

EXTRA LIGHT FUEL OIL

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Product Name: EXTRA-LIGHT FUEL OIL

1. Substance and Company Identification

1.1 Product identifier

Trade Name: **Extra-light fuel oil**
Name according to 67/548/EEC: ES 269-822-7 Fuels, diesel; Gasoil – unspecified
Other names: TOEL, ETO, Heating oil, Very light heating oil
Marketing authorisation number: **01-2119484664-27-0113**

1.2 Relevant identified uses of the substance and uses advised against

Extra-light fuel oil is used mainly as a heating medium in ecologically burdened areas and protected landscape areas. It shall be used only in approved facilities and in compliance with the relevant process documentation and valid legislation.

Extra-light fuel oil shall not be used for any other purposes than heating.

1.3 Details of the Supplier of the Material Safety Data Sheet

1.3.1 Business Name and Identification No.

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

1.3.2 Place of Business

Litvínov Refinery	Kralupy Refinery
P. O. BOX 47	P. O. BOX 96
436 01 Litvínov	278 01 Kralupy n/Vlt.
Phone: +420 476 163 567	+420 315 718 500
Fax: +420 476 165 086	+420 315 718 640
www.crc.cz	info@crc.cz

1.3.3 Person in Charge of the Material Safety Data Sheet

Ing. Václav Pražák	Phone: +420 476 164 308
	E-mail: vaclav.prazak@crc.cz

1.4 Emergency Phone Number

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 UNIPETROL RPA, s.r.o. Litvínov - the regional centre number 1 + the national coordination centre TRINS.

TRINS Contact: Mgr. Jaroslav Porteš; phone: +420 476 165 253, E-mail: jaroslav.portes@unipetrol.cz

1.4.2 Toxicological Information Centre

Address: Na Bojišti 1, 120 00 Prague 2
Telephone: +420 224 919 293, +420 224 915 402

Information on Health Risks Only - Acute poisoning of people and animals.

2. Hazard Identification

2.1 Substance Classification

2.1.1 According to Regulation (EC) No. 1272/2008

Extra-light fuel oil (ETO) is classified as a Category 2 carcinogen, suspected to cause cancer. ETO is harmful to health – due to its low viscosity, it may cause lung damage if ingested, it irritates skin and makes it dry. Its vapours may have narcotic effect, cause headache, nausea, irritation of the eyes and respiratory tract. ETO is harmful for the environment and detrimental to water and soil.

2.1.2 According to Council Directive 67/548/EEC

Extra-light fuel oil is classified as a Category 3 carcinogen. ETO is harmful to health – due to its low viscosity, it may cause lung damage if ingested, it irritates skin and makes it dry. Its vapours may have narcotic effect, cause headache, nausea, irritation of the eyes and respiratory tract. ETO is harmful for the environment and detrimental to water and soil.

2.2 Label Elements

2.2.1 According to Regulation (EC) No. 1272/2008



Hazard Indication: GHS07

GHS08

GHS09

Signal Words:

Danger (Dgr)

Hazard Phrases (H-phrases):

H304; H315; H332; H351; H373; H411

Instruction for safe handling (P-phrases):

P261; P280; P301+P310; P331; P332+P313; P501

2.2.2 According to Council Directive 67/548/EEC



Hazard Indication:

N

Xn

Xi

Specific Risk Level (R-phrases):

R20; R38; R40; R51/53; R65

Instructions for Safe Handling (S-phrases):

S2; S23; S24; S36/37; S51; S61; S62

2.3 Other Hazards

2.3.1 PBT Information

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

2.3.2 Other Hazardous Impacts

ETO vapours form an explosive mixture with air. The product may accumulate static electricity.

3. Composition / Information on Ingredients

3.1 Preparation Composition, Concentration Limits and Ingredients Classification

The product contains the following hazardous substances:

<i>Substance (name)</i>	<i>Content (% V/V)</i>	<i>Number CAS</i>	<i>Number ES.</i>	<i>Registration number</i>
Fuels, diesel; Gasoil -unspecified	> 99	68334-30-5	269-822-7	01-2119484664-27-0113

3.2 Chemical Specification

Extra light fuel oil is a complex blend of hydrocarbons boiling between approx. 180 and 370°C, containing polycyclic aromatic hydrocarbons up to 11 Wt%. 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). Contains colorants and identifiers in accordance with current legislation.

