

Reprint
as at 1 July 2008

**Petroleum Products Specifications
Regulations 2002**

(SR 2002/210)

Petroleum Products Specifications Regulations 2002: revoked, on 1 July 2008,
by regulation 23 of the Engine Fuel Specifications Regulations 2008 (SR
2008/138).

Pursuant to the Ministry of Energy (Abolition) Act 1989, Her Excellency the Governor-General, acting on the advice and with the consent of the Executive Council, makes the following regulations.

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Note

Changes authorised by section 17C of the Acts and Regulations Publication Act 1989 have been made in this eprint.

A general outline of these changes is set out in the notes at the end of this eprint, together with other explanatory material about this eprint.

These regulations are administered in the Ministry of Economic Development.

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1 Title

These regulations are the Petroleum Products Specifications Regulations 2002.

2 Commencement

These regulations come into force on 1 September 2002.

3 Interpretation

(1) In these regulations, unless the context otherwise requires,—

additive means a substance added to fuel in trace or small quantities in order to bring about specific benefits

Auckland and Northland means the area contained within the Auckland Regional Council and Northland Regional Council boundaries

autumn means, in Schedules 1 and 2, 1 April to 31 May (inclusive)

autumn: this definition was inserted, as from 1 May 2007, by regulation 4 Petroleum Products Specifications Amendment Regulations 2007 (SR 2007/88).

chief executive means the chief executive of the Ministry of Economic Development

diesel means a refined petroleum distillate having a viscosity and distillation range that is intermediate between those of kerosene and light lubricating oil, whether or not it contains additives, and that is intended for use as fuel in internal combustion engines ignited by compression

fuel means diesel or petrol

marine use means the use or intended use of diesel on a boat or ship

oxygenates means alcohols and ethers added to fuel

petrol means a refined petroleum distillate, normally boiling within the limits of 15°C to 220°C, whether or not it contains additives, that is intended for use as a fuel in spark-ignition internal combustion engines

petroleum has the same meaning as it has in section 2(1) of the Crown Minerals Act 1991

polycyclic aromatic hydrocarbon means the total aromatic hydrocarbon content less the mono-aromatic content, both as determined by the regulatory test method

pool average is determined in accordance with regulation 7

premium grade petrol means petrol supplied as having a research octane number of 95 or higher

regular grade petrol means petrol supplied as having a research octane number of at least 91 but less than 95

retail sale means a sale to an end user who has no written supply agreement or written contract with the supplier in respect of the sale.

spring means, in Schedules 1 and 2, 1 September to 30 November (inclusive)

spring: this definition was inserted, as from 1 May 2007, by regulation 4 Petroleum Products Specifications Amendment Regulations 2007 (SR 2007/88).

summer means,—

(a) in Schedules 1 and 2, 1 December to 31 March (inclusive); and

(b) in Schedule 3, 15 October to 14 April (inclusive)

summer: this definition was inserted, as from 1 May 2007, by regulation 4 Petroleum Products Specifications Amendment Regulations 2007 (SR 2007/88).

winter means,—

(a) in Schedules 1 and 2, 1 June to 31 August (inclusive); and

(b) in Schedule 3, 15 April to 14 October (inclusive)

winter: this definition was inserted, as from 1 May 2007, by regulation 4 Petroleum Products Specifications Amendment Regulations 2007 (SR 2007/88).

(2) In these regulations,—

ASTM means the American Society for Testing and Materials

BS means British Standard

EN means European Standard

IP means the Institute of Petroleum, London

ISO means the International Organization for Standardization.

- (3) In these regulations, the letter **D** and a series of numerals, or a series of numerals immediately following an expression referred to in subclause (2), means the latest version of the document identified by that serial number.
- (4) If a test method prescribed in these regulations provides for alternative methods, each of the alternative methods has equal standing, and either of those methods may be used.

