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- B **DIRECTIVE 98/70/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 13 October 1998
relating to the quality of petrol and diesel fuels and amending Council Directive 93/12/EEC**
(OJ L 350, 28.12.1998, p. 58)

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**DIRECTIVE 98/70/EC OF THE EUROPEAN PARLIAMENT AND
OF THE COUNCIL**

of 13 October 1998

**relating to the quality of petrol and diesel fuels and amending
Council Directive 93/12/EEC**

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 100a thereof,

Having regard to the proposal from the Commission⁽¹⁾,

Having regard to the opinion of the Economic and Social Committee⁽²⁾,

Acting in accordance with the procedure laid down in Article 189b of the Treaty⁽³⁾ in the light of the joint text approved on 29 June 1998 by the Conciliation Committee,

- (1) Whereas disparity between the laws or administrative measures adopted by the Member States on specifications of conventional and alternative fuels used by vehicles equipped with positive-ignition and compression-ignition engines creates barriers to trade in the Community and may thereby directly affect the establishment and functioning of the internal market and the international competitiveness of the European vehicle and refining industries; whereas in accordance with the provisions of Article 3b of the Treaty, it therefore appears necessary to approximate the laws in this field;
- (2) Whereas Article 100a(3) of the Treaty envisages that Commission proposals aimed at the establishment and functioning of the internal market and concerning, *inter alia*, health and environmental protection will take as a base a high level of protection;
- (3) Whereas primary air pollutants such as nitrogen oxides, unburnt hydrocarbons, particulate matter, carbon monoxide, benzenes and other toxic exhaust emissions which contribute to the formation of secondary pollutants such as ozone are emitted in significant amounts through the exhaust and evaporative fumes of motor vehicles thereby posing directly and indirectly a considerable risk to human health and the environment;
- (4) Whereas despite the increasing stringency of vehicle emission limit values laid down by Council Directive 70/220/EEC⁽⁴⁾, and by Council Directive 88/77/EEC⁽⁵⁾, further measures to reduce atmospheric pollution caused by vehicles and other sources are necessary in order to achieve satisfactory air quality;
- (5) Whereas Article 4 of Directive 94/12/EC of the European Parliament and of the Council⁽⁶⁾ introduced a new approach with regard to emission reduction policies for and beyond the year 2000 and required the Commission to examine, *inter alia*, the contribution that improvements in the quality of petrol and diesel and other fuels could make to reducing air pollution;

⁽¹⁾ OJ C 77, 11.3.1997, p. 1 and OJ C 209, 10.7.1997, p. 25.

⁽²⁾ OJ C 206, 7.7.1997, p. 113.

⁽³⁾ Opinion of the European Parliament of 10 April 1997 (OJ C 132, 28.4.1997, p. 170), Council Common Position of 7 October 1997 (OJ C 351, 19.11.1997, p. 1) and Decision of the European Parliament of 18 February 1998 (OJ C 80, 16.3.1998, p. 92). Decision of the European Parliament of 15 September 1998 (OJ C 313, 12.10.1998). Decision of the Council of 17 September 1998.

⁽⁴⁾ OJ L 76, 6.4.1970, p. 1. Directive as last amended by Directive 98/69/EC of the European Parliament and of the Council (see page 1 of this Official Journal).

⁽⁵⁾ OJ L 36, 9.2.1988, p. 33. Directive as last amended by Directive 96/1/EC of the European Parliament and of the Council (OJ L 40, 17.2.1996, p. 1).

⁽⁶⁾ OJ L 100, 19.4.1994, p. 42.

