



## **Fuel Quality Standards (Ethanol E85) Determination 2019**

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I, Angus Taylor, Minister for Energy and Emissions Reduction, make the following determination.

Dated 18 September 2019

Angus Taylor  
Minister for Energy and Emissions Reduction

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## 1 Name

This instrument is the *Fuel Quality Standards (Ethanol E85) Determination 2019*.

## 2 Commencement

This instrument commences on 1 October 2019.

## 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 2019*.

% *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 mentioned in an item of the following table, E85 must comply with the specification for that parameter mentioned in that item.

Item	Parameter	Specification	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
17	Sulfur	From commencement 52 mg/kg maximum  From 1 July 2027 10 mg/kg maximum	ASTM D5453
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 mentioned in 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

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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 2019*.
- (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 2019*.