

Petroleum Products Specifications Regulations 2002

Silvia Cartwright, Governor-General

Order in Council

At Wellington this 23rd day of July 2002

Present:

Her Excellency the Governor-General in Council

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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Regulations

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

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.

(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 subclauses (2) to (11).
- (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 subclauses (6)(a) and (b) and (7)(a) and (b); and
 - (e) monthly journal entry, as calculated in subclauses (6)(c) and (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) For diesel sulphur, for each calendar month during the period this regulation is in effect, each producer of fuel in New Zealand and each fuel importer must separately calculate for each region (set out in **Schedule 3**) the average sulphur content of diesel produced or imported in that month as follows:
- (a) for each batch of diesel respectively produced or imported in the month, the average sulphur content of the batch (in mg/kg) is multiplied by the mass of the batch (in kg) to obtain the mass of sulphur (in mg) contained in the batch; and
 - (b) the mass of sulphur calculated from all diesel batches produced or imported in a month is added together and the total divided by the total mass of all the month's batches to produce the monthly average sulphur content (in mg/kg) as follows:

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

where—

S_i is the average sulphur content for batch i in mg/kg

M_i is the mass of batch i in kg

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

- (c) the monthly average sulphur content is subtracted from the pool average maximum and the difference multiplied by the total mass of all the month's batches to produce the monthly journal entry as follows:

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

where—

M_i is the mass of batch i in kg

n is the total number of batches in the month.

(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

- (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:

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

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) For diesel sulphur content, all debits must be offset with an equal number of credits by 31 December 2005.

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.

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 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.

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 9; or
- (c) fails to comply with a requirement made under regulation 11.

12 Revocation

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

Schedule 1

Requirements for regular grade petrol

rr 4, 6, 7, 8

Property	Effective from 1 September 2002	Effective from 1 January 2004	Effective from 1 January 2006	Test method
Research Octane Number (RON)	91.0 minimum	91.0 minimum	91.0 minimum	ASTM D2699
Motor Octane Number (MON)	82.0 minimum	82.0 minimum	82.0 minimum	ASTM D2700
Colour	Not to be mistaken for water	Not to be mistaken for water	Not to be mistaken for water	Visual
Percentage volume evaporated at 70°C (E70)	22 minimum 48 maximum	22 minimum 48 maximum	22 minimum 48 maximum	ASTM D86
Percentage volume evaporated at 100°C (E100)	45 minimum 70 maximum	45 minimum 70 maximum	45 minimum 70 maximum	ASTM D86
Percentage volume evaporated at 180°C (E180)	90 minimum	Not applicable	Not applicable	ASTM D86
Percentage volume evaporated at 150°C (E150)	Not applicable	75 minimum	75 minimum	ASTM D86
End point (°C)	220 maximum	215 maximum	210 maximum	ASTM D86
Residue (percentage volume)	2 maximum	2 maximum	2 maximum	ASTM D86
Flexible Volatility Index [VP (kPa) + (0.7 × E70)]	115.0 maximum	115.0 maximum	115.0 maximum	ASTM D86 and ASTM D5191
Vapour Pressure ¹ (kPa) Summer: 1 December – 31 March; Autumn: 1 April – 31 May; Winter: 1 June – 31 August; Spring: 1 September – 30 November	Maxima: 85 kPa summer; 90 kPa autumn/spring; 95 kPa winter Minimum: 45 kPa all year	Maxima: 75 kPa summer; 85 kPa autumn/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

¹ 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 from 1 September 2002	Effective from 1 January 2004	Effective from 1 January 2006	Test method
Copper strip corrosion (3 hours at 50°C)	Class 1 maximum	Class 1 maximum	Class 1 maximum	ASTM D130
Sulphur ² (mg/kg)	350 maximum	350 maximum	150 maximum	IP 336 or ASTM D5453
Existent gum (solvent washed) (mg/100 ml)	5 maximum	5 maximum	5 maximum	ASTM D381
Oxidation stability induction period (minutes)	360 minimum	360 minimum	360 minimum	ASTM D525
Lead (mg/l)	5 maximum	5 maximum	5 maximum	IP 224
Benzene (percentage volume)	4 maximum	3 maximum if 20% maximum olefins or 1 maximum if 25% maximum olefins	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	42 maximum pool average and 45 maximum cap	ASTM D5580
Oxygenates ³ (percentage volume)	1 maximum for total oxygenates, with the exception of ethanol Ethanol: 10% by volume maximum	1 maximum for total oxygenates, with the exception of ethanol Ethanol: 10% by volume maximum	1 maximum for total oxygenates, with the exception of ethanol Ethanol: 10% by volume maximum	ASTM D4815
Olefins (percentage volume)	Not applicable	25 maximum if 1% maximum benzene or 20 maximum if 3% maximum benzene	18 maximum	ASTM D1319
Manganese ⁴ (mg/l)	2.0 maximum	2.0 maximum	2.0 maximum	ASTM D3831
Phosphorus (mg/l)	1.3 maximum	1.3 maximum	1.3 maximum	ASTM D3231

