

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1. Product identifier**

Trade name: Pentane hexane fraction  
Name of the Substance: Hydrocarbons, C<sub>≥5</sub>, C<sub>5-6</sub>-rich  
EC No.: 270-690-8  
CAS No.: 68476-50-6  
Index No.: 649-401-00-8  
REACH Registration No.: 01-2119489866-14-0004

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

Relevant identified uses: Gasoline component (intermediate substance).  
Uses advised against: no other use is recommended.

**1.3. Details of the supplier of the safety data sheet****Manufacturer:**

Public Company *ORLEN Lietuva*  
Juodeikiai, LT-89453 Mažeikiai District, Lithuania  
Tel.: +370 443 92121  
E-mail address: [post@orlenlietuva.lt](mailto:post@orlenlietuva.lt)

**1.4. Emergency telephone number**

Poison Information Bureau. In case of poisoning (24/7): +370 52 362052 or +370 687 53378  
General helpline number in Europe (24/7): 112

**SECTION 2: HAZARDS IDENTIFICATION****2.1. Classification of the substance or mixture**

Classification according to Regulation (EC) No. 1272/2008 (CLP)

**Flam. Liq. 1, H224**

**Asp. Tox. 1, H304**

**Skin Irrit. 2, H315**

**STOT SE 3, H336** (Organs affected: Central nervous system. Route of exposure: inhalation)

**Muta. 1B, H340**

**Carc. 1B, H350**

**Repr. 2, H361** (Specific effect: Fertility and unborn child)

**Aquatic Chronic 2, H411**

For the full text of Hazard Statements: see SECTION 16.

**2.2. Label elements**

Labelling according to Regulation (EC) No. 1272/2008 (CLP)

**Signal word: DANGER**

**Hazard pictogram:**



GHS02



GHS08



GHS07



GHS09

**Hazard Statements:**

H224: Extremely flammable liquid and vapour.

H304: May be fatal if swallowed and enters airways.

H315: Causes skin irritation.

H336: May cause drowsiness or dizziness.

H340: May cause genetic defects.

H350: May cause cancer.



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H361: Suspected of damaging fertility or the unborn child. Suspected of damaging fertility and the unborn child, when inhaled.

H411: Toxic to aquatic life with long lasting effects.

**Precautionary statements:**

P201: Obtain special instructions before use.

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P273: Avoid release to the environment.

P280: Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P301+P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P331: Do NOT induce vomiting.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

**2.3. Other hazards**

Product is extremely flammable liquid which may generate explosive mixtures of hydrocarbon vapours and air at ambient temperatures.

Vapour is irritating to skin, eyes and respiratory tract. Liquid product splashes irritate eyes and skin.

Toxic to aquatic organisms. May cause long-term adverse effects to aquatic environment. Risk of soil and ground water contamination.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1. Substances**

Trade name: Pentane hexane fraction

Substance Name	Concentration, %	Labelling according to CLP Regulation
Hydrocarbons, C <sub>≥5</sub> , C <sub>5-6</sub> -rich EC No.: 270-690-8 CAS No.: 68476-50-6 Index No.: 649-401-00-8 REACH Registration No.: 01-2119489866-14-0004	Up to 100	Flam. Liq. 1, H224 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 (Organs affected: Central nervous system. Route of exposure: inhalation) Muta. 1B, H340 Carc. 1B, H350 Repr. 2, H361 (Specific effect: Fertility and unborn child) Aquatic Chronic 2, H411

Contains substances for which workplace exposure limit value is established.

Occupational exposure limits, if available, are listed in SECTION 8.

For full text of H-statements, see SECTION 16.

**3.2. Mixtures**

Not applicable.

**SECTION 4: FIRST AID MEASURES**

**4.1. Description of first aid measures**

Before attempting to rescue casualties, isolate area from all potential sources of ignition including disconnecting electrical supply.

Ensure adequate ventilation and check that a safe, breathable atmosphere is present before entry into confined spaces.

