

New Zealand Standard

Materials and construction for earth buildings

Superseding NZS 4298:1998

NZS 4298:2020

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COMMITTEE REPRESENTATION

This standard was prepared by the P4297-99 Earth Buildings Committee. The membership of the committee was approved by the New Zealand Standards Approval Board and appointed by the New Zealand Standards Executive under the Standards and Accreditation Act 2015.

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The 'pressure spray test' (see Appendix K) is an empirical one developed by the former National Building Technology Centre now CSIRO (Commonwealth Scientific and Industrial Research Organisation – Australia).

The 'cyclic wet/dry appraisal test' (see Appendix L) was developed by Peter Yttrup and students at Deakin University, Geelong, Victoria, Australia.

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New Zealand Standard

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NOTES

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RELATED DOCUMENTS

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New Zealand standards

NZS 3109:1997 Concrete construction NZS 3124:1987 Specification for concrete construction for minor works NZS 3603:1993 Timber structures standard NZS 3604:2011 Timber-framed buildings NZS 4210:2001 Masonry construction: Materials and workmanship NZS 4251:- - - -Solid plastering Part 1:2007 Cement plasters for walls, ceilings and soffits NZS 4297:2020 Engineering design of earth building NZS 4299:2020 Earth buildings not requiring special engineering design NZS 4402:- - - -Methods of testing soils for civil engineering purposes -Soil compaction tests - Determination of the dry density/ water content relationship Test 4.1.1:1986 New Zealand standard compaction test NZS 7601:1978 Specification for polyethylene pipe (Type 3) for cold water services

Joint Australian/New Zealand standards

AS/NZS 1170:- - - - Structural design actions
Part 0:2002 General principles

AS/NZS 1547:2012 On-site domestic wastewater management

AS/NZS 2053:- - - - Conduits and fittings for electrical installations - Part 1:2001 General requirements (Reconfirmed 2016)

AS/NZS 4671:2001 Steel reinforcing materials

Australian standard

AS 3700:2018 Masonry structures

British standard

BS EN ISO 10319:2015 Geosynthetics – Wide width tensile test

Other publications

Acceptable Solutions and Verification Methods For New Zealand Building Code Clause B1 Structure; Clause B2 Durability; Clauses C1 to C6 Protection from fire; Clause E1 Surface water; Clause E2 External moisture; Clause E3 Internal moisture; and Clause H1 Energy efficiency, Ministry of Business, Innovation and Employment, 2019.

Guelberth, CR, and Chiras, D. *The Natural Plaster Book*. USA: New Society Publishers, 2003.

Middleton, G F, revised by Schneider, L. CSIRO Bulletin 5: *Earth-Wall Construction*. Fourth Edition, 1987.

Moisture Properties of Plaster and Stucco for Strawbale Buildings https://tallerconco.org/wp-content/uploads/2017/05/Straube_Moisture_Tests.pdf.

Ofverbeck, P. 'Ofverbeck Power Method: Small Sample Control and Structural Safety', Rep.TVBK-3009, Division of Structural Engineering, Lund Institute of Technology, Lund, Sweden. As reported by Hunt, R D, and Bryant A H 'Statistical Implications of Methods of Finding Characteristic Strengths', *Journal of Structural Engineering*, Vol.122 No.2, Feb. 1996, pp. 202 – 209.

Weismann, A, and Bryce K. Using Natural Finishes: Lime and Clay Based Plasters, Renders and Paints – a Step-by-Step Guide. UK: Green Books, 2008.

New Zealand legislation

Building Act 2004

New Zealand Building Code

LATEST REVISIONS

The users of this standard should ensure that their copies of the above-mentioned New Zealand standards are the latest revisions. Amendments to referenced New Zealand and Joint Australian/New Zealand standards can be found on www.standards.govt.nz.

REVIEW OF STANDARDS

Suggestions for improvement of this standard will be welcomed. They should be sent to the Manager, Standards New Zealand, PO Box 1473, Wellington 6140.