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- (6) Whereas, in addition to an initial stage of fuel specifications beginning in the year 2000, provision must be made for a second stage, to come into effect in 2005, to enable the industry to make the necessary investments to adapt its production plans;
- (7) Whereas petrol and diesel fuel complying with the specifications set out in Annexes I, II, III and IV are already available on the market in the European Community;
- (8) Whereas the European auto/oil programme, the details of which are outlined in the Commission's communication on a future strategy for the control of atmospheric emissions from road transport, contributes towards a scientific, technical and economic basis for recommending the introduction at Community level of new environmental fuel specifications for petrol and diesel fuels;
- (9) Whereas the introduction of environmental fuels specifications for petrol and diesel fuels is an important element of the cost-effective package of Europe-wide and national/regional/local measures that should be put into effect, taking into account the costs and benefits of any action;
- (10) Whereas the implementation of a combination of Europe-wide and national/regional/local measures to reduce vehicle emissions is part of the Commission's overall strategy to reduce air emissions from mobile and stationary sources in a way that is balanced and meets cost-benefit criteria;
- (11) Whereas it is necessary to obtain in the short term a reduction, in particular in urban areas, of polluting vehicle emissions, including primary pollutants such as unburnt hydrocarbons and carbon monoxide, secondary pollutants such as ozone, toxic emissions such as benzene and particle emissions; whereas the reduction of polluting vehicle emissions in urban areas can be immediately achieved on motor vehicles through changes in fuel composition;
- (12) Whereas the incorporation of oxygen and the significant reduction in aromatics, olefins, benzene and sulphur can permit better fuel quality to be obtained from an air quality standpoint;
- (13) Whereas the provisions of Council Directive 92/81/EEC of 19 October 1992 on the harmonisation of the structures of excise duties on mineral oils⁽¹⁾, and in particular Article 8(4) thereof, discourage and may prevent Member States from operating excise tax differentiation designed to accelerate fuel quality above Community-wide fuel specifications;
- (14) Whereas the use by Member States of differentiated excise taxation can encourage the introduction of more advanced fuels in line with national priorities, capacity and requirements;
- (15) Whereas the Commission has brought forward a proposal for an Energy Products Directive; whereas this proposal has the objective of, *inter alia*, permitting Member States to make more active use of fiscal incentives through differentiated excise taxation, so as to facilitate the introduction of more advanced fuels;
- (16) Whereas fuel specifications aiming at the reduction of both exhaust and evaporative emissions are generally lacking;
- (17) Whereas atmospheric pollution by lead arising from the combustion of leaded petrol constitutes a risk for human health and the environment; whereas it is a great step forward that by 2000 virtually all petrol-driven road vehicles will be able to run on unleaded petrol and whereas therefore it is appropriate to restrict severely the marketing of leaded petrol;
- (18) Whereas the need for vehicle emission reduction and the availability of the necessary refinery technology justify the

⁽¹⁾ OJ L 316, 31.10.1992, p. 12. Directive as last amended by Directive 94/74/EC (OJ L 365, 31.12.1994, p. 46).

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setting of environmental fuel specifications for the marketing of unleaded petrol and diesel fuels;

- (19) Whereas it seems appropriate to provide for the availability of two types of diesel and petrol fuel, one of which would be a higher-quality diesel and one of which would be a higher quality petrol; whereas it is appropriate for this higher quality diesel or petrol to replace diesel or petrol of lower quality on the market by 2005; whereas, however, appropriate provision should be made for such replacement to be delayed when application of the date of 2005 in a Member State would cause severe difficulties for its industries in making the necessary changes in its manufacturing facilities;
- (20) Whereas, in order to protect human health and/or the environment in specific agglomerations or in specific ecologically sensitive areas with special problems of air quality, Member States should be permitted, subject to a procedure established in this Directive, to require that fuels may be marketed only if they comply with more stringent environmental specifications than established under this Directive; whereas this procedure is a derogation from the information procedure laid down in Directive 98/34/EC of 22 June 1998 of the European Parliament and of the Council laying down a procedure for the provision of information in the field of technical standards and regulations and of rules on information society services⁽¹⁾;
- (21) Whereas, in order to ensure compliance with the fuel quality standards required under this Directive, Member States should introduce monitoring systems; whereas such monitoring systems should be based on common procedures for sampling and testing and whereas information on fuel quality collected by Member States should be communicated to the Commission according to a common format;
- (22) Whereas, on the basis of a comprehensive assessment, the Commission is to submit a proposal complementing the mandatory specifications for petrol and diesel fuels referred to in Annexes III and IV to be applied as from 1 January 2005; whereas the Commission's proposal may, as appropriate, also set down environmental specifications for other types of fuel such as liquid petroleum gas, natural gas and biofuels; whereas captive vehicle fleets exist (buses, taxis, commercial vehicles, etc.) which are responsible for a large proportion of urban pollution and would benefit from separate specifications;
- (23) Whereas further developments with regard to reference methods for measuring the specifications set out in this Directive may be desirable in the light of scientific and technical progress; whereas to this end, provisions should be made in order to adapt the Annexes to this Directive to technical progress;
- (24) Whereas Council Directive 85/210/EEC of 20 March 1985 on the approximation of the laws of the Member States concerning the lead content of petrol⁽²⁾, Council Directive 85/536/EEC of 5 December 1985 relating to crude-oil savings through the use of substitute fuel components in petrol⁽³⁾, and Article 1(1)(b) and Article 2(1) of Council Directive 93/12/EEC of 23 March 1993 relating to the sulphur content of certain liquid fuels⁽⁴⁾, should be repealed accordingly;
- (25) Whereas the transitional measures for Austria referred to in Article 69 of the 1994 Act of Accession include Article 7 of Directive 85/210/EEC; whereas the application of this transitional

