



**THE MINISTRY OF ENERGY (PETROLEUM PRODUCTS  
SPECIFICATIONS) REGULATIONS 1988**

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PAUL REEVES, Governor-General

ORDER IN COUNCIL

At Wellington this 5th day of December 1988

Present:

THE RIGHT HON. DAVID LANGE PRESIDING IN COUNCIL

PURSUANT to the Ministry of Energy Act 1977, His Excellency the Governor-General, acting by and with the advice and consent of the Executive Council, hereby makes the following regulations.

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REGULATIONS

**1. Title, commencement, and application**—(1) These regulations may be cited as the Ministry of Energy (Petroleum Products Specifications) Regulations 1988.

(2) These regulations shall come into force on the 28th day after the date of their notification in the *Gazette*.

(3) These regulations shall apply in respect of fuel imported into New Zealand or refined in New Zealand on or after the date of commencement of these regulations.

**2. Interpretation**—(1) In these regulations, unless the context otherwise requires,—

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

“Fuel” means diesel or petrol:

“Leaded petrol” means petrol other than unleaded 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 30 degrees Celsius to 220 degrees Celsius, whether or not it contains additives, 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 Petroleum Act 1937:

“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:

“Unleaded petrol” means petrol to which no lead has been intentionally added and which has a lead content not exceeding 0.05 of a gram per litre.

(2) In these regulations,—

“ASTM” means the American Society for Testing and Materials:

“BS” means British Standard:

“DIN” means the German Institute for Standardisation:

“IP” means the Institute of Petroleum, London.

(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) of this regulation, means the latest version of the document identified by that serial number.

(4) Where a test method prescribed in these regulations provides for a joint method, each of the alternative methods shall have equal standing, and either of those methods may be used.

**3. Requirements relating to fuel sold by retail**—(1) The requirements imposed by subclauses (2), (3), and (4) of this regulation shall apply to all fuel, however described, supplied, or available or intended for supply, by way of retail sale:

Provided that those requirements shall not apply to any fuel which is to be used as an aviation fuel.

(2) Leaded petrol shall have properties that conform to the limits specified in the First Schedule to these regulations, when tested by the methods specified in that Schedule.

(3) Unleaded petrol shall have properties that conform to the limits specified in the Second Schedule to these regulations, when tested by the methods specified in that Schedule.

(4) Diesel shall have properties that conform to the limits specified in the Third Schedule to these regulations, when tested by the methods specified in that Schedule.

**4. Requirements relating to all fuel**—(1) The requirements imposed by subclauses (2), (3), and (4) of this regulation shall apply to all fuel supplied or available or intended for supply (whether by way of sale or otherwise) for any end use other than use as an aviation fuel.

(2) Leaded petrol shall have the properties in respect of sulphur, lead, and benzene that conform to the limits specified in the First Schedule to these regulations, when tested by the methods specified in that Schedule.

(3) Unleaded petrol shall have the properties in respect of sulphur, lead, and benzene that conform to the limits specified in the Second Schedule to these regulations, when tested by the methods specified in that Schedule.

(4) Diesel shall have the properties in respect of sulphur that conform to the limit specified in the Third Schedule to these regulations, when tested by the methods specified in that Schedule.

**5. Test procedures**—(1) The procedure for obtaining a representative sample of fuel for testing by the test methods set out in these regulations shall be as set out in Part 1 of BS 3195 and in Section 2.2 of BS 4040, BS 7070, and BS 2869.

(2) In the event of a dispute as to the appropriate value nature or rating of any of the properties listed in the First, Second, and Third Schedules to these regulations or referred to in these regulations, the relevant procedures specified in BS 4306 shall be used to interpret the laboratory results.

**6. Sampling of fuel, etc.**—The importer or wholesale supplier or retailer of any fuel to which these regulations apply shall—

(a) Permit a person authorised for the purpose by the Secretary of Energy to take a sample of the fuel before it is discharged from a vessel or pipeline or pump for distribution or sale; or

(b) In the case of an importer or wholesale supplier, supply such an authorised person with a certificate describing the properties and value of any such fuel—

if the authorised person so requests.

**7. Withdrawal of fuel from sale, etc.**—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—

as the case may require.

**8. Offences**—Every person who—

(a) Supplies, or makes available for supply, by way of retail sale any fuel which does not comply with regulation 3 of these regulations; or

(b) Supplies or makes available for supply (whether by way of sale or otherwise), for any end use other than use as an aviation fuel, any fuel which does not comply with regulation 4 of these regulations; or

(c) Fails to comply with a request made under regulation 6 of these regulations; or

(d) Fails to comply with a requirement made under regulation 7 of these regulations—

commits an offence and is liable on summary conviction to a fine not exceeding \$1,000.