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 the applicable legislation and this Material Safety Data Sheet.

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

4.2 Inhalation Hazards

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

4.3 Contact with skin

Wash skin with water and soap, rinse, change clothes.

4.4 Contact with Eye

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

4.5 Ingestion

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

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 a 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 Personal Precautions, Protective Equipment and Emergency Procedures

Prevent contamination of clothes and shoes, prevent 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 are not participating in salvage operations.

6.2 Environmental Precautions

Prevent further leakage. Guard the area. Do not drain into sewers. Prevent entry into soil and water.

6.3 Methods and Material for Containment and Cleaning Up

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

6.4 Reference to Other Sections

See sections 8 and 13

7 Handling and Storage

7.1 Measures for Safe Handling

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 Conditions for Safe Storing of Substances and Mixtures, including Incompatible Substances and Mixtures

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 Final Use

Extra-light fuel oil is used mainly as a heating medium in ecologically burdened areas and protected landscape areas. It shall be used only in approved facilities and in compliance with the relevant process documentation and valid legislation. Contains colorants and identifiers in accordance with current legislation. Do not use as motor fuel, a cleaning agent, for lighting or kindling. Never drain into sewers.

8 Exposure Controls / Personal Protection

8.1 Exposure Limits

8.1.1 According to Government Resolution no. 361/2007 Coll.

		Oil (total hydrocarbons)
PEL	mg/m ³	200
NPK-P	mg/m ³	1 000

8.1.2 DNEL according to CSR

	in workplace	population	
Inhalation	4 300	2 600	mg/m ³ /15 min (aerosol – fatal dose)

8.2 Exposure Controls

General safety and sanitary precautions: never eat, drink or smoke when working with ETO. 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 cartridge 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 also Clauses 2.1 6.2 and 16.3.

9 Physical and Chemical Properties

9.1 **Basic Physical and Chemical Properties**

<i>Physical state (at 20 °C):</i>	liquid
<i>Colour:</i>	colourless to yellow, possibly with greenish opalescence; red when colorants and identifiers are added
<i>Odour:</i>	characteristic petroleum odour
<i>Density at 15°C:</i>	820 to 860 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>Reid vapour pressure:</i>	< 0.01 kPa
<i>Flash point:</i>	> 55°C
<i>Concentration explosion limits:</i>	lower: 0.5 % (V/V) upper: 6.5 % (V/V)
<i>Maximum Experimental Safe Gap</i>	> 0.9 mm
<i>Kinematic viscosity at 40°C</i>	2.0 to 4.5 mm ² /s

9.2 **Additional information**

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

10 Stability and Reactivity

10.1 **Reactivity**

The product is stable at normal use conditions.

10.2 **Chemical stability**

The product is stable at normal use conditions.

10.3 **Possibility of Hazardous Chemical Reactions**

When burning with limited air carbon monoxide can be released.

10.4 **Conditions to Avoid**

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

10.5 **Incompatible Materials**

Oxidizing agents.

10.6 **Hazardous Decomposition Products**

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

11 Toxicological Information

11.1 Acute toxicity

LD50 (oral) 2 000 mg/kg bw
LD50 (dermal) 5 000 mg/kg bw

11.2 Skin Causticity / Irritation

Irritating to skin.

11.3 Serious Damage / Irritation to Eyes

Not irritating to eyes.

11.4 Respiratory / Skin Sensitisation

LC50 (inhalation) 4 100 mg/m³ air

11.5 Mutagenic Impacts in Elementary Cells

N/A.

11.6 Carcinogenicity:

Category 3 carcinogen.

11.7 Reproductive Toxicity

N/A.

11.8 STOT - Single Exposure

N/A.

11.9 STOT - Repeated Exposure

N/A.

11.10 Inhalation Hazards

Yes – due to its low viscosity, it may cause lung damage if ingested.