⁽¹⁾ OJ L 204, 21.7.1998, p. 37. Directive as amended by Directive 98/48/EC (OJ L 217, 5.8.1998, p. 18).

⁽²⁾ OJ L 96, 3.4.1985, p. 25. Directive as last amended by the 1994 Act of Accession.

⁽³⁾ OJ L 334, 12.12.1985, p. 20. Directive as amended by Commission Directive 87/441/EEC (OJ L 238, 21.8.1987, p. 40).

⁽⁴⁾ OJ L 74, 27.3.1993, p. 81.

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measure should, for specific reasons of the protection of the environment, be prolonged until 1 January 2000;

- (26) Whereas a *modus vivendi* between the European Parliament, the Council and the Commission concerning the implementing measures for acts adopted in accordance with the procedure laid down in Article 189b of the Treaty⁽¹⁾ was concluded on 20 December 1994,

HAVE ADOPTED THIS DIRECTIVE:

Article 1

Scope

This Directive sets technical specifications on health and environmental grounds for fuels to be used for vehicles equipped with positive-ignition and compression-ignition engines.

Article 2

Definitions

For the purpose of this Directive:

1. 'petrol' means any volatile mineral oil intended for the operation of internal combustion positive-ignition engines for the propulsion of vehicles and falling within CN codes 2710 00 27, 2710 00 29, 2710 00 32, 2710 00 34 and 2710 00 36;
2. 'diesel fuels' means gas oils falling within CN codes 2710 00 66 and used for self-propelling vehicles as referred to in Directive 70/220/EEC and Directive 88/77/EEC.

For gas oils used for engines in non-road mobile machinery and agricultural tractors Member States may require the same sulphur content as defined for diesel fuels in this Directive or the sulphur content as defined for diesel fuels in Directive 93/12/EEC.

Article 3

Petrol

1. No later than 1 January 2000, Member States shall prohibit the marketing of leaded petrol within their territory.
2. (a) Member States shall ensure that, no later than 1 January 2000, unleaded petrol can be marketed within their territory only if it complies with the environmental specifications set out in Annex I.
 - (b) Without prejudice to the provisions of subparagraph (a), Member States shall, from 1 January 2000, permit the marketing within their territory of unleaded petrol complying with the specifications of Annex III.
 - (c) Member States shall also ensure that, no later than 1 January 2005, unleaded petrol can be marketed within their territory only if it complies with the environmental specifications set out in Annex III.
3. By way of derogation from paragraph 1, a Member State may be allowed, on a request to be submitted to the Commission no later than 31 August 1999, to continue to permit the marketing of leaded petrol, until at the latest 1 January 2005, if it can demonstrate that the introduction of a ban would result in severe socioeconomic problems or would not lead to overall environmental or health benefits because of, *inter alia*, the climatic situation in that Member State.

