

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

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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Note: This table relates only to the provisions of this instrument as originally made.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 |
| 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.