12 Ecological Information

12.1 Toxicity

Fish: EC10/LC10 0.083 mg/l
Invertebrates: EC10/LC10 0.2 mg/l
Algae: EC50/LC50 22 mg/l (fresh-water algae)

12.2 Persistency and Degradability

Assessment of representative hydrocarbon structures indicates some structures, which can meet the P or vP criteria.

Biodegradability in accordance with CEC approx. 50 – 60%.

Difficult to degrade.

12.3 Bio-Accumulative Potential

Assessment of representative hydrocarbon structures indicates some structures, which can meet the B criteria, but none, which could meet vB criteria.

12.4 Mobility in Soil:

Not expected. Surface tension approx. 25 mS/m.

12.5 PBT Assessment Results

No hydrocarbon structures indicating compliance with the criteria for PBT or vPvB substances have been identified.

12.6 Other Adverse Effects

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 Considerations

13.1 Legal Regulations on Wastes

In accordance with the 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**

13.2 Substance 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.

13.3 Contaminated Container Disposal

Extra light fuel oil is usually supplied in road or railway tank cars. Decontamination and disposal of these containers follows the applicable ADR/RID regulations.

14 Transportation

The product is usually transported using railway and road tank cars. The product is classified as follows.

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

FUEL OIL	Hazard ID No.:	30	Classification code:	F1
(LIGHT)	UN No.:	1202	Class:	3
ENVIRONMENTALLY HAZARDOUS			Packaging Group:	III



15 Regulatory Information

15.1 Safety, health and environmental regulations / legislation specific for the substance or mixture

- 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
- Government Regulation No. 361/2007 Coll., on Occupational Safety, as amended, including the related regulations and provisions

15.2 Chemical Safety Assessment

Has been performed.

15.3 Other Regulatory Information

15.3.1 Act No. 8/2002 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. Pursuant to Section 2 Para n) of the aforesaid Act, the product is a volatile organic substance.

15.3.2 ČSN 65 0201 Flammable Liquids – Plants and Storage Facilities

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

15.3.3 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 Other Information Applying to the Dangerous Chemical Substance or Preparation

16.1 Information on Changes

All changes in this safety data sheet were made in accordance with the new data on substance hazardoussness gained during its registration process and in accordance with the requirements of the regulation no. 1907/2006/EC and the regulation no. 1272/2008.

16.2 Used literature

- Regulation (EC) No. 1907/2006 of the European Parliament and the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), as amended, including related rules and regulations
- Regulation of the European Parliament and of the Council (EC) no. 1272/2008 dated 16 December 2008 on classification, labelling and packaging of substances and mixture, as amended, including related rules and regulations
- 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. 254/2001 Coll., Water Act, 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 Regulation No. 361/2007 Coll., on Occupational Safety, as amended, including the related regulations and provisions
- 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

16.3 List of Used R-Phrases and H-Phrases, S-Phrases and P-Phrases

16.3.1 Standards Phrases for Specific Degree of Risk (R-Phrases)

R20	Harmful by inhalation
R38	Irritating to skin
R40	Possible risk of irreversible effects
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in aquatic environment
R65	Harmful: may cause lung damage if ingested

16.3.2 Hazard phrases (H-phrases):

H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H332	Harmful by inhalation
H351	Suspected of causing cancer
H373	May cause damage to organs
H411	Toxic to aquatic life with long lasting effects

16.3.3 Standard Instructions for Safe Handling (S-Phrases)

S2	Keep out of the reach of children
S23	Do not breathe vapours
S24	Avoid contact with skin
S36/37	Wear suitable protective clothing; Wear suitable gloves
S51	Use only in well-ventilated areas.
S61	Avoid release to the environment. Refer to special instructions or Safety data sheets
S62	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label

16.3.4 Instructions for Safe Handling (P-phrases):

P261	Avoid breathing vapours
P280	Wear protective gloves, safety goggles and protective clothing
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor
P331	DO NOT INDUCE vomiting
P332+P313	If skin irritation occurs: Get medical advice/attention
P501	Dispose of container in accordance with current legislation

16.4 Training Instructions

Trainings are carried out in accordance with the requirements of the Labour Code and Act No. 258/2000 Coll.

16.5 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.