

DIESEL

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Product Name: DIESEL

1 Product and Company Identification

1.1 Product Identification

Trade Name: **Diesel Fuel Class B, D, F for Soft Climates;
Diesel Fuel Class 2 for Arctic Climates**

Name according to 67/548/EEC: ---

Other Names: NM-B, NM-D, NM-F, NM-2 (Arctic Diesel)

Registration No.: **01-2119484664-27-0113** ES 269-822-7 Fuels, diesel; Gasoil – unspecified

1.2 Product Application

Diesel is mainly used as the motor fuel for compression ignition engines.

1.3 Company Identification

1.3.1 Business Name and Identification No.

Česká rafinářská, a.s., Litvínov	ID: 62741772
Záluží 2	Tax ID: CZ62741772
Litvínov	www.ceskarafinerska.cz
Post Code 436 70	E-mail: info@crc.cz

1.3.2 Place of Business

Litvínov Refinery	Kralupy Refinery
P. O. BOX 47	P. O. BOX 96
436 01 <u>Litvínov</u>	278 01 <u>Kralupy n/Vlt.</u>
telephone: +420-47 616 4756	+420-31 571 8882
fax: +420-47 616 3516	+420-31 571 8642

1.3.3 Person in Charge of the Material Safety Data Sheet

Ing. Václav Pražák	telephone	+420 47 616 4308
	E-mail:	vaclav.prazak@crc.cz

1.4 Telephone Number for Emergencies

1.4.1 TRINS (transport information and emergency system)

It provides around-the-clock expert as well as practical assistance in handling emergency situations in connection with the transport and storage of hazardous chemical substances in the territory of the Czech Republic. The assistance is provided via fire brigade operational centres or via the national coordination centre of Chemopetrol, a. s., Litvínov.

TRINS contact telephone no.: +420 – 476 709 826

1.4.2 Toxicological Information Centre of the Ministry of Health

Address: Na Bojišti 1, 128 08 Praha 2
Telephone: +420-22 491 9292, 5402, 4575

2 Hazards Identification

2.1 Classification

Pursuant to Act No. 356/2003 Coll. (67/548/EEC), this product is classified as a hazardous chemical substance. Diesel is classified as a Category 3 carcinogen, harmful to health.

Symbol: Xn, N

R-Phrases: 20-38-40-51/53-65

2.2 Hazardous Physical and Chemical Effects

Diesel is a flammable liquid with a flash point over 55°C. Its vapours form an explosive mixture with air. Product may accumulate static charges.

2.3 Human Health Hazards

In the case of frequent repeated contact, diesel is suspected to have potential carcinogenic effects. It is harmful to health – due to its low viscosity, it may cause lung damage if ingested. Diesel causes local skin dryness and irritation. Its vapours may have narcotic effects, cause headache, nausea, irritation of the eyes and respiratory tract.

2.4 Environmental Hazards

Harmful to water and soil. Prevent diesel from entering into ground and surface waters and from soil contamination.

3 Composition or Information on Ingredients

3.1 Preparation Composition, Concentration Limits and Ingredients Classification

The product contains the following hazardous substances:

<i>Substance (name)</i>	<i>Proportion (Wt%)</i>	<i>No. CAS</i>	<i>No. EINECS</i>	<i>Symbol of risks</i>	<i>R-Phrases</i>
Fuels, diesel; Gasoil – unspecified	≥ 93	68334-30-5	269-822-7	Xn	20-38-40- 51/53--65
Fatty acid methyl esters (FAME)	≤ 7	85586-25-0	287-828-8	Xi	36/38

3.2 Chemical Specification

Diesel is a complex blend of hydrocarbons boiling between approx. 180 and 370°C, containing polycyclic aromatic hydrocarbons up to 11 Wt%. Diesel may contain fatty acid methyl esters (most often those of rape oil) amounting to 7 % (V/V). For improving application characteristics, it may contain appropriate additives – additives to improve low-temperature properties (depressants), conductivity additives, lubricating additives, corrosion inhibitors, detergents etc. in concentrations up to 0.1% (wt).

3.3 PBT Information

According to the criteria in the Regulation Annex XIII, the product does not contain PBT or vPvB substances.

4 First Aid Instructions

4.1 General Instructions

When handling the product, it is necessary to observe all the requirements related to health and safety at work in compliance with this Material Safety Data Sheet and applicable legislation.

