AS/NZS 4013:2025

STANDARDS NEW ZEALAND
TE MANA TAUTIKANGA O AOTEAROA

STANDARDS Australia

Australian/New Zealand Standard™

Domestic solid fuel burning appliances — Method for determination of flue gas emission

AS/NZS 4013:2025

This Joint Australian/New Zealand Standard™ was prepared by Joint Technical Committee CS-062, Solid Fuel Burning Appliances. It was approved on behalf of Standards Australia's Standards Development and Accreditation Committee on 26 May 2025 and by the New Zealand Standards Approval Board on 04 June 2025.

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The following are represented on Committee CS-062:

Applied Research Services (Testing Interests New Zealand)
Australasian Fire and Emergency Service Authorities Council
Australian Building Codes Board
Australian Chamber of Commerce and Industry
Australian Forest Products Association
Australian Home Heating Association
Australian Industry Group
Australian Solid Fuel Testing (Testing Interests Australia)
Building System Performance, Ministry of Business, Innovation and Employment
Clean Air Society of Australia & New Zealand
Department of Energy, Climate Change, the Environment and Water (NSW)
Department of Water and Environmental Regulation (WA)
Employers And Manufacturers Association New Zealand
Energy Efficiency & Conservation Authority of New Zealand
Environment, Planning and Sustainable Development Directorate (ACT)
Firewood Association of Australia
Ministry for the Environment New Zealand
National Association of Testing Authorities Australia
National Retail Association Australia
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Australian/New Zealand Standard™

Domestic solid fuel burning appliances — Method for determination of flue gas emission

First published in Australia as AS 4013—1992.
First published in New Zealand as NZS 7403:1992.
Previous edition AS/NZS 4013:2014.
Third edition 2025.

How to read this Standard

This page explains the meaning of the language and structure of this Standard.

Refer to Standards Australia's Standardisation Guide 006 for more details about drafting rules.

Australian and Australian/New Zealand Standards are voluntary unless they are referenced in legislation or called up in contracts.

Requirements

To conform to a Standard, all requirements in the Standard need to be met.

A requirement is any statement in the Standard which uses the word "shall".

Recommendations, permissions and possibilities

The following words are commonly used in Standards, but statements using them do not have to be followed to conform to the Standard:

(a) "should" means that something is recommended.

(b) "may" means that something is permitted.

(c) "can" means that something is possible.

Structure of Standards

A Standard always has the following parts:

(i) The Preface states who developed the Standard, what the Standard is aiming to do, and how it relates to other documents.

(ii) The Scope states what the Standard is about, what it covers and what it does not cover.

(iii) The Normative references clause lists other documents that are referenced in the Standard as part of requirements.

(iv) The Terms and definitions clause defines important terms to help with understanding the Standard.

A Standard may also include other parts, such as the following:

(1) A normative appendix sets additional requirements that need to be conformed to.

(2) An informative appendix provides additional information or guidance. An informative appendix provides additional information or guidance. They usually do not contain requirements. If an informative appendix does contain requirements, the Standard will explain when those requirements apply.

(3) A Bibliography lists documents referenced in the Standard but not as part of requirements.

Many Standards include notes. Notes provide recommendations and/or guidance only. They never contain requirements.

Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee CS-062, Solid Fuel Burning Appliances, to supersede AS/NZS 4013:2014.

The objective of this document is to set out comprehensive specifications and instructions for the appropriate test equipment to determine the flue gas emissions of solid fuel burning appliances.

Results of testing using the described method may be used by consumers when selecting a domestic solid fuel burning appliance, and regulatory bodies when setting allowable emission limits for domestic solid fuel burning appliances.

The test method described in this document enables a comparison of appliance performance in a laboratory setting; however, the results may not reflect performance under uncontrolled real-world conditions.

The major changes in this edition are as follows:

(a) The particulate emissions limit has been reduced in Clause 8.1.1.

(b) If a Standard is referenced in legislation, the legislative instrument or regulation specifies the date on which the Standard comes into effect. Regulatory authorities have indicated three years as an appropriate transition period from the date of publication for the removal of central heating appliances from the list of excluded appliances list in Clause 1.1. Refer to the relevant regulatory authority for further information.

(c) The upper limit for the emission sampling train has been removed in Clause 7.7(e).

The terms “normative” and “informative” are used in Standards to define the application of the appendices to which they apply. A “normative” appendix is an integral part of a Standard, whereas an “informative” appendix is only for information and guidance.

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1 Scope and general

1.1 Scope

This document specifies a test method for determining the particulate emission factor from batch-fed domestic solid fuel burning appliances and the associated particulate emission acceptance criteria.

Appliances within the scope of this document include —

(a) space-heating appliances; and

(b) space-heating appliances which include water-heating devices.

Appliances excluded from the scope of this document are —

i) site-built masonry appliances;

ii) cooking appliances;

iii) appliances intended solely for water heating;

iv) appliances intended solely to distribute convective heat via ducting to locations remote from the appliance;

v) appliances that when fired at the high burn rate prescribed in this document have a maximum carbon dioxide output from the combustion chamber of less than 5 % by volume with any optional doors fitted and closed.

1.2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document.

NOTE Documents referenced for informative purposes are listed in the Bibliography.

AS/NZS 4012, *Domestic solid fuel burning appliances—Method for determination of power output and efficiency*

AS/NZS 4014 (all parts), *Domestic solid fuel burning appliances—Test fuels*

1.3 Terms and definitions

For the purposes of this document, the terms and definitions given in AS/NZS 2918, AS/NZS 4012 and the following apply.

1.3.1
appliance particulate emission factor
arithmetic mean of the average particulate emission factors at each of the high, medium and low burn rates

1.3.2
cooking appliance
solid fuel burning appliance that incorporates at least one cooking hot plate and an oven with a volume not less than 28 L with the ability for gaseous combustion products to be routed around the oven