Commonwealth Coat of Arms of Australia

Fuel Quality Standards (Petrol) Determination 2019

made under section 21 of the

Fuel Quality Standards Act 2000

**Compilation No. 1**

**Compilation date:** 10 February 2021

**Includes amendments up to:** *Fuel Quality Standards (Petrol) Amendment Determination 2021*

**About this compilation**

**This compilation**

This is a compilation of the *Fuel Quality Standards (Petrol) Determination 2019* that shows the text of the law as amended and in force on 10/02/2021 (the ***compilation date***).

The notes at the end of this compilation (the ***endnotes***) include information about amending laws and the amendment history of provisions of the compiled law.

**Uncommenced amendments**

The effect of uncommenced amendments is not shown in the text of the compiled law. Any uncommenced amendments affecting the law are accessible on the Legislation Register (www.legislation.gov.au). The details of amendments made up to, but not commenced at, the compilation date are underlined in the endnotes. For more information on any uncommenced amendments, see the series page on the Legislation Register for the compiled law.

**Application, saving and transitional provisions for provisions and amendments**

If the operation of a provision or amendment of the compiled law is affected by an application, saving or transitional provision that is not included in this compilation, details are included in the endnotes.

**Modifications**

If the compiled law is modified by another law, the compiled law operates as modified but the modification does not amend the text of the law. Accordingly, this compilation does not show the text of the compiled law as modified. For more information on any modifications, see the series page on the Legislation Register for the compiled law.

**Self‑repealing provisions**

If a provision of the compiled law has been repealed in accordance with a provision of the law, details are included in the endnotes.

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1 Name

This instrument is the *Fuel Quality Standards (Petrol) Determination 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***

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

(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.

| Item | Parameter | Specification | Testing Method |
| --- | --- | --- | --- |
| 1 | Aromatics | Between commencement and 31 December 2021:  45% v/v maximum with a 42% v/v maximum pool average across all grades  On and from 1 January 2022:  45% v/v maximum with a 35% v/v maximum pool average across all grades | ASTM D1319 |
| 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 commencement and 30 June 2027:  91 RON grade:  150 mg/kg maximum  95 RON grade:  50 mg/kg maximum  On and from 1 July 2027:  All grades: 10 mg/kg maximum | ASTM D5453 |
| 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 in an item of the following table, ethanol in petrol must comply with the specification for that parameter mentioned in that item.

(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.

| Item | Parameter | Specification | 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.

Endnotes

Endnote 1—About the endnotes

The endnotes provide information about this compilation and the compiled law.

The following endnotes are included in every compilation:

Endnote 1—About the endnotes

Endnote 2—Abbreviation key

Endnote 3—Legislation history

Endnote 4—Amendment history

**Abbreviation key—Endnote 2**

The abbreviation key sets out abbreviations that may be used in the endnotes.

**Legislation history and amendment history—Endnotes 3 and 4**

Amending laws are annotated in the legislation history and amendment history.

The legislation history in endnote 3 provides information about each law that has amended (or will amend) the compiled law. The information includes commencement details for amending laws and details of any application, saving or transitional provisions that are not included in this compilation.

The amendment history in endnote 4 provides information about amendments at the provision (generally section or equivalent) level. It also includes information about any provision of the compiled law that has been repealed in accordance with a provision of the law.

**Misdescribed amendments**

A misdescribed amendment is an amendment that does not accurately describe the amendment to be made. If, despite the misdescription, the amendment can be given effect as intended, the amendment is incorporated into the compiled law and the abbreviation “(md)” added to the details of the amendment included in the amendment history.

If a misdescribed amendment cannot be given effect as intended, the abbreviation “(md not incorp)” is added to the details of the amendment included in the amendment history.

Endnote 2—Abbreviation key

|  |  |
| --- | --- |
| ad = added or inserted | o = order(s) |
| am = amended | Ord = Ordinance |
| amdt = amendment | orig = original |
| c = clause(s) | par = paragraph(s)/subparagraph(s) |
| C[x] = Compilation No. x | /sub‑subparagraph(s) |
| Ch = Chapter(s) | pres = present |
| def = definition(s) | prev = previous |
| Dict = Dictionary | (prev…) = previously |
| disallowed = disallowed by Parliament | Pt = Part(s) |
| Div = Division(s) | r = regulation(s)/rule(s) |
| exp = expires/expired or ceases/ceased to have | reloc = relocated |
| effect | renum = renumbered |
| F = Federal Register of Legislation | rep = repealed |
| gaz = gazette | rs = repealed and substituted |
| LA = *Legislation Act 2003* | s = section(s)/subsection(s) |
| LIA = *Legislative Instruments Act 2003* | Sch = Schedule(s) |
| (md) = misdescribed amendment can be given | Sdiv = Subdivision(s) |
| effect | SLI = Select Legislative Instrument |
| (md not incorp) = misdescribed amendment | SR = Statutory Rules |
| cannot be given effect | Sub‑Ch = Sub‑Chapter(s) |
| mod = modified/modification | SubPt = Subpart(s) |
| No. = Number(s) | underlining = whole or part not |
|  | commenced or to be commenced |

Endnote 3—Legislation history

| Name | Registration | Commencement | Application, saving and transitional provisions |
| --- | --- | --- | --- |
| *Fuel Quality Standards (Petrol) Determination 2019* | 28 March 2019  (FL2019L00455) | 1 October 2019 |  |
| *Fuel Quality Standards (Petrol) Amendment Determination 2021* | 9 February 2021  (FL2021L00107) | 10 February 2021 |  |

Endnote 4—Amendment history

| Provision affected | How affected |
| --- | --- |
| s 2 | rep LA s 48D |
| s 5 | am FL2021L00107 |
| s 6 | am FL2021L00107 |