The lead content of leaded petrol shall not exceed 0,15 g/l and the benzene content shall comply with the specifications in Annex I. The

⁽¹⁾ OJ C 102, 4.4.1996, p. 1.

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other values of the specifications may remain unchanged compared to the present situation.

4. Notwithstanding the provisions of paragraph 2, a Member State may be authorised, on a request to be submitted to the Commission no later than 31 August 1999, to continue to permit the marketing within its territory, until at the latest 1 January 2003, of unleaded petrol with a sulphur content which does not comply with the specification for sulphur content in Annex I but which does not exceed the current content, if it can demonstrate that severe difficulties would ensue for its industries in making the necessary changes in their manufacturing facilities during the period of time between the date of adoption of this Directive and 1 January 2000.

5. Notwithstanding the provisions of paragraph 2, a Member State may be authorised, on a request to be submitted to the Commission no later than 31 August 2003, to continue to permit the marketing within its territory, until at the latest 1 January 2007, of unleaded petrol with a sulphur content which does not comply with Annex III but which does comply with Annex I, if it can demonstrate that severe difficulties would ensue for its industries in making the necessary changes in their manufacturing facilities during the period of time between the date of adoption of this Directive and 1 January 2005.

6. The Commission may authorise the derogations referred to in paragraphs 3, 4 and 5 in accordance with the Treaty.

The Commission shall notify the Member States and inform the European Parliament and the Council of its decision.

7. Notwithstanding paragraph 1, Member States may continue to permit the marketing of small quantities of leaded petrol with the specifications mentioned in the second subparagraph of paragraph 3 to a maximum of 0,5 % of total sales to be used by old vehicles of a characteristic nature and to be distributed through special interest groups.

Article 4

Diesel fuel

1. (a) Member States shall ensure that, no later than 1 January 2000, diesel fuel can be marketed within their territory only if it complies with the environmental specifications set out in Annex II.

(b) Without prejudice to the provisions of subparagraph (a), Member States shall, from 1 January 2000, permit the marketing within their territory of diesel fuel complying with the specifications of Annex IV.

(c) Member States shall also ensure that, no later than 1 January 2005, diesel fuel can be marketed within their territory only if it complies with the environmental specifications set out in Annex IV.

2. Notwithstanding the provisions of paragraph 1, a Member State may be authorised, on a request to be submitted to the Commission no later than 31 August 1999, to continue to permit the marketing within its territory, until at the latest 1 January 2003, of diesel fuel with a sulphur content which does not comply with the specification for sulphur content in Annex II but which does not exceed the current content, if it can demonstrate that severe difficulties would ensue for its industries in making the necessary changes in their manufacturing facilities during the period of time between the date of adoption of this Directive and 1 January 2000.

3. Notwithstanding the provisions of paragraph 1, a Member State may be authorised, on a request to be submitted to the Commission no later than 31 August 2003, to continue to permit the marketing within its territory, until at the latest 1 January 2007, of diesel fuel with a sulphur content which does not comply with Annex IV but which does comply with Annex II, if it can demonstrate that severe difficulties would ensue

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for its industries in making the necessary changes in their manufacturing facilities during the period of time between the date of adoption of this Directive and 1 January 2005.

4. The Commission may authorise the derogations referred to in paragraphs 2 and 3 in accordance with the Treaty.

The Commission shall notify the Member States and inform the Council and the European Parliament of its decision.

*Article 5***Free circulation**

No Member State may prohibit, restrict or prevent the placing on the market of fuels which comply with the requirements of this Directive.

*Article 6***Marketing of fuels with more stringent environmental specifications**

1. By way of derogation from Articles 3, 4 and 5, Member States may require that in specific areas fuels may only be marketed if they comply with more stringent environmental specifications than those provided for in this Directive for all or part of the vehicle fleet with a view to protecting the health of the population in a specific agglomeration or the environment in a specific ecologically sensitive area in a Member State, if atmospheric pollution constitutes or may reasonably be expected to constitute a serious and recurrent problem for human health or the environment.