² Indicative 50 ppm maximum sulphur content from 2008; ultimate requirement for "sulphur-free" petrol of 10–15 ppm maximum sulphur content.

³ The sale of ethanol-blended petrol must be accompanied by consumer information about the possible vehicle maintenance requirements that may result from using ethanol blends. Up to 11% volume MTBE allowed until 1 March 2003, as long as the total volume of all oxygenates does not exceed 11% by volume.

⁴ To be reviewed by 2006.

rr 4, 6, 7, 8

Schedule 2

Requirements for premium grade petrol

Property	Effective from 1 September 2002	Effective from 1 January 2004	Effective from 1 January 2006	Test method
Research Octane Number (RON)	95.0 minimum	95.0 minimum	95.0 minimum	ASTM D2699
Motor Octane Number (MON)	85.0 minimum	85.0 minimum	85.0 minimum	ASTM D2700
Colour	Not to be mistaken for water	Not to be mistaken for water	Not to be mistaken for water	Visual
Percentage volume evaporated at 70°C (E70)	22 minimum 48 maximum	22 minimum 48 maximum	22 minimum 48 maximum	ASTM D86
Percentage volume evaporated at 100°C (E100)	45 minimum 70 maximum	45 minimum 70 maximum	45 minimum 70 maximum	ASTM D86
Percentage volume evaporated at 180°C (E180)	90 minimum	Not applicable	Not applicable	ASTM D86
Percentage volume evaporated at 150°C (E150)	Not applicable	75 minimum	75 minimum	ASTM D86
End point (°C)	220 maximum	215 maximum	210 maximum	ASTM D86
Residue (percentage volume)	2 maximum	2 maximum	2 maximum	ASTM D86
Flexible Volatility Index [VP (kPa) + (0.7 × E70)]	115.0 maximum	115.0 maximum	115.0 maximum	ASTM D86 and ASTM D5191
Vapour Pressure ⁵ (kPa) Summer: 1 December – 31 March; Autumn: 1 April – 31 May; Winter 1 June – 31 August; Spring: 1 September – 30 November	Maxima: 85 kPa summer; 90 kPa autumn/spring; 95 kPa winter Minimum: 45 kPa all year	Maxima: 75 kPa summer; 85 kPa autumn/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

⁵ 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 from 1 September 2002	Effective from 1 January 2004	Effective from 1 January 2006	Test method
Copper strip corrosion (3 hours at 50°C)	Class 1 maximum	Class 1 maximum	Class 1 maximum	ASTM D130
Sulphur ⁶ (mg/kg)	150 maximum	150 maximum	150 maximum	IP 336 or ASTM D5453
Existent gum (solvent washed) (mg/100 ml)	5 maximum	5 maximum	5 maximum	ASTM D381
Oxidation stability induction period (minutes)	360 minimum	360 minimum	360 minimum	ASTM D525
Lead (mg/l)	5 maximum	5 maximum	5 maximum	IP 224
Benzene (percentage volume)	4 maximum	3 maximum if 20% maximum olefins or 1 maximum if 25% maximum olefins	1 maximum	ASTM D5580
Total aromatic compounds (including Benzene) (percentage volume)	48 maximum	48 maximum	42 maximum pool average and 45 maximum cap	ASTM D5580
Oxygenates ⁷ (percentage volume)	1 maximum for total oxygenates, with the exception of ethanol Ethanol: 10% by volume maximum	1 maximum for total oxygenates, with the exception of ethanol Ethanol: 10% by volume maximum	1 maximum for total oxygenates, with the exception of ethanol Ethanol: 10% by volume maximum	ASTM D4815
Olefins (percentage volume)	Not applicable	25 maximum if 1% maximum benzene or 20 maximum if 3% maximum benzene	18 maximum	ASTM D1319
Manganese ⁸ (mg/l)	2.0 maximum	2.0 maximum	2.0 maximum	ASTM D3831
Phosphorus (mg/l)	1.3 maximum	1.3 maximum	1.3 maximum	ASTM D3231

⁶ Indicative 50 ppm maximum sulphur content from 2008; ultimate requirement for "sulphur-free" petrol of 10–15 ppm maximum sulphur content.

