



Fuel Quality Standards (Ethanol E85) Determination 2024

I, Chris Bowen, Minister for Climate Change and Energy, make the following determination.

Dated: 12 April 2024

Chris Bowen
Minister for Climate Change and Energy

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1 Name

This instrument is the *Fuel Quality Standards (Ethanol E85) Determination 2024*.

2 Commencement

- (1) Each provision of this instrument specified in column 1 of the table commences, or is taken to have commenced, in accordance with column 2 of the table. Any other statement in column 2 has effect according to its terms.

Commencement information		
Column 1	Column 2	Column 3
Provisions	Commencement	Date/Details
1. The whole of this instrument	The day after this instrument is registered.	

Note: This table relates only to the provisions of this instrument as originally made. It will not be amended to deal with any later amendments of this instrument.

- (2) Any information in column 3 of the table is not part of this instrument. Information may be inserted in this column, or information in it may be edited, in any published version of this instrument.

3 Authority

This instrument is made under section 21 of the *Fuel Quality Standards Act 2000*.

4 Definitions

Note: A number of expressions used in this instrument are defined in section 4 of the Act, including the following:

- (a) *fuel*
- (b) *supply*
- (c) *inspector*

In this instrument:

Act means the *Fuel Quality Standards Act 2000*.

ASTM followed by an alphanumeric code means the testing method developed under that code by the standards development organisation called ASTM International.

CEN/TS followed by a numeric code means the testing method developed under that code by the European Committee for Standardization.

DVPE means dry vapour pressure equivalent.

E85 means a mixture of petrol and ethanol that is supplied or represented as E85 fuel.

Note: Section 5 requires the fuel to be 70–85% v/v ethanol.

EN followed by a numeric code means the testing method developed under that code by the European Committee for Standardization.

mg/kg means milligrams per kilogram, and is equivalent to ‘parts per million’ or ‘ppm’ by mass.

petrol has the same meaning as in the *Fuel Quality Standards (Petrol) Determination 2024*.

% v/v means per cent volume by volume, and is equivalent to ‘volume %’, ‘vol %’ and ‘% vol’.

% m/m means per cent mass by mass, and is equivalent to ‘mass %’, ‘% mass’ and ‘weight %’.

5 Fuel standard for E85

- (1) In relation to a parameter specified in column 1 of an item of the following table, E85 must comply with the specification for that parameter specified in column 2 of that item.

Item	Column 1 Parameter	Column 2 Specification	Column 3 Testing Method
1	Acidity—as acetic acid	0.006% m/m maximum	ASTM D7795
2	Benzene	0.35% v/v maximum	ASTM D5580
3	Copper	0.10 mg/kg maximum	EN 15837 (as modified in CEN/TS 15293)
4	Distillation—final boiling point	210°C maximum	ASTM D86
5	Ethanol	70–85% v/v	ASTM D6839
6	Ethers—5 or more C atoms	1.0% v/v maximum	ASTM D6839
7	Inorganic chloride	10 mg/kg maximum	ASTM D7328
8	Lead	5 mg/L maximum	ASTM D3237
9	Methanol	0.5% v/v maximum	ASTM D5501
10	Motor octane number (MON)	87 minimum	(See note)
11	Oxidation stability	360 minutes minimum	ASTM D525
12	pHe	6.5–9.0	ASTM D6423
13	Phosphorus	1.3 mg/L maximum	ASTM D3231
14	Research octane number (RON)	100 minimum	(See note)
15	Solvent washed gum	5.0 mg/100 mL maximum	ASTM D381
16	Sulfate	4.0 mg/kg maximum	ASTM D7328

Item	Column 1 Parameter	Column 2 Specification	Column 3 Testing Method
17	Sulfur	From commencement 52 mg/kg maximum	ASTM D5453
		From 15 December 2025 10 mg/kg maximum	
18	Vapour pressure (DVPE) at 37.8°C	38–63 kPa	ASTM D5191
19	Water	1.0% m/m maximum	ASTM E1064

Note : Testing methods for determining the MON and RON of E85 are not yet available. The minimum targets specified in the table are interim targets until a testing method is available. These minimum targets allow for engine calibration.

- (2) For subsection (1), compliance with the specification for a parameter is determined by using the testing method for that parameter specified in column 3 of that item of the table.

Note: The testing methods listed in the table are the methods that will be used by inspectors and other persons authorised to conduct tests on fuel under the Act to determine whether the fuel complies with the relevant fuel standard. Subsection (2) does not prevent other persons (including persons supplying fuel) from using other test methods to ensure that the fuel complies with the relevant fuel standard.

- (3) Any petrol component of E85 must meet the requirements of the fuel quality standard for petrol set out in the *Fuel Quality Standards (Petrol) Determination 2024*.
- (4) Any ethanol component of E85 must meet the requirements of the fuel quality standard for ethanol set out in the *Fuel Quality Standards (Petrol) Determination 2024*.