In the case of risk of unconsciousness, transport in the recovery position.

4.2 Inhalation

Remove to fresh air, provide rest, prevent from walking. If breathing has stopped, apply mouth-to-mouth resuscitation. Obtain medical attention.

4.3 Skin Contact

Wash skin with water and soap, wash away, change clothes.

4.4 Eye Contact

Flush eyes carefully with plenty of water and obtain medical attention.

4.5 Ingestion

Give water in case of ingestion. Do not induce vomiting. Obtain medical attention.

5 Fire Fighting Measures

5.1 Suitable Extinguishing Media

Foam, powder, carbon dioxide.

5.2 Unsuitable Extinguishing Media

Water (only suitable for cooling).

5.3 Special Hazards

Product vapours form an explosive mixture with air. It burns with sooty flame in air. Carbon monoxide may be released.

5.4 Special Protective Equipment for Fire Fighters

Fire-resistant clothing, self-contained breathing apparatus.

6 Accidental Release Measures

6.1 Preventative Personal Precautions

Prevent contamination of clothes and shoes, prevent the product from skin and eye contact. To escape a contaminated area, use a respirator fitted with an organic vapour cartridge. Do not smoke. Remove all potential sources of ignition. Evacuate all persons who do not participate in salvage operations.

6.2 Preventative Environmental Precautions

Prevent from spreading. Guard the area. Do not drain into sewers. Prevent entry into soil and water.

6.3 Recommended Clean-Up and Disposal Methods

Depending on the situation, drain or absorb into a suitable porous material and dispose of in compliance with the applicable waste legislation.

7 Handling and Storage

7.1 Handling Instructions

When handling hazardous chemical substances and chemical preparations, everybody is obliged to protect human health and the environment and observe the warning symbols of hazards, standard phrases marking the degree of risk and standard instructions for safe handling.

7.2 Storage Instructions

The ČSN 65 0201 standard applies to storage. The premises must be equipped in accordance with ČSN 75 3415. Keep in a well-ventilated area away from ignition sources. Electrical equipment must conform to the respective regulations. Protect from electrostatic charges. Do not smoke.

7.3 Specific Use

Diesel is designed mainly for use as the motor fuel for compression ignition engines. It is also used as the fuel for some types of turbines. It must not be used for vehicles that are operated at workplaces in confined spaces, or as a cleaning agent, for lighting, heating or kindling. Never drain into sewers.

8 Exposure Controls / Personal Protection

8.1 Exposure Limits

Oil (total hydrocarbons)	FAME	
mg/m ³	200	not
PEL specified		
NPK-P	mg/m ³	1,000
		not specified

8.2 Exposure Controls

General safety and sanitary precautions: never eat, drink or smoke when working with diesel. Before meals and drinks and after work wash the skin with warm water and soap and apply a suitable moisturizing cream.

8.2.1 Employee Exposure Controls

<i>Respiratory protection:</i>	Respirator with A, AX-(brown) cartridge or other suitable type against organic gases and vapours of organic substances.
<i>Eye protection:</i>	Chemical type goggles.
<i>Hand protection:</i>	Safety gloves.
<i>Skin protection:</i>	Protective clothing

8.2.2 Environmental Exposure Controls

See Clauses 2.4, 6.2 and 16.3.

9 Physical and Chemical Properties

9.1 General Information

<i>Physical state (at 20°C):</i>	liquid
<i>Colour:</i>	colourless to yellow, possibly with greenish opalescence
<i>Odour:</i>	characteristic

9.2 Important Information Regarding Health Protection, Safety and Environment

<i>Density at 15°C:</i>	800 to 845 kg/m ³
<i>Boiling point range:</i>	180 to 370°C
<i>Relative vapour density:</i>	approx. 6 (air =1)
<i>Solubility in water:</i>	negligible
<i>Vapour pressure at 20°C:</i>	< 0.01 kPa
<i>Flash point:</i>	> 55°C
<i>Concentration explosion limits:</i>	<i>lower:</i> 0.5% (V/V)
<i>upper:</i>	6.5% (V/V)
<i>Maximum experimental safety gap</i>	> 0.9 mm
<i>Kinematic viscosity at 40°C</i>	2.0 to 4.5 mm ² /s

9.3 Other Information

<i>Pour point:</i>	< 0°C
<i>Ignition point:</i>	approx. 60°C
<i>Self-ignition temperature:</i>	approx. 250°C

10 Stability and Reactivity

The preparation is stable at normal use conditions.