4 Requirements relating to fuel sold by retail

- (1) Subclauses (2) to (6) apply to all petrol and diesel supplied, or available or intended for supply, by way of retail sale, other than—
 - (a) as an aviation fuel; or
 - (b) for motor car racing; or
 - (c) for powerboat racing and jet boats; or
 - (d) for motorcycle racing.
- (2) Regular grade petrol must be fit for common purposes and must have properties that conform to the limits specified in **Schedule 1** from the relevant date set out in that schedule when tested by the methods specified in that schedule.
- (3) Premium grade petrol must be fit for common purposes and must have properties that conform to the limits specified in **Schedule 2** from the relevant date set out in that schedule when tested by the methods specified in that schedule.
- (4) If petrol contains ethanol greater than 1% by volume, the seller of the petrol must provide or display information to consumers on the possible vehicle maintenance requirements that may result from using ethanol blends.
- (5) Diesel must be fit for common purposes and must have properties that conform to the limits specified in **Schedule 3** from the relevant date set out in that schedule when tested by the methods specified in that schedule.
- (6) Fuel that is advertised as having properties that are superior or in addition to the regulated limits must conform to those

advertised properties when tested by the methods specified in the schedules or, in the case of an additional property, by a suitable and recognised international method.

5 Requirements relating to retail fuel pumps

- (1) Subclauses (2) and (3) apply to a dispensing pump or container used for delivering fuel by way of retail sale either into the consuming vehicle or into a container for subsequent use in an engine for any end use other than—
 - (a) as an aviation fuel; or
 - (b) for motor car racing; or
 - (c) for powerboat racing and jet boats; or
 - (d) for motorcycle racing.
- (2) For petrol, the seller of the petrol must ensure that the dispensing pump or container is clearly marked with the grade designation, such as regular or premium, and with the minimum research octane number. If petrol is blended with ethanol, the seller of the petrol must ensure that the dispensing pump or container displays the words “contains ethanol”.
- (3) For diesel, the dispensing pump or container must be clearly marked as “diesel”.
- (4) In this regulation, **clearly marked** means having a label that is able to be easily seen by the person dispensing the fuel.

6 Requirements relating to all fuel

- (1) Subclauses (2) to (4) apply to all fuel supplied or available or intended for supply (whether by way of retail sale or otherwise) for any end use other than—
 - (a) as an aviation fuel; or
 - (b) for motor car racing; or
 - (c) for powerboat racing and jet boats; or
 - (d) for motorcycle racing.
- (2) Regular grade petrol must have properties in respect of sulphur, lead, benzene, total aromatic compounds, manganese, olefins, vapour pressure, phosphorus, and total oxygenates except ethanol that conform to the limits specified in **Schedule 1** from the relevant date set out in that schedule when tested by the methods specified in that schedule.

- (3) Premium grade petrol must have properties in respect of sulphur, lead, benzene, total aromatic compounds, manganese, olefins, vapour pressure, phosphorus, and total oxygenates except ethanol that conform to the limits specified in **Schedule 2** from the relevant date set out in that schedule when tested by the methods specified in that schedule.
- (4) Diesel must have properties in respect of sulphur and polycyclic aromatic hydrocarbon compounds that conform to the limits specified in **Schedule 3** from the relevant date set out in that schedule when tested by the methods specified in that schedule.

7 Calculating pool average

- (1) In **Schedules 1, 2, and 3**, if a pool average is specified, it must be determined as set out in this regulation.
- (2) Pool averages must be calculated separately by each producer of fuel in New Zealand and by each fuel importer for imported product.
- (3) Monthly pool averages must be calculated based on—
 - (a) batch fuel quality, as indicated on the certificate of quality, and quantity and date of completion of loading, as indicated on the bill of lading, for fuel produced in New Zealand; and
 - (b) batch fuel quality, as indicated on the certificate of quality, and supplied quantity and date of completion of discharge into the first port storage at a New Zealand port, as indicated on the bill of lading or other appropriate documentation, for imported fuel.
- (4) Each producer of fuel in New Zealand and each fuel importer must keep for a period of not less than 3 years the following records with regard to properties that are regulated by pool averaging:
 - (a) relevant fuel quality, for each individual batch; and
 - (b) quantity of each individual batch, on a mass or volume basis as appropriate; and
 - (c) date of the batch, as defined in subclause (3)(a) and (b); and
 - (d) monthly average, as calculated in subclause (7)(a) and (b); and