2. A Member State wishing to make use of a derogation provided for in paragraph 1 shall submit its request in advance, including the justification for it, to the Commission. The justification shall include evidence that the derogation respects the principle of proportionality and that it will not disrupt the free movements of persons and goods.

3. The Member States involved shall provide the Commission with data on ambient air quality for the area in question as well as the predicted effects on air quality of the measures proposed.

4. The Commission shall provide this information to the other Member States without delay.

5. Member States may give their comments on the request and its justification within two months of the date of the Commission's provision of information.

6. The Commission shall take a decision on the request of Member States within three months after the date on which Member States have submitted their comments. The Commission will take Member States' comments into account and will notify them of its decision and inform the European Parliament and the Council at the same time.

7. Any Member State may refer the Commission's decision to the Council within one month of its notification or, in the case of a non-decision, refer the matter to the Council within one month of the expiry of the period referred to in paragraph 6.

8. The Council, acting by a qualified majority, may take a different decision within two months of the matter being referred to it.

*Article 7***Change in supply of crude oils**

If, as a result of exceptional events, a sudden change in the supply of crude oils or petroleum products renders it difficult for the refineries in a Member State to respect the fuel specification requirements of Articles 3 and 4, that Member State shall inform the Commission thereof. The Commission, after informing the other Member States, may authorise higher limit values in that Member State for one or more fuel components for a period not exceeding six months.

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The Commission shall notify the Member States and inform the European Parliament and the Council of its decision.

Any Member State may refer the Commission's decision to the Council within one month of its notification.

The Council, acting by a qualified majority, may take a different decision within one month of the matter being referred to it.

*Article 8***Monitoring compliance and reporting**

1. Member States shall monitor compliance with the requirements of Articles 3 and 4 on the basis of the analytical methods set out in Annex I and II.

2. The Commission will promote the development of a uniform system for fuel quality monitoring. The Commission may for the purpose of developing such a system request the assistance of the European Committee for Standardisation.

3. The Commission shall establish a common format for the submission of a summary of national fuel quality data no later than 30 June 2000.

4. Each year by 30 June Member States shall submit their summary for the preceding calendar year to the Commission for the first time by 30 June 2002.

*Article 9***Review process**

1. The Commission shall, periodically and for the first time not later than 12 months from the date of adoption of this Directive but in any event not later than 31 December 1999, and in the light of the assessment carried out in accordance with the requirements of Article 3 of Directive 98/69/EC of the European Parliament and of the Council of 13 October 1998 relating to measures to be taken against air pollution by emissions from motor vehicles and amending Council Directive 70/220/EEC⁽¹⁾, submit to the European Parliament and the Council a proposal for a revision of this Directive as an integral part of the strategy designed to produce effects to meet the requirements of the Community air quality standards and related objectives.

2. The proposal shall contain environmental specifications complementing the mandatory specifications stipulated in Annex III for petrol and Annex IV for diesel fuels on the basis, *inter alia*, of accumulated knowledge concerning requirements on emission reductions related to air quality, the effective functioning of new pollution abatement technologies and developments affecting international fuel markets.

3. In addition to the provisions of paragraphs 1 and 2, the Commission may, *inter alia*, bring forward

- proposals taking into consideration the particular situation of captive fleets and the need to propose levels of specifications for the special fuels they use,
- proposals setting levels of specifications applicable to liquid petroleum gas, natural gas and biofuels.

*Article 10***Procedure for adaptation to technical progress**

Any amendments which are necessary in order to adapt the measuring methods as laid down in the right hand section ('tests') of Annexes I, II, III and IV to this Directive, to take account of technical progress, shall be adopted by the Commission assisted by the Committee established in

⁽¹⁾ See page 1 of this Official Journal.

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accordance with Article 12 of Directive 96/62/EC⁽¹⁾ and in accordance with the procedure laid down in Article 11 of this Directive.