10.1 Conditions to Avoid

Concentrations within explosion limits, presence of ignition sources, contact with naked flames.

10.2 Materials to Avoid

Oxidizing agents.

10.3 Hazardous Decomposition Products

None under normal conditions; incomplete burning can produce carbon monoxide and soot.

11 Toxicological Information

11.1 Acute Toxicity

The following toxicity figures are given for gasoil: gasoil (CAS 68334-30-5)

LD ₅₀ orally, rat, mg.kg ⁻¹	7,500
LD dermally, rat, ml.kg ⁻¹	> 5
LC ₅₀	not known

11.2 Sub-chronic – Chronic Toxicity

Gasoil vapours may have narcotic effects, cause headaches, nausea, irritation of the eyes and respiratory tract. Skin effects depend on the duration and intensity of exposure. Prolonged and intensive skin contact may cause drying and strong skin irritation (dermatitis). Chronic effects of vapours may cause polyneuritis and muscular atrophy.

TCL ₀ inhalatory, rat, µg.m ⁻³ .16 h ⁻¹ .2.5 year ⁻¹	400	biochemical changes
TCL ₀ inhalatory, rat, g.m ⁻³ .6 h ⁻¹ .3 weeks ⁻¹	2	changes on lungs, thorax and blood count
TDL ₀ inhalatory, rat, ml.kg ⁻¹ .12 dni ⁻¹	80	changes on liver, kidneys, urethra and bladder
Excitability: eye, rabbit, µl.24 h ⁻¹	500	hard

11.3 Other Information

Category 3 carcinogen. Upon existing obtained data with similar composition products mild carcinogenic potential on animal skin can be considered. However, there is no evidence that these effects also apply to human provided that the handling rules are observed.

Sensitisation – N/A.

Mutagenicity – N/A.

Reproductive Toxicity – N/A.

12 Ecological Information

12.1 Ecotoxicity

N/A.

12.2 Mobility

Not expected. Surface tension approx. 30 mS/m.

12.3 Persistence and Degradability

Due to negligible solubility in water, persistence in aquatic organisms is not expected.

Biodegradability in accordance with CEC approx. 60%.

Difficult to degrade.

12.4 Potential to Bioaccumulate

N/A.

Based on log K_{ow}, very low potential even after prolonged exposure can be expected.

12.5 PBT Assessment Results

No information is available.

12.6 Other Adverse Effects

Intensive negative effects on waste water. It forms a continuous layer on water surfaces preventing access of oxygen. It does not contain substances that deplete the ozone in accordance with the Montreal Protocol and its Copenhagen Amendment.

13 Disposal Instructions

13.1 Product Disposal

Wastes and unused residues are disposed of in compliance with the applicable legislation on wastes, usually by incineration in the reserved incinerators. Dumping is inappropriate.

13.2 Contaminated Container Disposal

Diesel is supplied in road and railway car tanks. Decontamination and disposal of these containers follows the applicable ADR/RID regulations.

13.3 Legal Regulations on Wastes

In accordance with Act No. 185/2001 Coll., on wastes, as amended, including related regulations and provisions, the product is classified as follows:

Waste type code according to the inventory:	13 07 01 (in sorbent 15 02 02)
Waste category:	N

14 Transport Information

The product is transported using railway or road tank cars or via pipeline.

Nomenclature and labelling in accordance with the European Agreement on Dangerous Goods RID/ADR as amended:

DIESEL	Hazard ID No.:	30	Classification code:	F1
conforming to EN 590 standard	UN No.:	1202	Class:	3
	Packing group:	III	Labelling:	3
ENVIRONMENTALLY HAZARDOUS				

15 Regulatory information

15.1 Information to be specified on the container in accordance with Act No. 356/2003 Coll.

The product contains the following hazardous chemical substances:

Fuels, diesel (ES 269-822-7) – min. 93% (V/V)
Fatty acid methyl esters (FAME) (ES 287-828-8) – max. 7 % (V/V)

Indication of danger: Category 3 carcinogen, harmful to health

Symbol: Xn, N
R-Phrases: 20-38-40-51/53-65
S – Phrases: (2)-23-24-36/37-51-61-62

15.2 Specific EU Provisions

N/A.