Drench contaminated clothing with water before removing to avoid risk of sparks from static electricity.

**Inhalation**

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If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If the casualty is unconscious and:

- Not breathing – ensure that there is no obstruction to breathing and give artificial respiration by trained personnel. If necessary, give external cardiac massage and obtain medical assistance.
- Breathing – place in the recovery position and keep the head below the level of the torso. Administer oxygen if necessary.

Obtain medical attention if casualty has an altered state of consciousness or if symptoms do not resolve.

**Skin Contact**

Immediately remove contaminated clothing and footwear and dispose of safely. Wash affected area thoroughly with soap and water. Seek medical attention if skin irritation, swelling or redness develops and persists.

When using high-pressure equipment, injection of product can occur. If high-pressure injuries occur, immediately seek professional medical attention. Do not wait for symptoms to develop.

For minor thermal burns: Cool the burn. Hold the burned area under cold running water for at least five minutes, or until the pain subsides. However, body hypothermia must be avoided.

**Eye Contact**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. If irritation, blurred vision or swelling occurs and persists, obtain medical advice from a specialist.

**Ingestion**

The casualty should be sent immediately to a hospital. Do not wait for symptoms to develop. Do not induce vomiting, as there is high risk of aspiration (chemical pneumonia). Gastric lavage should be undertaken only after endotracheal intubation.

Do not give anything by mouth to an unconscious person.

**4.2. Most important symptoms and effects, both acute and delayed**

Inhalation may cause: headache, nausea, dizziness, vomiting and an altered state of consciousness.

Skin Contact – reddening, irritation.

Eye Contact – May cause mild reversible eye irritation.

Ingestion – few or no symptoms expected. If any, nausea and diarrhoea might occur. In case of ingestion, always assume that aspiration has occurred. May be fatal if it enters the airways after swallowing.

**4.3. Indication of any immediate medical attention and special treatment needed**

Treatment according to symptoms. In case of ingestion, always assume that aspiration has occurred. Do NOT induce vomiting. If vomiting does occur, have victim lean forward to reduce risk of aspiration.

**SECTION 5: FIREFIGHTING MEASURES**

**Flammability**

Extremely flammable liquid.

**5.1. Extinguishing media**

**Suitable extinguishing media:**

- Foam (specifically trained personnel only),
- Water fog (specifically trained personnel only),
- Dry chemical powder,
- Carbon dioxide,
- Inert gases (subject to regulations),
- Sand or earth,
- Steam.

**Unsuitable extinguishing media:**

Do not use direct water jets on the burning product; they could cause splattering and spread the fire.

Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

## 5.2. Special hazards arising from the substance or mixture

### Combustion Products

Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates and gases, including carbon monoxide and unidentified organic and inorganic compounds.

### Specific Hazards

If tanks or containers with product are exposed to fire, there is a hazard of explosion and fire due to increased pressure inside the vessel. If spillage of product occurs, the mixture of hydrocarbon vapours and air may explode or ignite of sparks or heated surfaces. Tanks and containers with product, which are in the direct vicinity of the fire, should be cooled by water jets from the safe distance.

## 5.3. Advice for firefighters

Use proper breathing apparatus, self-contained gas masks and impervious protective clothes. In case of a large fire or in confined or poorly ventilated spaces wear full fire resistant protective clothing and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Product is volatile liquid with very low flash point, any spillage or leak is severe fire or explosion hazard. Stop or contain leak at the source if safe to do so. Avoid direct contact with released material. Stay upwind. In case of large spillages, alert occupants in downwind areas.

Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency. Eliminate all ignition sources if safe to do so (e.g. electricity, sparks, fires, flares).

If required, notify relevant authorities according to all applicable regulations.

#### 6.1.2. For emergency responders

Small spillages: normal antistatic working clothes are usually adequate. Large spillages: full body suit of chemically resistant and antistatic material. Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons.

NOTE: gloves made of PVA are not water-resistant, and are not suitable for emergency use.