- (e) monthly journal entry, as calculated in subclause (7)(c).
- (5) Each producer of fuel and each fuel importer must supply access in New Zealand to the records required to be kept under subclause (4) when requested, in writing, to do so by the responsible Minister of the Crown.
- (6)
- (7) For total aromatic compounds in petrol, for each calendar month during the period that this regulation is in effect, each producer of fuel in New Zealand and each fuel importer must separately calculate the average percentage total aromatic compounds for each relevant grade of petrol produced or imported in that month as follows:
- (a) for each batch of regular grade petrol and each batch of premium grade petrol respectively produced or imported in the month, the average total aromatic compounds content of the batch (in l/l) is multiplied by the volume of the batch (in l) to obtain the volume of total aromatic compounds (in l) contained in the batch; and
- (b) the volume of total aromatic compounds calculated from all petrol batches of the relevant grade produced or imported in a month is added together and the total divided by the total volume of all the month's batches to produce the monthly average total aromatic compounds content (in l/l) as follows:

$$\text{monthly average} = \frac{\sum_{i=1}^n (A_i * V_i)}{\sum_{i=1}^n (V_i)}$$

where—

A_i is the average total aromatic compounds content for batch i in litres

V_i is the volume of batch i in litres

n is the total number of batches in the month; and

- (c) the monthly average total aromatics compounds content is subtracted from the pool average maximum expressed in l/l, and the difference multiplied by the total volume of all the month's batches of the relevant grade to produce the monthly journal entry as follows:

$$\text{monthly journal entry} = (\text{pool average maximum} - \text{monthly average}) * \sum_{i=1}^n (V_i)$$

where—

V_i is the volume of batch i in litres

n is the total number of batches in the month.

- (8) If the monthly journal entry is negative, it is considered a debit. If the monthly journal entry is positive, it is considered a credit.
- (9) Debits must be offset with an equal number of credits within 5 months following the end of the month in which the debits were accumulated.
- (10) Credits may be used within 5 months following the end of the month in which the credits were accumulated to offset future debits. Credits expire and may not be used after this time period.
- (11)

Subclause (1) was amended, as from 1 January 2007, by regulation 4(1) Petroleum Products Specifications Amendment Regulations 2006 (SR 2006/350) by substituting the words "this regulation" for the words "subclauses (2) to (11)".

Subclause (4)(d) was amended, as from 1 January 2007, by regulation 4(2) Petroleum Products Specifications Amendment Regulations 2006 (SR 2006/350)

by substituting the word “subclause” for the words “subclauses (6)(a) and (b) and”.

Subclause (4)(e) was amended, as from 1 January 2007, by regulation 4(3) Petroleum Products Specifications Amendment Regulations 2006 (SR 2006/350) by substituting the word “subclause” for the words “subclauses (6)(c) and”.

Subclause (6) was revoked, as from 1 January 2007, by regulation 4(4) Petroleum Products Specifications Amendment Regulations 2006 (SR 2006/350).

Subclause (11) was revoked, as from 1 January 2007, by regulation 4(5) Petroleum Products Specifications Amendment Regulations 2006 (SR 2006/350).