15.3 Specific Legal Regulations Applying to Personal or Environmental Protection

No.

16 Other Information Applying to the Dangerous Chemical Substance or Preparation

16.1 List of Used R-Phrases and S-Phrases

16.1.1 Standards Phrases Marking Specific Degree of Risk (R-Phrases)

- R – 20 Harmful by inhalation
- R – 38 Irritating to skin
- R – 36/38 Irritating to eyes and skin
- R – 40 Limited evidence of a carcinogenic effect
- R – 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in aquatic environment
- R – 65 Harmful: may cause lung damage if ingested

16.1.2 Standard Instructions for Safe Handling (S-Phrases)

- S – (2) Keep out of reach of children
- S – 23 Do not breathe vapours
- S – 24 Avoid contact with skin
- S – 36/37 Wear suitable protective clothing; Wear suitable gloves
- S – 51 Use only in well-ventilated areas
- S – 61 Avoid release to the environment. Refer to special instructions/safety data sheets
- S – 62 If swallowed do not induce vomiting: seek medical advice immediately and show this container or label

16.2 Information on Training

Trainings are carried out in accordance with the requirements of the Labour Code and Act No. 258/200 Coll.

16.3 Other Regulatory Information

16.3.1 Act No. 86/2002 Coll., on air conservation

The product is subject to the respective provisions of Act No. 86/2002 Coll., on air conservation, as amended, including the related regulations and provisions.

According to Section 2 Subsection n) of the above-mentioned Act and Decree No. 355/2002 Coll., which specifies the emission limits and other operating conditions for other stationary sources of air pollution emitting volatile organic substances from processes applying organic solvents and from petrol storage and distribution, the product is categorized as : **c) volatile organic substance**

Technical data to be specified on the label according to Annex 5 of Decree No. 355/2002 Coll.:

Product density (g/cm ³)	0.800 to 0.845
Organic solvent content in kg/kg of product	0
Content of total organic carbon in v kg/kg of product	approx. 0.87
Content of non-volatile substances in % (V/V)	max. 2

16.3.2 ČSN 65 0201 Flammable Liquids – Plants and Storage Facilities

In accordance with ČSN 65 0201, the product is classified as a Class III flammable product.

16.3.3 ČSN 33 0371 Non-explosive Electrical Equipment – Explosive Mixtures – Classification and Test Methods

In accordance with ČSN 33 0371, the product is classified in the T3 temperature class and the IIA explosion group.

16.4 Information on Changes

All changes in this Material Safety Data Sheet were induced by Regulation 1907/2006/EC. The Material Safety Data Sheet will further be continuously updated based on the data obtained during the processing of the registration documentation and the registration proper.

16.5 Applied and Related Legal Regulations

- Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
- Act No. 86/2002 Coll., on air conservation, as amended, including the related regulations and provisions
- Act No. 111/1994 Coll., on road transport, as amended, including the related regulations and provisions (ADR)
- Act No. 185/2001 Coll., on wastes, as amended, including the related regulations and provisions
- Act No. 258/2000 Coll., on public health protection, as amended, including the related regulations and provisions
- Act No. 262/2006 Coll., the Labour Code, as amended, including the related regulations and provisions
- Act No. 266/1994 Coll., on railways, as amended, including the related regulations and provisions (RID)
- Act No. 356/2003 Coll., on chemical substances and chemical preparations, as amended, including the related regulations and provisions
- Government Decree No. 178/2001 Coll., which stipulates the conditions for occupational protection of employees, as amended
- ČSN EN 590 Motor fuels – Diesels – Requirements and Test Methods
- ČSN 33 0371 Non-explosive Electrical Equipment – Explosive Mixtures – Classification and Test Methods
- ČSN 65 0201 Flammable Liquids – Plants and Storage Facilities
- ČSN 75 3415 Protection of Water from Petroleum Products – Facilities for Petroleum Products Handling and Storage

16.6 Other Information

The information contained in this Material Safety Data Sheet applies to the specified product only and is based on our current knowledge and experience and need not be comprehensive. The user is responsible for the proper handling of the product in accordance with the applicable legislation.