Work helmet. Antistatic non-skid safety shoes or boots. Goggles or face shield, if splashes or contact with eyes is possible or anticipated.

Respiratory protection: A half or full-face respirator with filter(s) for organic vapours (and when applicable for H<sub>2</sub>S) or a Self Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.

Product is extremely flammable liquid, any spillage or leak is a severe fire or explosion hazard.

### 6.2. Environmental precautions

#### Spillages onto Land

Stop leak at the source if safe to do so. Prevent product from entering sewers, rivers, waterways or other bodies of water. If necessary dike the product with dry earth, sand or similar non-combustible materials.

Large spillages may be cautiously covered with foam, if available, to limit vapour cloud formation and fire risk. Do not use direct jets.

When inside buildings or confined spaces, ensure adequate ventilation.

**Spillages on water or at sea**

Stop or contain leak at the source if safe to do so. In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment.

If possible, large spillages in open waters should be contained with floating barriers or other mechanical means.

**6.3. Methods and material for containment and cleaning up****Spillages onto Land**

Absorb spilled product with suitable non-combustible materials. Collect free product with suitable means. Transfer collected product and other contaminated materials to suitable containers for recycle, recovery or safe disposal.

In case soil contamination, remove contaminated soil and treat this in accordance with local regulations.

**Spillages on Water or at Sea**

Collect spilled product by absorbing with specific floating absorbents. Large spillages in open waters should be contained with floating barriers or other mechanical means and recovered, only if this is strictly necessary and if fire/explosion risks can be adequately prevented. Otherwise control the spreading of the spillage, and let the substance evaporate naturally. The use of dispersants should be advised by an expert, and, if required, approved by local authorities. Collect recovered product and other materials in suitable tanks or containers for recovery or safe disposal.

**Additional information**

NOTE: recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave/current direction and speed) may significantly influence the choice of appropriate actions. For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken.

Spillages of limited amounts of products, especially in the open air when vapours will be usually quickly dispersed, are dynamic situations, which are unlikely to entail exposure to dangerous concentrations. A possible exception may regard the build-up of dangerous concentrations in specific spots, like trenches, depressions or confined spaces. In all these circumstances, however, the correct actions should be assessed on a case-by-case basis.

**6.4. Reference to other sections**

See SECTION 8 for Exposure controls/personal protection. See SECTION 13 for Disposal considerations.

**SECTION 7: HANDLING AND STORAGE****7.1. Precautions for safe handling**

Obtain special instructions before use. Risk of explosive mixtures of vapour and air. Ensure that all relevant regulations regarding explosive atmospheres, and handling and storage facilities of flammable products, are followed.

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Use and store only outdoors or in a well-ventilated area. Avoid contact with the product.

Avoid release to the environment.

**7.2. Conditions for safe storage, including any incompatibilities****Handling**

During product transfer activities (loading and unloading of mobile tanks) and during sampling there is a risk of static electrical discharge, therefore precautionary measures against static electricity shall be taken.

Adequate hermetic mobile tanks should be used for pentane hexane fraction transportation. Use only bottom loading of tanks/tankers/containers in compliance with European legislation. Do not use compressed air for filling, discharging, or handling operations.

Ground/bond containers, tanks and transfer/receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools.

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The vapour is heavier than the air. Beware of accumulation in pits and confined spaces. Use personal protective equipment. Avoid contact with skin and eyes. Do not ingest. Avoid breathing vapours.

**Storage**

Storage area layout, tank design, equipment and operating procedures must comply with the relevant European, national or local legislation. For product storage tanks or containers with floaters (pontoons), which are suitable for storage of extremely flammable liquids, shall be used.

Storage installations should be designed with adequate bunds so as to prevent ground and water pollution in case of leaks or spills.

Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations.

Before entering storage tanks and commencing any operation in a confined area check the atmosphere for oxygen content and flammability.

