



Solid biofuel standards

Solid Biofuels Standards are under the direct responsibility of the ISO Committee ISO/TC 238

International organisation for standardisation

The International Organisation for Standardisation (ISO) develops and publishes international standards for the manufacture of products, operating practices etc. To develop a standard, international experts form a technical committee that is responsible for that specific subject area. They begin the process with the development of a draft that meets a specific market need. This is then shared for commenting and further discussion. Standards are developed in committee until ready for public consultation. After comments are received from the public the committee will produce a final document.

Individual countries have their own standards setting organisations and each of these may be a national member of the ISO. Committees may have participating or observing members in an ISO Committee.

Some countries have their own standards or they may have a mix of their own and adopted ISO standards. There are a number of joint Australian/New Zealand standards. Under the Australia–New Zealand Closer Economic Relations Trade Agreement, commonly known as Closer Economic Relations (CER) the presumption is that a AU or NZ standard will be joint unless there is good reason for it to be separate. An AU/NZ standard will only be produced if there is not an applicable international standard which could be adopted or referenced.

Solid Biofuel standards are the responsibility of the committee ISO/TC238. Bioenergy Association is the observing New Zealand representative on this committee.

What is a standard

A standard is a document that provides requirements, specifications, guidelines or characteristics that can be used consistently to ensure that materials, products, processes and services are fit for their purpose.

A regulatory body may reference as part of a regulatory regime a standard in whole or in part.

Solid biofuels standards for New Zealand, Australia and the South Pacific

The full suite of ISO solid biofuel standards are referenced in New Zealand and Australia. There are no separate or joint New Zealand or Australian standards relevant to solid biofuels.

The current international standards for solid biofuels are:

[ISO 14780:2017](#)

Solid biofuels -- Sample preparation

[ISO 14780:2017/DAMD 1: 2019](#)

[ISO 16559:2014](#)

Solid biofuels -- Terminology, definitions and descriptions

[ISO 16948:2015](#)

Solid biofuels -- Determination of total content of carbon, hydrogen and nitrogen

[ISO 16967:2015](#)

Solid biofuels -- Determination of major elements -- Al, Ca, Fe, Mg, P, K, Si, Na and Ti

[ISO 16968:2015](#)

Solid biofuels -- Determination of minor elements

[ISO 16993:2016](#)

Solid biofuels -- Conversion of analytical results from one basis to another

[ISO 16994:2016](#)

Solid biofuels -- Determination of total content of sulphur and chlorine

[ISO 16995:2015](#)

Solid biofuels -- Determination of the water soluble chloride, sodium and potassium content

[ISO/TS 16996:2015](#)

Solid biofuels -- Determination of elemental composition by X-ray fluorescence

[ISO 17225-1:2014](#)

Solid biofuels -- Fuel specifications and classes -- Part 1: General requirements

[ISO 17225-2:2014](#)

Solid biofuels -- Fuel specifications and classes -- Part 2: Graded wood pellets

[ISO 17225-3:2014](#)

Solid biofuels -- Fuel specifications and classes -- Part 3: Graded wood briquettes

[ISO 17225-4:2014](#)

Solid biofuels -- Fuel specifications and classes -- Part 4: Graded wood chips

[ISO 17225-5:2014](#)

Solid biofuels -- Fuel specifications and classes -- Part 5: Graded firewood

[ISO 17225-6:2014](#)

Solid biofuels -- Fuel specifications and classes -- Part 6: Graded non-woody pellets

[ISO 17225-7:2014](#)

Solid biofuels -- Fuel specifications and classes -- Part 7: Graded non-woody briquettes

[ISO 17225-8:2016](#)

Solid biofuels -- Fuel specifications and classes -- Part 8: Graded thermally treated and densified biomass fuels

[ISO 17225-9:2020](#)

Solid biofuels -- Fuel specifications and classes -- Part 9: Graded hog fuel and wood chip for industrial use

[ISOCD 17588 \[Under development\]](#)

Solid Biofuels – Fuel quality assurance

[ISO 17827-1:2016](#)

Solid biofuels -- Determination of particle size distribution for uncompressed fuels -- Part 1: Oscillating screen method using sieves with apertures of 3,15 mm and above