⁷ The sale of ethanol-blended petrol must be accompanied by consumer information about the possible vehicle maintenance requirements that may result from using ethanol blends. Up to 11% volume MTBE allowed until 1 March 2003, as long as the total volume of all oxygenates does not exceed 11% by volume.

⁸ To be reviewed by 2006.

rr 4, 6, 7, 8

Schedule 3 Requirements for diesel

Property	Effective from 1 September 2002	Effective from 1 January 2004	Effective from 1 January 2006	Test method
Density at 15°C (kg/m ³)	820 minimum 860 maximum	820 minimum 850 maximum (effective 1 August 2004)	820 minimum 850 maximum	ASTM D1298
Distillation – 95% volume recovered at (°C) (T95)	370 maximum	370 maximum	360 maximum	ASTM D86
Cetane	47 minimum cetane index or 47 minimum cetane number	49 minimum cetane index or 49 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
Appearance at 15°C	Clear and bright or compliance with water con- tent and particu- lates specifica- tions below	Clear and bright or compliance with water con- tent and particu- lates specifica- tions below	Not applicable	ASTM D4176(B)
Water content (mg/ kg)	200 maximum. Requirement waived if appear- ance specification is met.	200 maximum. Requirement waived if appear- ance specification is met.	200 maximum	ASTM D6304
Particulates (mg/l)	24 maximum. Requirement waived if appear- ance specification is met.	24 maximum. Requirement waived if appear- ance specification is met.	24 maximum	ASTM D6217
Colour (ASTM colour)	3.0 maximum	3.0 maximum	3.0 maximum	ASTM D1500
Cloud Point (°C) – Summer; Cloud Point and Cold Filter Plug- ging Point (CFPP) (°C) – Winter ⁹ . Winter: 15 April – 14 October; Summer: 15 October – 14 April	Winter: +2 maxi- mum Cloud Point and –6 maximum Cold Filter Plugging Point; Summer: +4 maximum Cloud Point	Winter: +2 maxi- mum Cloud Point and –6 maximum Cold Filter Plugging Point; Summer: +4 maximum Cloud Point	Winter: +2 maxi- mum Cloud Point and –6 maximum Cold Filter Plugging Point; Summer: +4 maximum Cloud Point	Cloud Point: ASTM D5773 Cold Filter Plug- ging Point: IP 309

⁹ 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.

Property	Effective from 1 September 2002	Effective from 1 January 2004	Effective from 1 January 2006	Test method
Sulphur ¹⁰ (mg/kg)	1,000 maximum pool average and 1,400 maximum cap for Auckland and Northland; 2,200 maximum pool average and 3,000 maximum cap for rest of country	500 maximum pool average and 600 maximum cap (effective 1 August 2004)	50 maximum	IP 336 or ASTM D5453
Polycyclic aromatic hydrocarbons (percentage mass)	Not applicable	Not applicable	11 maximum	IP 391
Filter Blocking Tendency	Fuel must be of acceptable filterability so that it is fit for common purposes	Fuel must be of acceptable filterability so that it is fit for common purposes	Fuel must be of acceptable filterability so that it is fit for common purposes	Indicative for monitoring purposes: IP 387 or ASTM D2068, 2.5 maximum, to be reviewed by 2006
Lubricity – HFRR wear scar diameter at 60°C (µm)	460 maximum	460 maximum	460 maximum	IP 450
Viscosity (mm per second at 40°C)	1.5 minimum 4.5 maximum	1.5 minimum 4.5 maximum	2.0 minimum 4.5 maximum	ASTM D445
Oxidation Stability (g/m ³)	25 maximum	25 maximum	25 maximum	ASTM D2274
Carbon residue (on 10% distillation residue) (percentage mass)	0.25 maximum	0.25 maximum	0.25 maximum	ASTM D4530
Copper strip corrosion (3 hours at 50°C)	Class 1 maximum	Class 1 maximum	Class 1 maximum	ASTM D130
Ash (percentage mass)	0.01 maximum	0.01 maximum	0.01 maximum	ASTM D482
Flash point (°C)	61 minimum	61 minimum	61 minimum	ASTM D93

¹⁰ The limit for sulphur does not apply to sale for marine use. Diesel sulphur content to be reviewed by mid-2005; 10–15 ppm maximum sulphur content to be required no later than 2009–10.

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 motor-car, 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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