Pentane hexane fraction vapours can build up in the headspace of tanks that may cause flammability/explosion hazards; therefore static electrical discharge and ignition sources should be avoided when measuring product level or sampling in the tanks.

Store separately from oxidising agents.

**Recommended and Unsuitable Materials for Storage**

Recommended materials: For containers, or container linings use mild steel, stainless steel.

Unsuitable materials: some synthetic materials may be unsuitable for containers or container linings depending on the material specification and intended use. Compatibility should be checked with the manufacturer.

**Container Advice**

If the product is supplied in containers: Keep only in the original container or in a suitable container for this kind of product. Keep containers tightly closed and properly labelled. Protect from the sunlight.

Light hydrocarbon vapours can build up in the headspace of containers. These can cause flammability/explosion hazards. Empty containers may contain flammable product residues. Do not weld, solder, drill, cut or incinerate empty containers, unless they have been properly cleaned.

**Hygiene measures**

Ensure that proper housekeeping measures are in place. Contaminated materials should not be allowed to accumulate in the workplace and should never be kept inside the pockets. Keep away from food and beverages. Do not eat, drink or smoke while using this product. Wash the hands thoroughly after handling. Change contaminated clothes at the end of working shift.

**7.3. Specific end use(s)**

Product is used in the technological process as feedstock component or fuel component for spark ignition (gasoline) internal combustion engines.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters**

**Substances for which occupational exposure limit values need to be controlled in the work environment:**

Hydrocarbons, C<sub>≥5</sub>, C<sub>5-6</sub>-rich, CAS No. 68476-50-6

Lithuanian Hygiene Standard HN 23:2011: not established.

**Exposure Limits**

Comply with established national occupational exposure limits. Where not established, the following short-term exposure limit is recommended – 350 mg/m<sup>3</sup>.

**Biological limit values (BLV)**

No biological limit value has been established for this substance.

**Recommended monitoring procedures**

Standard monitoring procedures must be followed.

Follow the monitoring measures applied in the country.

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**Derived No Effect Level DNEL**

Derived No Effect Level (DNEL) or other conclusions of hazardous health effects:

Route of exposure	Type of exposure	Hazard assessment conclusion	Most sensitive endpoint
<b>Workers</b>			
Systemic effects			
Inhalation	Long term exposure	No hazard identified	
Inhalation	Acute/short term exposure	DNEL 1286.4 mg/m <sup>3</sup>	Neurotoxicity
Dermal	Long term exposure	No hazard identified	
Dermal	Acute/short term exposure	No hazard identified	
Local effects			
Inhalation	Long term exposure	DNEL 837.5 mg/m <sup>3</sup>	Irritation (respiratory tract)
Inhalation	Acute/short term exposure	DNEL 1066.67 mg/m <sup>3</sup>	Irritation (respiratory tract)
Dermal	Long term exposure	Low hazard (no threshold derived)	
Dermal	Acute/short term exposure	Low hazard (no threshold derived)	
Eyes	Local effects	No hazard identified	
<b>General Population</b>			
Systemic effects			
Inhalation	Long term exposure	No hazard identified	
Inhalation	Acute/short term exposure	DNEL 1152 mg/m <sup>3</sup>	Neurotoxicity
Dermal	Long term exposure	No hazard identified	
Dermal	Acute/short term exposure	No hazard identified	
Oral	Long term exposure	No hazard identified	
Oral	Acute/short term exposure	No hazard identified	
Local effects			
Inhalation	Long term exposure	DNEL 178.57 mg/m <sup>3</sup>	Irritation (respiratory tract)
Inhalation	Acute/short term exposure	DNEL 640 mg/m <sup>3</sup>	Irritation (respiratory tract)
Dermal	Long term exposure	Low hazard (no threshold derived)	
Dermal	Acute/short term exposure	Low hazard (no threshold derived)	
Eyes	Local effects	No hazard identified	

**Predicted No Effect Concentrations PNEC**

Substance is a hydrocarbon UVCB: technically, the PNEC is not determined or cannot be determined.