Such adaptation must not result in any direct or indirect modification of the limit values laid down in this Directive or to any change in the dates from which they apply.

*Article 11***Committee procedure**

1. The representative of the Commission shall submit to the committee referred to in Article 10 a draft of the measures to be taken. The committee shall deliver its opinion on the draft within a time limit which the chairman may lay down according to the urgency of the matter. The opinion shall be delivered by the majority laid down in Article 148(2) of the Treaty in the case of decisions which the Council is required to adopt on a proposal from the Commission. The votes of the representatives of the Member States within the committee shall be weighted in the manner set out in that Article. The chairman shall not vote.

2. The Commission shall adopt the measures envisaged if they are in accordance with the opinion of the committee.

If the measures envisaged are not in accordance with the opinion of the committee, or if no opinion is delivered, the Commission shall, without delay, submit to the Council a proposal relating to the measures to be taken. The Council shall act by a qualified majority.

If, on the expiry of three months from the date of referral to the Council, the Council has not acted, the proposed measures shall be adopted by the Commission.

*Article 12***Repeal and amendment of the Directives related to the fuel quality of petrol and diesel fuels**

1. Directives 85/210/EEC, 85/536/EEC and 87/441/EEC are repealed as from 1 January 2000.

2. Directive 93/12/EEC is amended by deleting Article 1(1)(b) and Article 2(1) as from 1 January 2000.

*Article 13***Transposition into national legislation**

1. Member States shall adopt and publish the laws, regulations and administrative provisions necessary to comply with this Directive not later than 1 July 1999. They shall immediately inform the Commission thereof.

Member States shall apply these measures from 1 January 2000.

When Member States adopt these measures, they shall contain a reference to this Directive or shall be accompanied by such reference on the occasion of their official publication. The methods of making such reference shall be laid down by Member States.

2. Member States shall communicate to the Commission the texts of the main provisions of domestic law which they adopt in the field covered by this Directive.

⁽¹⁾ OJ L 296, 21.11.1996, p. 55.

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Article 14

Austria

Article 7 of Directive 85/210/EEC, as far as the benzene content of petrol referred to in Article 4 of that Directive is concerned, shall, until 1 January 2000, not apply to Austria.

Article 15

Entry into force of the Directive

This Directive shall enter into force on the day of its publication in the *Official Journal of the European Communities*.

Article 16

Addressees

This Directive is addressed to the Member States.

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ANNEX I

ENVIRONMENTAL SPECIFICATIONS FOR MARKET FUELS TO BE USED FOR VEHICLES EQUIPPED WITH POSITIVE-IGNITION ENGINES

Type: **Petrol**

Parameter	Unit	Limits ⁽¹⁾		Test	
		Minimum	Maximum	Method	Date of publication
Research octane number		95	—	EN 25164	1993
Motor octane number		85	—	EN 25163	1993
Vapour pressure, summer period ⁽²⁾	kPa	—	60,0	pr. EN-13016-1 (DVPE)	1997
Distillation:			—	pr. EN-ISO 3405	1998
— evaporated at 100 °C	% v/v	46,0			
— evaporated at 150 °C	% v/v	75,0	—		
Hydrocarbon analysis:	% v/v				
— olefins ⁽³⁾ ⁽⁴⁾ ⁽⁵⁾		—	18,0 ⁽⁶⁾	ASTM D1319	1995
— aromatics ⁽³⁾ ⁽⁴⁾ ⁽⁵⁾		—	42,0	ASTM D1319	1995
— benzene ⁽⁷⁾		—	1,0	EN 12177	1998
				EN 238	1996
Oxygen content ⁽⁸⁾	% m/m	—	2,7	EN 1601	1997
				pr. EN 13132	1998
Oxygenates ⁽⁹⁾				EN 1601	1997
				pr. EN 13132	1998
— Methanol, stabilising agents must be added	% v/v	—	3		
— Ethanol, stabilising agents may be necessary	% v/v	—	5		
— Iso-propyl alcohol	% v/v	—	10		
— Tert-butyl alcohol	% v/v	—	7		
— Iso-butyl alcohol	% v/v	—	10		
— Ehters containg 5 or more carbon atoms per molecule	% v/v	—	15		
Other oxygenates ⁽⁹⁾	% v/v	—	10		
Sulphur content ⁽¹⁰⁾	mg/kg	—	150	EN ISO 14596	1998
				EN ISO 8754	1995
				EN 24260	1994
Lead content	g/l	—	0,005	EN 237	1996