[ISO 17827-2:2016](#)

Solid biofuels -- Determination of particle size distribution for uncompressed fuels -- Part 2: Vibrating screen method using sieves with aperture of 3,15 mm and below

[ISO 17828:2015](#)

Solid biofuels -- Determination of bulk density

[ISO 17829:2015](#)

Solid Biofuels -- Determination of length and diameter of pellets

[ISO 17830:2016](#)

Solid biofuels -- Particle size distribution of disintegrated pellets

[ISO 17831-1:2015](#)

Solid biofuels -- Determination of mechanical durability of pellets and briquettes -- Part 1: Pellets

[ISO 17831-2:2015](#)

Solid biofuels -- Determination of mechanical durability of pellets and briquettes -- Part 2: Briquettes

[ISO 18122:2015](#)

Solid biofuels -- Determination of ash content

[ISO 18123:2015](#)

Solid biofuels -- Determination of the content of volatile matter

[ISO 18125:2017](#)

Solid biofuels -- Determination of calorific value

[ISO 18134-1:2015](#)

Solid biofuels -- Determination of moisture content -- Oven dry method -- Part 1: Total moisture -- Reference method

[ISO 18134-2:2017](#)

Solid biofuels -- Determination of moisture content -- Oven dry method -- Part 2: Total moisture -- Simplified method

[ISO 18134-3:2015](#)

Solid biofuels -- Determination of moisture content -- Oven dry method -- Part 3: Moisture in general analysis sample

[ISO 18135:2017](#)

Solid Biofuels -- Sampling

[ISO 18846:2016](#)

Solid biofuels -- Determination of fines content in quantities of pellets

[ISO/CD 18846-2](#) [Under development]

Solid biofuels -- Determination of fines content in quantities of pellets -- Part 2: Simplified method

[ISO 18847:2016](#)

Solid biofuels -- Determination of particle density of pellets and briquettes

[ISO 19743:2017](#)

Solid biofuels -- Determination of content of heavy extraneous materials larger than 3.15 mm

[ISO 20023:2018](#)

Solid biofuels -- Safety of solid biofuel pellets -- Safe handling and storage of wood pellets in residential and other small-scale applications

[ISO 20024:2020](#)

Solid biofuels -- Safe handling and storage of solid biofuel pellets in commercial and industrial applications

[ISO/CD 20024-1](#) [Under development]

Solid biofuels — Safe handling and storage of solid biofuel

[ISO/CD 20024-2](#) [Under development]

Solid biofuels — Safe handling and storage of solid biofuel pellets in commercial and industrial applications — Part 2: Detection, suppression and management of fire and explosion

[ISOTS 20048-1:2020](#)

Solid biofuels -- Determination of off-gassing and oxygen depletion characteristics -- Part 1: Laboratory method for the determination of off-gassing and oxygen depletion using closed containers.

[ISO/CD 20048-2](#) [Under development]

Solid biofuels -- Determination of off-gassing and oxygen depletion characteristics -- Part 2: Operational method for screening of carbon monoxide off-gassing

[ISO 20049-1:2020](#)

Solid biofuels -- Determination of self-heating of pelletized biofuels – Part 1 Isothermal calorimetry

[ISO 20049-2](#) [Under development]

Solid biofuels -- Determination of self-heating of pelletized biofuels – Part 2 Basket heating tests

[ISO 21404:2020](#)

Solid biofuels -- Determination of ash melting behaviour

[ISO/AWI 21596](#) [Under development]

Solid biofuels -- Determination of grindability -- Hardgrove type method for thermally treated biomass fuels

[ISO 21945:2020](#)

Solid biofuels -- Simplified sampling method for small scale applications

[ISO/CD 23343-1](#) [Under development]

Solid biofuels -- Determination of water sorption and its effect on durability of thermally treated biomass fuels -- Part 1: Pellets

[ISO/TR 23437:2020](#)

Solid biofuels -- Determination of bridging behaviour of bulk biofuels

[ISO NP 5370](#) [Under development]

Solid biofuels — Determination of fines content in pellets