**8.2. Exposure controls**

### 8.2.1. Appropriate engineering controls

Reduce exposure by using closed systems, sufficient general and local ventilation. If exposure is likely, restrict access to area. Provide training for staff.

During various technical and process operations gasoline vapour may be emitted into the environment, therefore the concentration in working environment air shall be controlled to the minimum allowed limit.

### 8.2.2. Individual protection measures, such as personal protective equipment

#### a) Eye/face protection

Wear safety glasses in circumstances where eye contact may occur (e.g. acc. to EN 166). Do not use contact lenses.

#### b) Skin protection

##### i) Hand protection

Use petroleum product resistant gloves (tested and compliant to EN374). Check before use. Use only with clean hands. Contaminated gloves should be replaced. Always seek advice from glove suppliers for use, storage, care and replacement of gloves.

##### ii) Other

Wear protective clothes (according to EN 465) and other protection equipment. Protective clothing should be regularly inspected and maintained.

#### c) Respiratory protection

If during operations the exposure of employees to large amounts of product vapour and gas is inevitable, suitable respiratory protective equipment, such as A2 filtering mask or analogous should be applied (e.g. according to EN 14387). When working in vessel internals or other confined spaces **do not** use filtering masks but the special self-contained protective equipment. Respiratory protection equipment should be selected and used in accordance with the manufacturer's instructions and requirements established by the law.

#### d) Thermal hazards

If applicable, use heat-resistant personal protective equipment.

#### Hygiene measures

Comply with personal hygiene requirements. Wash hands before breaks and after work. Wash immediately in case of skin contact.

### 8.2.3. Environmental exposure controls

To ensure the compliance of ventilation and process equipment with requirements of environmental legislation, emissions of such equipment are subject to verification. In some cases vapour filtering installations or process equipment modifications may be necessary for the reduction of emission to allowed limit.

Avoid release to the environment.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

a) Physical state	Liquid
b) Colour	Clear, colourless
c) Odour	Typical odour of hydrocarbons
d) Melting point/freezing point	Below minus 20 °C
e) Boiling point or initial boiling point and boiling range	30–115 °C
f) Flammability	Flamable liquid
g) Lower and upper explosion limit	1.4–8.3 %
h) Flash point	Below 0 °C
i) Auto-ignition temperature	> 290 °C
j) Decomposition temperature	Not applicable
k) pH	Not applicable
l) Kinematic viscosity	< 1 mm <sup>2</sup> /s (at 40 °C)
m) Solubility	Not applicable to UVCB substances



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- n) Partition coefficient n-octanol/water (log value)
- o) Vapour pressure
- p) Density and/or relative density
- q) Relative vapour density
- r) Particle characteristics

Not applicable to UVCB substances  
45–100 kPa (at 40 °C)  
Max 0.7 g/cm<sup>3</sup> (at 15 °C)  
3–4 (rel. to air.)  
Not applicable for liquids

**9.2. Other information****9.2.1. Information with regard to physical hazard classes**

Based on the available data, meets the CLP Regulation criteria as Category 1 Flammable Liquids.

**SECTION 10: STABILITY AND REACTIVITY****10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

**10.2. Chemical stability**

Stable at ambient temperature.

**10.3. Possibility of hazardous reactions**

Hazardous reactions with strong oxidizing agents.

**10.4. Conditions to avoid**

High ambient temperature.

Avoid electrostatic discharges and other ignition sources.

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

**10.5. Incompatible materials**

Avoid contact with strong oxidizing agents.

**10.6. Hazardous decomposition products**

Thermal decomposition products vary depending on conditions.

Partial decomposition produces fume, carbon dioxide, carbon monoxide and other harmful gases.

Concentration of toxic gas in a confined space or premises may reach a hazardous limit.

**SECTION 11: TOXICOLOGICAL INFORMATION****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****a) acute toxicity**

Not classified for acute oral toxicity based on an oral LD<sub>50</sub> > 5000 mg/kg bw (test method equivalent or similar to OECD 401).