(1) The values quoted in the specification are 'true values'. In the establishment of their limit values the term of ISO 4259 'Petroleum products — Determination and application of precision data in relation to methods of test', have been applied and in fixing a minimum value, a minimum difference of 2R above zero has been taken into account (R = reproducibility). The results of individual measurements shall be interpreted on the basis of the criteria described in ISO 4259 (published in 1995).

(2) The summer period shall begin no later than 1 May and shall not end before 30 September. For Member States with arctic conditions the summer period shall begin no later than 1 June and note end before 31 August and the RVP is limited to 70 kPa.

(3) The content of oxygenate compounds shall be determined in order to make the corrections according to clause 13.2 of ASTM D 1319:1995.

(4) When Ethyl-tert-butyl ether (ETBE) is present in the sample, the aromatic zone shall be determined from the pink brown ring downstream of the red ring normally used in the absence of ETBE. The presence or absence of ETBE can be concluded from the analysis described in note 3.

(5) For the purpose of this standard ASTM D 1319:1995 shall be applied without the optional depentanisation step. Therefore clauses 6.1, 10.1 and 14.1.1 shall not be applied.

(6) Except for unleaded petrol regular (minimum motor octane number (MON) of 81 and a minimum research octane number (RON) of 91) for which the maximum olefin content shall be 21 % v/v. These limits shall not

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preclude the introduction on to the market of a Member State of another unleaded petrol with lower octane numbers than set out in this Annex.

(7) In cases of dispute, EN 12177:1998 shall be used.

(8) In cases of dispute, EN 1601:1997 shall be used.

(9) Other mono-alcohols with a final distillation point no higher than the final distillation point laid down in national specifications or, where these do not exist, in industrial specifications for motor fuels.

(10) In cases of dispute EN ISO 14596:1998 shall be used.

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ANNEX II

ENVIRONMENTAL SPECIFICATIONS FOR MARKET FUELS TO BE USED FOR
VEHICLES EQUIPPED WITH COMPRESSION IGNITION ENGINES

Type: Diesel fuel

Parameter	Unit	Limits ⁽¹⁾		Test	
		Minimum	Maximum	Method	Date of publication
Cetane number		51,0	—	EN ISO 5165	1998
Density at 15 °C ⁽²⁾	kg/m ³	—	845	EN ISO 3675 EN ISO 12185	1998 1996
Distillation:					
— 95 % point	°C	—	360	pr. EN ISO 3405	1998
Polycyclic aromatic hydrocarbons ⁽³⁾	% m/m	—	11	IP 391	1995
Sulphur content ⁽⁴⁾	mg/kg	—	350	EN ISO 14596 EN ISO 8754 EN 24260	1998 1995 1994

(1) The values quoted in the specification are 'true values'. In the establishment of their limit values the terms of ISO 4259 'Petroleum products — Determination and application of precision data in relation to methods of test', have been applied and in fixing a minimum value, a minimum difference of 2R above zero has been taken into account (R = reproducibility). The results of individual measurements shall be interpreted on the basis of the criteria described in ISO 4259 (published in 1995).

(2) In cases of dispute EN ISO 3675:1998 shall be used.

(3) Polycyclic aromatic hydrocarbons are defined as the total aromatic hydrocarbon content less the mono-aromatic hydrocarbon content both as determined by IP 391.

(4) In cases of dispute EN ISO 14596:1998 shall be used.

