Fuel Quality Standards (Petrol) 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

Contents

1 Name

This instrument is the *Fuel Quality Standards (Petrol) 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Note: This table relates only to the provisions of this instrument as originally made.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***

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.

CAS no., for a parameter, means the Chemical Abstracts Service Registry number for the parameter.

petrol does not include aviation gasoline (avgas) supplied for use in aircraft.

pool average for aromatic content, means the average amount of aromatics in all batches of petrol across all grades manufactured in Australia, or imported, by a supplier in each 12 months starting on 1 January.

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

% 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 petrol

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

(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.

Item	Column 1 Parameter	Column 2 Specification		Column 3 Testing Method
1	Aromatics	Between the date this instrument commences and 14 December 2025:	All grades: 45% v/v maximum with a 35% v/v maximum pool average.	ASTM D1319
		After 14 December 2025:	Petrol with RON grade between 95.0 and 97.9: 35% v/v maximum All other grades: 45% v/v maximum All grades: 35% v/v maximum pool average	
2	Benzene	1.0% v/v maximum		ASTM D5580
3	Copper corrosion—3 h at 50°C	Class 1		ASTM D130
4	Diisopropyl ether (DIPE, CAS no. 108-20-3)	1% v/v maximum		ASTM D4815
5	Distillation—final boiling point	210°C maximum		ASTM D86

Item	Column 1 Parameter	Column 2 Specification		Column 3 Testing Method
6	Ethanol	10% v/v maximum		ASTM D4815
7	Ethyl tertiary butyl ether (ETBE, CAS no. 637-92-3)	1% v/v maximum		ASTM D4815
8	Existent gum—washed	5 mg/100 mL maximum		ASTM D381
9	Induction period—oxidation stability	360 minutes minimum		ASTM D525
10	Lead	5 mg/L maximum		ASTM D3237
11	Methyl tertiary butyl ether (MTBE, CAS no. 1634-04-4)	1% v/v maximum		ASTM D4815
12	Motor octane number (MON)	91 RON grade: 81.0 minimum 95 RON grade: 85.0 minimum		ASTM D2700
13	Olefins	18% v/v maximum		ASTM D1319
14	Oxygen	Petrol without ethanol: 2.7% m/m maximum Petrol with ethanol: 3.9% m/m maximum		ASTM D4815
15	Phosphorus	1.3 mg/L maximum		ASTM D3231
16	Research octane number (RON)	91 RON grade: 91.0 minimum 95 RON grade: 95.0 minimum		ASTM D2699
17	Sulfur	Between the date this instrument commences and 14 December 2025:	91 RON grade: 150 mg/kg maximum 95 RON grade: 50 mg/kg maximum	ASTM D5453
		After 14 December 2025:	All grades: 10 mg/kg maximum	
18	Tertiary butyl alcohol (TBA, CAS no. 75-65-0)	0.5% v/v maximum		ASTM D4815

(3) Specifications set out in the table apply to all grades of petrol unless otherwise stated.

(4) Any ethanol component of petrol must comply with the fuel standard for ethanol in section 6.

(5) Compounds containing phosphorus must not be added to petrol.

6 Fuel standard for ethanol

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

(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.

Item	Column 1 Parameter	Column 2 Specification	Column 3 Testing Method
1	Acidity—as acetic acid	0.006% m/m maximum	ASTM D7795
2	Appearance	Clear and bright and visibly free of suspended or precipitated contaminants	ASTM D4806
3	Copper	0.1 mg/kg maximum	EN 15837 (as modified in CEN/TS 15293)
4	Denaturant	1–1.5% v/v denaturant	ASTM D5501
5	Ethanol	95.6% v/v minimum	ASTM D5501
6	Inorganic chloride	10 mg/kg maximum	ASTM D7328
7	Methanol	0.5% v/v maximum	ASTM D5501
8	pHe	6.5–9.0	ASTM D6423
9	Solvent washed gum	5.0 mg/100 mL maximum	ASTM D381
10	Sulfate	4.0 mg/kg maximum	ASTM D7328
11	Sulfur	10 mg/kg maximum	ASTM D5453
12	Water	1.25% m/m maximum	ASTM E1064

(3) The denaturant component of ethanol must be petrol.