8 Sampling of fuel

- (1) The procedure for obtaining a representative sample of fuel for testing by the test methods set out in these regulations is set out in BS EN 228 and BS EN 590.
- (2) In the event of a dispute as to the appropriate value, nature, or rating of any of the properties listed in the schedules or referred to in these regulations, the relevant procedures specified in ISO 4259 must be used to interpret the laboratory results.
- (3) An alternative test method to any of those specified in **Schedules 1, 2, and 3** may be agreed by the chief executive if a request is made in writing from a fuel importer or wholesale supplier or retailer of fuel and if the chief executive is satisfied that the alternative test method is at least as good as the test method specified in **Schedules 1, 2, or 3**.
- (4) The fuel importer or wholesale supplier of any fuel to which these regulations apply must, at the request of a person authorised in writing by the chief executive, supply the authorised person with a certificate describing the properties and value of any such fuel within 5 working days of receiving the request.

Subclause (4) was amended, as from 1 January 2004, by regulation 3 Petroleum Products Specifications Amendment Regulations 2003 (SR 2003/346) by adding the words “within 5 working days of receiving the request”.

9 Accreditation

A person authorised by the chief executive to take samples or to conduct testing of fuel for compliance with these regulations must, unless the person is an employee of the Ministry of Economic Development, be ISO 9001 certified for fuel sampling or testing, or be accredited by International Accreditation

New Zealand or by an overseas accreditation agency recognised under New Zealand's mutual recognition arrangements.

10 Withdrawal of fuel from sale

If the Minister is satisfied that the properties of any fuel to which these regulations apply do not comply with the relevant provisions of these regulations, the Minister may, by written notice given to any distributor of the fuel, require the distributor, within the period of time specified by the Minister in the notice, to—

- (a) withdraw the fuel from retail sale or cease making it available for retail sale; or
- (b) withdraw the fuel from availability, or cease making it available, for any end use, other than use as an aviation fuel.

Regulation 10 was amended, as from 1 January 2004, by regulation 4 Petroleum Products Specifications Amendment Regulations 2003 (SR 2003/346) by inserting the words “, within the period of time specified by the Minister in the notice,” after the words “require the distributor”.

11 Offences

A person commits an offence and is liable on summary conviction to a fine not exceeding \$10,000 who—

- (a) supplies, or makes available for supply, any fuel other than in accordance with regulations 4 to 7; or
- (b) fails to comply with a request made under regulation 8(4); or
- (c) fails to comply with a requirement made under regulation 10.

Paragraph (b) was amended, as from 1 January 2004, by regulation 5(1) Petroleum Products Specifications Amendment Regulations 2003 (SR 2003/346) by substituting the expression “8(4)” for the expression “9”.

Paragraph (c) was amended, as from 1 January 2004, by regulation 5(2) Petroleum Products Specifications Amendment Regulations 2003 (SR 2003/346) by substituting the expression “10” for the expression “11”.

12 Revocation

The Petroleum Products Specifications Regulations 1998 (SR 1998/267) are consequentially revoked.

Schedule 1

rr 4, 6, 7, 8

Requirements for regular grade petrol

Schedule 1 was substituted, as from 1 January 2007, by regulation 5 Petroleum Products Specifications Amendment Regulations 2006 (SR 2006/350).

Schedule 1 was substituted, as from 1 May 2007, by regulation 5 Petroleum Products Specifications Amendment Regulations 2007 (SR 2007/88).

Property	Effective on and from 1 May 2007	Effective on and from 1 January 2008	Test method
Research Octane Number (RON)	91.0 minimum	91.0 minimum	ASTM D2699
Motor Octane Number (MON)	82.0 minimum	82.0 minimum	ASTM D2700
Colour	Not to be mistaken for water	Not to be mistaken for water	Visual
Percentage volume evaporated at 70°C (E70) ¹	22 minimum	22 minimum	ASTM D86
	48 maximum	48 maximum	
Percentage volume evaporated at 100°C (E100)	45 minimum	45 minimum	ASTM D86
	70 maximum	70 maximum	

