Fuel Standard (Ethanol E85) Determination 2012[1]

Fuel Quality Standards Act 2000

I, Don Farrell, Parliamentary Secretary for Sustainability and Urban Water, make the following determination under section 21 of the *Fuel Quality Standards Act 2000*.

Dated 16th August 2012

Don Farrell
Parliamentary Secretary for Sustainability and Urban Water

1 Name of determination

This determination is the *Fuel Standard (Ethanol E85) Determination 2012*.

2 Commencement

This determination commences on 1 November 2012.

3 Definitions

In this determination:

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

CEN/TS followed by a number means the testing method developed under that code and number by the standards development organisation called the European Committee for Standardization.

E85 means a fuel blend consisting of:

(a) 70–85% ethanol; and

(b) petrol that meets the requirements of the *Fuel Standard (Petrol) Determination 2001*.

EN followed by a number means the testing method developed under that code and number by the standards development organisation called the European Committee for Standardization.

4 Fuel standard for E85

E85 must comply with the specification for the parameters mentioned in the following table.

Item	Parameter	Specification
1	Acidity (as acetic acid)	0.006% m/m maximum
2	Benzene	0.35% v/v maximum
3	Copper	0.10 mg/kg maximum
4	Ethanol	70–85% v/v
5	Ethers (5 or more C atoms)	1.0% v/v maximum
6	Final boiling point (distillation)	210°C maximum
7	Higher alcohols (C_3-C_8)	2.0% v/v maximum
8	Inorganic chloride	1 mg/kg maximum
9	Lead content	5 mg/L maximum
10	Methanol	0.5% v/v maximum
11	Motor Octane Number	87 minimum
12	Oxidation stability	360 minutes minimum
13	pHe	6.5–9.0
14	Phosphorus	1.3 mg/L maximum
15	Research Octane Number	100 minimum
16	Solvent washed gum	5 mg/100mL maximum
17	Sulfate	4.0 mg/kg maximum
18	Sulfur	70 mg/kg maximum
19	Vapour Pressure (DVPE)	38–65 kPa at 37.8°C
20	Water	1.0% m/m maximum

5 Testing methods

(1) Compliance with the standard for a parameter set out in section 4 is determined by applying the testing method for the parameter in the following table.

Item	Parameter	Testing method
1	Acidity (as acetic acid)	ASTM D1613
2	Benzene	ASTM D5580
3	Copper	EN 15837 (as modified in CEN/TS 15293)
4	Ethanol	ASTM D5501
5	Ethers (5 or more C atoms)	ASTM D4815 (See Note 1)
6	Final boiling point (distillation)	ASTM D86
7	Higher alcohols (C_3-C_8)	ASTM D4815 (See Note 1)
8	Inorganic chloride	ASTM D7328
9	Lead content	ASTM D3237
10	Methanol	ASTM D5501
11	Motor Octane Number	(See Note 2)
12	Oxidation stability	ASTM D525
13	pHe	ASTM D6423
14	Phosphorus	ASTM D3231
15	Research Octane Number	(See Note 2)
16	Solvent washed gum	ASTM D381
17	Sulfate	ASTM D7319
18	Sulfur	ASTM D5453
19	Vapour Pressure (DVPE)	ASTM D5191
20	Water	ASTM E1064

Note 1 Testing method ASTM D4815–09 has been validated for use in the analysis of oxygenates (ethers (5 or more C atoms) and higher alcohols (C_3-C_8)) in ethanol/unleaded petrol blended fuels containing 70 to 85% ethanol, providing standards are prepared in 80% ethanol blended with unleaded petrol.

Note 2 Testing methods for Motor Octane Number and Research Octane Number in E85 are not yet available. The minimum targets specified in section 4 are interim targets until a testing method is available. These minimum targets allow for engine calibration.

(2) A testing method mentioned in subsection (1) is one that is in force on the day on which this determination commences.

Note

1. All legislative instruments and compilations are registered on the Federal Register of Legislative Instruments kept under the *Legislative Instruments Act 2003.* See www.comlaw.gov.au.

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