## SCHEDULES

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### FIRST SCHEDULE

Regs. 3 (2), 4 (2)

#### REQUIREMENTS FOR LEADED PETROL

<i>Property</i>	<i>Limit</i>	<i>Test Method</i>
Research octane number	.. 96.0 minimum	ASTM D 2699
Motor octane number	.. 87.0 minimum	ASTM D 2700
Colour	.. Red	Visual
Percentage volume evaporated at 70 degrees Celsius (E 70)	15 minimum 45 maximum	} ASTM D 86
Percentage volume evaporated at 100 degrees Celsius (E 100)	40 minimum 67 maximum	
Percentage volume evaporated at 180 degrees Celsius (E 180)	90 minimum	ASTM D 86
End point (degrees Celsius)	.. 220 maximum	ASTM D 86
Residue (percentage volume)	.. 2 maximum	ASTM D 86
Flexible volatility index	77.5 minimum	} ASTM D 323 and ASTM D 86
[RVP (kPa) + (0.7 × E 70)] <sup>1</sup>	115.0 maximum	
Copper strip corrosion (2 hours at 100 degrees Celsius)	Class 1 maximum	ASTM D 130
Sulphur (percentage mass)	.. 0.15 maximum	ASTM D 1266
Existent gum (solvent washed) (mg/100ml)	5 maximum	ASTM D 381
Oxidation stability induction period (minutes)	240 minimum	ASTM D 525
Lead (grams per litre)	.. 0.45 maximum	ASTM D 3341
Benzene (percentage mass)	.. 5 maximum	DIN 51 413-02
Oxygenates (percentage mass) <sup>2</sup>	0.1 maximum	DIN 51 413-01

<sup>1</sup> Specifications cover broad range of summer and winter grades.

<sup>2</sup> Does not apply where the added oxygenate is methyl tertiary butyl ether (MTBE). Up to 11 percent volume MTBE may be added.

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Regs. 3 (3), 4 (3)

SECOND SCHEDULE  
REQUIREMENTS FOR UNLEADED PETROL

<i>Property</i>	<i>Limit</i>	<i>Test Method</i>
Research octane number	.. 91.0 minimum	ASTM D 2699
Motor octane number	.. 82.0 minimum	ASTM D 2700
Colour .. ..	.. Yellow/orange	Visual
Percentage volume evaporated at 70 degrees Celsius (E 70)	15 minimum 45 maximum	} ASTM D 86
Percentage volume evaporated at 100 degrees Celsius (E 100)	40 minimum 67 maximum	
Percentage volume evaporated at 180 degrees Celsius (E 180)	90 minimum	ASTM D 86
End point (degrees Celsius)	.. 220 maximum	ASTM D 86
Residue (percentage volume)	.. 2 maximum	ASTM D 86
Flexible volatility index [RVP (kPa) + (0.7 × E 70)] <sup>1</sup>	77.5 minimum 115.0 maximum	} ASTM D 86
Copper strip corrosion (2 hours at 100 degrees Celsius)	Class 1 maximum	ASTM D 130
Sulphur (percentage mass)	.. 0.10 maximum	ASTM D 1266
Existent gum (solvent washed) (mg/100ml)	5 maximum	ASTM D 381
Oxidation stability induction period (minutes)	240 minimum	ASTM D 525
Lead (grams per litre)	.. 0.05 maximum	ASTM D 3341 or ASTM D 3116
Benzene (percentage mass)	.. 5 maximum	DIN 51 413-02
Oxygenates (percentage mass) <sup>2</sup>	0.1 maximum	DIN 51 413-01

<sup>1</sup> Specifications cover broad range of summer and winter grades.<sup>2</sup> Does not apply where the added oxygenate is methyl tertiary butyl ether (MTBE). Up to 11 percent volume MTBE may be added.

THIRD SCHEDULE  
REQUIREMENTS FOR DIESEL

Regs. 3 (4), 4 (4)

<i>Property</i>	<i>Limit</i>	<i>Test Method</i>
Density at 15 degrees Celsius (kg per litre)	0.860 maximum 0.810 minimum	} ASTM D 1298
Appearance at 15 degrees Celsius	Clear and bright	
Colour (ASTM colour)	.. 3.0 maximum	ASTM D 1500
Cetane number <i>or</i> cetane index	45 minimum 47 minimum	ASTM D 613 ASTM D 976
Cloud point (degrees Celsius) <sup>1</sup> — Summer	4 maximum	ASTM D 2500
Cloud point or Cold filter plugging point (CFPP) (degrees Celsius) <sup>1</sup> — Winter	—6 maximum	ASTM D 2500 or IP 309
Viscosity (centistokes at 40 degrees Celsius)	1.50 minimum 5.00 maximum	} ASTM D 445
Flash point (degrees Celsius)	61 minimum	
Sulphur (percentage mass)	.. 0.30 maximum	ASTM D 93 IP 242
Copper strip corrosion (3 hours at 100 degrees Celsius)	Class 1 maximum	ASTM D 130
Ash (percentage mass)	.. 0.01 maximum	ASTM D 482
Carbon residue—Ramsbottom on 10 percent volume residuum (percentage mass)	0.20 maximum	ASTM D 524
Distillation—85 percent volume recovered to (degrees Celsius)	350 maximum	ASTM D 86

<sup>1</sup> Applies at time of manufacture in New Zealand or, for imports, date of discharge into port storage at a New Zealand port.

Summer: 1 September to 31 January.

Winter: 1 February to 31 August.

For locations subject to severe cold periods a maximum -9 CFPP is recommended.

Sales for marine use may be summer grade at any time of the year.

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 specify technical requirements required to be met by petroleum fuels distributed in New Zealand.

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Issued under the authority of the Regulations Act 1936.  
Date of notification in *Gazette*: 8 December 1988.  
These regulations are administered in the Ministry of Energy.