Property	Effective on and from 1 May 2007	Effective on and from 1 January 2008	Test method
Percentage volume evaporated at 150°C (E150)	75 minimum	75 minimum	ASTM D86
End point (°C)	210 maximum	210 maximum	ASTM D86
Residue (percentage volume)	2 maximum	2 maximum	ASTM D86
Flexible Volatility Index ² [VP (kPa) + (0.7 × E70)]	115.0 maximum	115.0 maximum	ASTM D86 and ASTM D5191
Vapour Pressure ³ (VP) (kPa)	Maxima: Auckland and Northland: 65 kPa summer; 80 kPa autumn and spring; 90 kPa winter; rest of North Island: 70 kPa summer; 80 kPa autumn and spring; 90 kPa winter; South Island: 75 kPa summer; 85 kPa autumn and spring;	Maxima: Auckland and Northland: 65 kPa summer; 80 kPa autumn and spring; 90 kPa winter; rest of North Island: 70 kPa summer; 80 kPa autumn and spring; 90 kPa winter; South Island: 75 kPa summer; 85 kPa autumn and spring;	ASTM D5191

Property	Effective on and from 1 May 2007	Effective on and from 1 January 2008	Test method
	95 kPa winter Minimum: 45 kPa all year	95 kPa winter Minimum: 45 kPa all year	
Copper strip corrosion (3 hours at 50°C)	Class 1 maximum	Class 1 maximum	ASTM D130
Sulphur ⁴ (mg/kg)	150 maximum	50 maximum	IP 497 or ASTM D5453
Existent gum (solvent washed) (mg/100 ml)	5 maximum	5 maximum	ASTM D381
Oxidation stability induction period (minutes)	360 minimum	360 minimum	ASTM D525
Lead (mg/l)	5 maximum	5 maximum	IP 224
Benzene (percentage volume)	1 maximum	1 maximum	ASTM D5580
Total aromatic compounds (including benzene) (percentage volume)	42 maximum pool average and 45 maximum cap	42 maximum pool average and 45 maximum cap	ASTM D5580

Property	Effective on and from 1 May 2007	Effective on and from 1 January 2008	Test method
Oxygenates ⁵ (percentage volume)	1 maximum for total oxygenates, with the exception of ethanol; 10 maximum for ethanol	1 maximum for total oxygenates, with the exception of ethanol; 10 maximum for ethanol	ASTM D4815
Olefins (percentage volume)	18 maximum	18 maximum	ASTM D1319
Manganese ⁶ (mg/l)	2.0 maximum	2.0 maximum	ASTM D3831
Phosphorus (mg/l)	1.3 maximum	1.3 maximum	ASTM D3231

¹ For regular grade petrol blended with more than 1% and not more than 10% volume ethanol, the E70 maximum is increased by 1% per 1% volume ethanol in the blend.

² For regular grade petrol blended with more than 1% and not more than 10% volume ethanol, the flexible volatility index maximum allowed is: 115.0 summer; 120.0 autumn and spring; 130.0 winter. Petrol that complies with the previous season's quality, and that is stored in a filling station tank to which fewer than 3 deliveries of petrol have been made since 6 weeks before the beginning of the season, is regarded as complying with this specification.

Property	Effective on and from 1 May 2007	Effective on and from 1 January 2008	Test method
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³ Petrol that complies with the previous season's quality, and that is stored in a filling station tank to which fewer than 3 deliveries of petrol have been made since 6 weeks before the beginning of the season, is regarded as complying with this specification. For regular grade petrol blended with more than 1% and not more than 10% volume ethanol, the maximum vapour pressure allowed is: Auckland and Northland: 72 kPa summer; 87 kPa autumn and spring; 90 kPa winter; rest of North Island: 77 kPa summer; 87 kPa autumn and spring; 90 kPa winter; South Island: 82 kPa summer; 92 kPa autumn and spring; 95 kPa winter.

⁴ Ultimate requirement for **sulphur-free** petrol of 10 ppm maximum sulphur content.

⁵ Regulation 4 provides—

“If petrol contains ethanol greater than 1% by volume, the seller of the petrol must provide or display information to consumers on the possible vehicle maintenance requirements that may result from using ethanol blends.”

