revision are to—

- (a) include editorial amendments and some technical changes to correct mistakes, clarify interpretation and enhance the application of the document;
- (b) incorporate the outcomes of recent research projects that considered the role and function of wall noggings (Clause 6.2.1.5) and alternative simplified tie-down systems for higher wind areas in particular using ring beam construction methods;
- (c) include information on generic building practices for EWPs (engineered wood products), which are being widely used in timber-framed construction (see Appendix J); and
- (d) provide some adjustments to the span table values in the Supplements for stress grades MGP 10, MGP 12 and MGP 15 in response to changes to the design characteristic values for these stress grades in AS 1720.1.

NOTE: These adjustments have been made recognizing that MGP stress grades represent the major product usage in the marketplace. Further work is required to assess and more fully respond to existing and expected changes to the related loading, design, and design criteria Standards, and this may result in a future revision of Span Tables in the Supplements for all stress grades.

This Standard is a companion publication to the following:

AS

1684 Residential timber-framed construction

1684.1	Part 1:	Design criteria
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1684.3 Part 3: Cyclonic areas

1684.4 Part 4: Simplified—Non-cyclonic areas

This Standard provides detailed design, bracing and connection procedures for wind classifications N1 to N4.

Prior to using this Standard, it is necessary to establish the design gust wind speed and wind classification (see Clause 1.4.2).

Alternatively, for wind classifications N1 and N2, AS 1684.4 provides a simpler set of design solutions derived from this Standard. It should be noted that a more economical design may be obtained by following the design procedures given in this Standard.

It should also be noted that AS 1684.4 includes additional differences to AS 1684.2 and 1684.3.

The following Supplements form an integral part of, and must be used in conjunction with, this Standard:

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Supplement 0	General introduction and index
N1/N2 Supp. 1	Wind classification N1/N2—Seasoned softwood—Stress grade F5
N1/N2 Supp. 2	Wind classification N1/N2—Seasoned softwood—Stress grade F7
N1/N2 Supp. 3	Wind classification N1/N2—Seasoned softwood—Stress grade F8
N1/N2 Supp. 4	Wind classification N1/N2—Seasoned softwood—Stress grade MGP 10
	Wind classification N1/N2—Seasoned softwood—Stress grade MGP 12
	Wind classification N1/N2—Seasoned softwood—Stress grade MGP 15
	Wind classification N1/N2—WA seasoned hardwood—Stress grade F14
	Wind classification N1/N2—Seasoned hardwood—Stress grade F17
	Wind classification N1/N2—Seasoned hardwood—Stress grade F27
	Wind classification N1/N2—Unseasoned softwood—Stress grade F5
	Wind classification N1/N2—Unseasoned softwood—Stress grade F7
	Wind classification N1/N2—Unseasoned hardwood—Stress grade F8
	Wind classification N1/N2—Unseasoned hardwood—Stress grade F11
	Wind classification N1/N2—Unseasoned hardwood—Stress grade F14
	Wind classification N1/N2—Unseasoned hardwood—Stress grade F17
	Wind classification N3—Seasoned softwood—Stress grade F5
· •	Wind classification N3—Seasoned softwood—Stress grade F7
11	Wind classification N3—Seasoned softwood—Stress grade F8
	Wind classification N3—Seasoned softwood—Stress grade MGP 10
	Wind classification N3—Seasoned softwood—Stress grade MGP 12
11	Wind classification N3—Seasoned softwood—Stress grade MGP 12
11	Wind classification N3—WA seasoned hardwood—Stress grade F14
	Wind classification N3—Seasoned hardwood—Stress grade F17
	Wind classification N3—Seasoned hardwood—Stress grade F27
	Wind classification N3—Unseasoned softwood—Stress grade F5
	Wind classification N3—Unseasoned softwood—Stress grade F7
	Wind classification N3—Unseasoned hardwood—Stress grade F8
· •	Wind classification N3—Unseasoned hardwood—Stress grade F11
	Wind classification N3—Unseasoned hardwood—Stress grade F14
	Wind classification N3—Unseasoned hardwood—Stress grade F17
N4 Supp. 1	Wind classification N4—Seasoned softwood—Stress grade F5
• •	Wind classification N4—Seasoned softwood—Stress grade F7
N4 Supp. 2 N4 Supp. 3	Wind classification N4—Seasoned softwood—Stress grade F8
	Wind classification N4—Seasoned softwood—Stress grade NGP 10
	Wind classification N4—Seasoned softwood—Stress grade MGP 12
	Wind classification N4—Seasoned softwood—Stress grade MGP 12 Wind classification N4—Seasoned softwood—Stress grade MGP 15
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N4 Supp. 8	
N4 Supp. 9	
	Wind classification N4—Unseasoned softwood—Stress grade F5 Wind classification N4—Unseasoned softwood —Stress grade F7
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N4 Supp. 13	
	Wind classification N4—Unseasoned hardwood—Stress grade F14
N4 Supp. 15	Wind classification N4—Unseasoned hardwood—Stress grade F17

Span tables in Supplements for unseasoned hardwood F8 and F11 may be used for unseasoned F8 and F11 softwood as well.

A CD-ROM, which contains the above Supplements, is attached to this Standard.



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