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ANNEX III

ENVIRONMENTAL SPECIFICATIONS FOR MARKET FUELS TO BE USED FOR VEHICLES EQUIPPED WITH POSITIVE IGNITION ENGINES

Type: **Petrol**

Parameter	Unit	Limits ⁽¹⁾		Test	
		Minimum	Maximum	Method	Date of publication
Research octane number		95		EN 25164	1993
Motor octane number		85		EN 25163	1993
Vapour pressure, summer period	kPa	—		pr. EN 13016-1 (DVPE)	1997
Distillation:	% v/v			pr. EN ISO 3405	1988
— evaporated at 100 °C		—	—		
— evaporated at 150 °C		—	—		
Hydrocarbon analysis:					
— olefins ⁽²⁾ ⁽³⁾ ⁽⁴⁾	% v/v	—		ASTM D1319	1995
— aromatic ⁽²⁾ ⁽³⁾ ⁽⁴⁾	% v/v	—	35,0	ASTM D1319	1995
— benzene ⁽⁵⁾	% v/v	—		EN 12177	1995
				EN 238	1996
Oxygen content ⁽⁶⁾	% m/m	—		EN 1601	1997
				pr. EN 13132	1998
Sulphur content ⁽⁷⁾	mg/Kg	—	50	pr. EN ISO/14596	1998
				EN ISO 8754	1995
				EN 24260	1994
Lead content	g/l	—		EN 237	1996

⁽¹⁾ The values quoted in the specification are 'true values'. In the establishment of their limit values the terms of ISO 4259 'Petroleum products — Determination and application of precision data in relation to methods of test', have been applied and in fixing a minimum value, a minimum difference of 2R above zero has been taken into account (R = reproducibility). The results of individual measurements shall be interpreted on the basis of the criteria described in ISO 4259 (published in 1995).

⁽²⁾ The content of oxygenate compounds shall be determined in order to make the corrections according to clause 13.2 of ASTM D 1319:1995.

⁽³⁾ When Ethyl-tert-butyl ether (ETBE), is present in the sample, the aromatic zone shall be determined from the pink brown ring downstream of the red ring normally used in the absence of ETBE. The presence or absence of ETBE can be concluded from the analysis described in note 2.

⁽⁴⁾ For the purpose of this standard ASTM D 1319: 1995 shall be applied without the optional depentanisation step. Therefore clauses 6.1, 10.1 and 14.1 shall not be applied.

⁽⁵⁾ In cases of dispute, EN 12177:1998 shall be used.

⁽⁶⁾ In cases of dispute, EN 1601:1997 shall be used.

⁽⁷⁾ In cases of dispute, EN ISO 14596:1998 shall be used.

▼M1

ANNEX IV

ENVIRONMENTAL SPECIFICATIONS FOR MARKET FUELS TO BE USED FOR
VEHICLES EQUIPPED WITH COMPRESSION IGNITION ENGINES

Type: Diesel fuel

Parameter	Unit	Limits ⁽¹⁾		Test	
		Minimum	Maximum	Method	Date of publication
Cetane number			—	EN ISO 5165	1998
Density at 15 °C ⁽²⁾	kg/m ³		—	EN ISO 3675 EN ISO 12185	1998 1996
Distillation:					
— 95 % point	°C	—		pr. EN ISO 3405	1998
Polycyclic aromatic hydrocarbons ⁽³⁾	% m/m	—		IP 391	1995
Sulphur content ⁽⁴⁾	mg/kg	—	50	EN ISO 14596 EN ISO 8754 EN 24260	1998 1995 1994

(1) The values quoted in the specification are 'true values'. In the establishment of their limit values the terms of ISO 4259 'Petroleum products — Determination and application of precision data in relation to methods of test', have been applied and in fixing a minimum value, a minimum difference of 2R above zero has been taken into account (R = reproducibility). The results of individual measurements shall be interpreted on the basis of the criteria described in ISO 4259 (published in 1995).

(2) In cases of dispute EN ISO 3675:1998 shall be used.

(3) Polycyclic aromatic hydrocarbons are defined as the total aromatic hydrocarbon content less the mono-aromatic hydrocarbon content both as determined by IP 391.

(4) In cases of dispute EN ISO 14596:1998 shall be used.