⁶ To be reviewed by 2010 (indicative time frame).

Schedule 2

rr 4, 6, 7, 8

Requirements for premium grade petrol

Schedule 2 was substituted, as from 1 January 2007, by regulation 6 Petroleum Products Specifications Amendment Regulations 2006 (SR 2006/350).

Schedule 2 was substituted, as from 1 May 2007, by regulation 5 Petroleum Products Specifications Amendment Regulations 2007 (SR 2007/88).

Property	Effective on and from 1 May 2007	Effective on and from 1 January 2008	Test method
Research Octane Number (RON)	95.0 minimum	95.0 minimum	ASTM D2699
Motor Octane Number (MON)	85.0 minimum	85.0 minimum	ASTM D2700
Colour	Not to be mistaken for water	Not to be mistaken for water	Visual
Percentage volume evaporated at 70°C (E70) ⁷	22 minimum	22 minimum	ASTM D86
	48 maximum	48 maximum	
Percentage volume evaporated at 100°C (E100)	45 minimum	45 minimum	ASTM D86
	70 maximum	70 maximum	
Percentage volume evaporated at 150°C (E150)	75 minimum	75 minimum	ASTM D86
End point (°C)	210 maximum	210 maximum	ASTM D86
Residue (percentage volume)	2 maximum	2 maximum	ASTM D86

Property	Effective on and from 1 May 2007	Effective on and from 1 January 2008	Test method
Flexible Volatility Index ⁸ [VP (kPa) + (0.7 × E70)]	115.0 maximum	115.0 maximum	ASTM D86 and ASTM D5191
Vapour Pressure ⁹ (VP) (kPa)	Maxima: Auckland and Northland: 65 kPa summer; 80 kPa autumn and spring; 90 kPa winter; rest of North Island: 70 kPa summer; 80 kPa autumn and spring; 90 kPa winter; South Island: 75 kPa summer; 85 kPa autumn and spring; 95 kPa winter Minimum: 45 kPa all year	Maxima: Auckland and Northland: 65 kPa summer; 80 kPa autumn and spring; 90 kPa winter; rest of North Island: 70 kPa summer; 80 kPa autumn and spring; 90 kPa winter; South Island: 75 kPa summer; 85 kPa autumn and spring; 95 kPa winter Minimum: 45 kPa all year	ASTM D5191
Copper strip corrosion (3 hours at 50°C)	Class 1 maximum	Class 1 maximum	ASTM D130
Sulphur ¹⁰ (mg/kg)	150 maximum	50 maximum	IP 497 or ASTM D5453

Property	Effective on and from 1 May 2007	Effective on and from 1 January 2008	Test method
Existent gum (solvent washed) (mg/100 ml)	5 maximum	5 maximum	ASTM D381
Oxidation stability induction period (minutes)	360 minimum	360 minimum	ASTM D525
Lead (mg/l)	5 maximum	5 maximum	IP 224
Benzene (percentage volume)	1 maximum	1 maximum	ASTM D5580
Total aromatic compounds (including benzene) (percentage volume)	42 maximum pool average and 45 maximum cap	42 maximum pool average and 45 maximum cap	ASTM D5580
Oxygenates ¹¹ (percentage volume)	1 maximum for total oxygenates, with the exception of ethanol; 10 maximum for ethanol	1 maximum for total oxygenates, with the exception of ethanol; 10 maximum for ethanol	ASTM D4815
Olefins (percentage volume)	18 maximum	18 maximum	ASTM D1319

Property	Effective on and from 1 May 2007	Effective on and from 1 January 2008	Test method
Manganese ¹² (mg/l)	2.0 maximum	2.0 maximum	ASTM D3831
Phosphorus (mg/l)	1.3 maximum	1.3 maximum	ASTM D3231

⁷ For premium grade petrol blended with more than 1% and not more than 10% volume ethanol, the E70 maximum is increased by 1% per 1% volume ethanol in the blend.

⁸ For premium grade petrol blended with more than 1% and not more than 10% volume ethanol, the flexible volatility index maximum allowed is: 115.0 summer; 120.0 autumn and spring; 130.0 winter. Petrol that complies with the previous season's quality, and that is stored in a filling station tank to which fewer than 3 deliveries of petrol have been made since 6 weeks before the beginning of the season, is regarded as complying with this specification.

⁹ Petrol that complies with the previous season's quality, and that is stored in a filling station tank to which fewer than 3 deliveries of petrol have been made since 6 weeks before the beginning of the season, is regarded as complying with this specification. For premium grade petrol blended with more than 1% and not more than 10% volume ethanol, the maximum vapour pressure allowed is: Auckland and Northland: 72 kPa summer; 87 kPa autumn and spring; 90 kPa winter; rest of North Island: 77 kPa summer; 87 kPa autumn and spring; 90 kPa winter; South Island: 82 kPa summer; 92 kPa autumn and spring; 95 kPa winter.

¹⁰ Ultimate requirement for **sulphur-free** petrol of 10 ppm maximum sulphur content.

¹¹ Regulation 4 provides—

Property	Effective on and from 1 May 2007	Effective on and from 1 January 2008	Test method
			“If petrol contains ethanol greater than 1% by volume, the seller of the petrol must provide or display information to consumers on the possible vehicle maintenance requirements that may result from using ethanol blends.”

¹² To be reviewed by 2010 (indicative time frame).

Schedule 3 Requirements for diesel

rr 4, 6, 7, 8

Schedule 3 was amended, as from 1 January 2004, by regulation 4 Petroleum Products Specifications Amendment Regulations 2003 (SR 2003/346) by substituting the words “Viscosity (mm² per second at 40°C)” for the words “Viscosity (mm per second at 40°C)” in the first column.

Schedule 3 was substituted, as from 1 January 2007, by regulation 7 Petroleum Products Specifications Amendment Regulations 2006 (SR 2006/350).

Schedule 3 was substituted, as from 1 May 2007, by regulation 5 Petroleum Products Specifications Amendment Regulations 2007 (SR 2007/88).

Property	Effective on and from 1 May 2007	Effective on and from 1 January 2009	Test method
Density at 15°C (kg/m ³)	820 minimum	820 minimum	ASTM D1298
	850 maximum	850 maximum	
Distillation – 95% volume recovered at (°C) (T95)	360 maximum	360 maximum	ASTM D86

Property	Effective on and from 1 May 2007	Effective on and from 1 January 2009	Test method
Cetane	51 minimum cetane index or 51 minimum cetane number and 47 minimum cetane index	51 minimum cetane index or 51 minimum cetane number and 47 minimum cetane index	Cetane number: ASTM D613 Cetane index: ASTM D976
Water content (mg/kg)	200 maximum	200 maximum	ASTM D6304
Particulates (mg/l)	24 maximum	24 maximum	ASTM D6217
Colour (ASTM colour)	3.0 maximum	3.0 maximum	ASTM D1500
Cloud Point (°C) – Summer; Cloud Point and Cold Filter Plugging Point (CFPP) (°C) – Winter ¹³ .	Summer: +4 maximum Cloud Point; Winter: +2 maximum Cloud Point and –6 maximum Cold Filter Plugging Point	Summer: +4 maximum Cloud Point; Winter: +2 maximum Cloud Point and –6 maximum Cold Filter Plugging Point	Cloud Point: ASTM D5773 Cold Filter Plugging Point IP 309
Sulphur ¹⁴ (mg/kg)	50 maximum	10 maximum	IP 497 or ASTM D5453

Property	Effective on and from 1 May 2007	Effective on and from 1 January 2009	Test method
Polycyclic aromatic hydrocarbons (percentage mass)	11 maximum	11 maximum	IP 391
Filter Blocking Tendency	2.5 maximum; fuel must be of acceptable filterability so that it is fit for common purposes	2.5 maximum; fuel must be of acceptable filterability so that it is fit for common purposes	IP 387 or ASTM D2068
Lubricity – HFRR wear scar diameter at 60°C (µm)	460 maximum	460 maximum	IP 450
Viscosity (mm ² per second at 40°C)	2.0 minimum	2.0 minimum	ASTM D445
	4.5 maximum	4.5 maximum	
Oxidation Stability (g/m ³)	25 maximum	25 maximum	ASTM D2274
Carbon residue (on 10% distillation residue) (percentage mass)	0.2 maximum	0.2 maximum	ASTM D4530

Property	Effective on and from 1 May 2007	Effective on and from 1 January 2009	Test method
Copper strip corrosion (3 hours at 50°C)	Class 1 maximum	Class 1 maximum	ASTM D130
Ash (percentage mass)	0.01 maximum	0.01 maximum	ASTM D482
Flash point (°C)	61 minimum	61 minimum	ASTM D93

¹³ These are maximum criteria; cold flow properties of a fuel must be fit for common purposes in the region and the season in which it is sold. Diesel that complies with the previous season's quality, and that is stored in a filling station tank to which fewer than 3 deliveries of diesel have been made since 6 weeks before the beginning of the season, is regarded as complying with this specification. Sales for marine use may be summer grade at any time of the year.

¹⁴ The limit for sulphur does not apply to sale for marine use.

Marie Shroff,
Clerk of the Executive Council.

Explanatory note

This note is not part of the regulations, but is intended to indicate their general effect.

These regulations consolidate and amend the Petroleum Products Specifications Regulations 1998 and preceding regulations.

The regulations apply progressively over the period September 2002 to January 2006.

They specify technical requirements to be met in respect of petrol and diesel supplied for use other than as an aviation fuel for motorcar, motorcycle, and powerboat racing, and for jetboats.

The regulations have been significantly updated to reflect changes in international environmental, health and safety standards for fuel, improvements in refinery technologies, and changes to vehicle requirements, particularly those related to emissions technologies.

Substantive changes to the petrol specifications are to—

- progressively reduce maximum allowable sulphur levels, benzene levels, and total aromatics levels; and
- allow for the addition of up to 10% ethanol in petrol; and
- regulate maximum levels of olefins from 2004; and
- amend distillation properties (E70, E100, E150, E180, end point); and
- regulate vapour pressure, and delete flexible volatility index minimum; and
- not allow the addition of MTBE, manganese, and phosphorous (with only contamination levels provided for); and
- change the colour requirement to provide that petrol not be mistaken for water.

Substantive changes to the diesel specifications are to—

- progressively reduce maximum allowable sulphur levels; and
- narrow the allowable density range; and
- amend the distillation specification from T85 to T95 and reduce by 2006; and
- regulate maximum polycyclic aromatic hydrocarbons from 2006; and
- progressively increase the minimum cetane index and cetane number; and
- amend the cloud point and cold filter plugging specifications; and
- regulate for filter blocking tendency, lubricity, oxidation stability, water content, and particulates.

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Notes

1 *General*

This is an eprint of the Petroleum Products Specifications Regulations 2002. It incorporates all the amendments to the Petroleum Products Specifications Regulations 2002 as at 1 July 2008. The list of amendments at the end of these notes specifies all the amendments incorporated into this eprint since 3 September 2007. Relevant provisions of any amending enactments that contain transitional, savings, or application provisions are also included, after the Principal enactment, in chronological order.

2 *About this eprint*

This eprint has not been officialised. For more information about officialisation, please see “Making online legislation official” under “Status of legislation on this site” in the About section of this website.

3 *List of amendments incorporated in this eprint (most recent first)*

Engine Fuel Specifications Regulations 2008 (SR 2008/138): regulation 23