Not classified for acute inhalation toxicity (test method equivalent or similar to OECD 403).

Not classified for acute dermal toxicity based on a dermal LD<sub>50</sub> of > 2000 mg/kg body weight (test method equivalent or similar to OECD 402).

**b) skin corrosion/irritation**

Classified as irritating to the skin, Cat. 2, H315: Causes skin irritation. Test method OECD 404.

**c) serious eye damage/irritation**

Does not meet the classification criteria based on available data. Test method equivalent or similar to OECD 405.

**d) respiratory or skin sensitisation**

Does not meet the classification criteria based on available data (test method equivalent or similar to OECD 406).

**e) germ cell mutagenicity**

Classified as mutagenic based on available data, Cat. 1B H340: May cause genetic defects (weight of evidence approach).

**f) carcinogenicity**

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Classified as carcinogenic, Cat. 1B, H350: May cause cancer (weight of evidence approach).

**g) reproductive toxicity**

Classified as toxic to reproductive system, Cat. 2, H361: Suspected of damaging fertility or the unborn child. Suspected of damaging fertility and the unborn child, when inhaled (test method equivalent or similar to OECD 416).

**h) STOT-single exposure**

Classified as Specific Target Organ Toxicant upon single exposure, Cat. 3, H336: May cause drowsiness or dizziness (weight of evidence approach).

**i) STOT-repeated exposure**

Does not meet the classification criteria based on available data (weight of evidence approach).

**j) aspiration hazard**

Classified as presenting an aspiration hazard, Cat. 1, H304: May be fatal if swallowed and enters airways. Based on a kinematic viscosity  $\leq 20.5 \text{ mm}^2/\text{s}$  at  $40 \text{ }^\circ\text{C}$ .

**Symptoms related to the physical, chemical and toxicological characteristics, delayed and immediate effects as well as chronic effects from short and long-term exposure**

Vapour of low concentration is slightly irritating to eyes and respiratory system. The liquid product, when in contact with the eyes, may cause transient eye stinging or redness, and if splashed on the skin, it may slightly irritate and dry the skin.

Unlikely to cause harm if swallowed in small amounts, though larger quantities may cause nausea and diarrhea. In case of ingestion assume that aspiration has occurred.

Prolonged or repeated gasoline contact with skin may cause nausea, dizziness, headache and drowsiness; possible chemical pneumonitis.

NOTE. Product handling under typical conditions does not pose a toxicological hazard; however, even a short deliberate inhalation of large quantity of high concentration gasoline vapour may cause loss of consciousness.

**11.2 Information on other hazards****Endocrine disrupting properties**

Not applicable. The substance is not considered an endocrine disruptor.

**SECTION 12: ECOLOGICAL INFORMATION****12.1. Toxicity**

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Spills may form a film on water surfaces causing physical damage to aquatic life. Oxygen transfer can also be impaired due to the formed film.

Classified as hazardous to the aquatic environment — Chronic, Cat. 2, H411: Toxic to aquatic life with long lasting effects.

Short term toxicity to fish

The 96 h  $\text{LL}_{50}$  for freshwater fish (*Oncorhynchus mykiss*) is 10 mg/l (based on data of similar substances).

The 96 h  $\text{LL}_{50}$  for freshwater fish (*Pimephales promelas*) is 8.2 mg/l (based on data of similar substances).

Short-term toxicity to aquatic invertebrates

$\text{EL}_{50}$  (*Daphnia magna*, 48 h) 4.5 mg/l (based on data of similar substances).

Long-term toxicity to aquatic invertebrates

NOELR 21-day value 2.6 mg/l based on reproduction with *Daphnia magna*.

Toxicity to aquatic algae and cyanobacteria

$\text{EL}_{50}$  (*Pseudokirchnerella subcapitata*, 72 h) value 3.1 mg/l. The 72-hour NOELR value for *Pseudokirchnerella subcapitata* is 0.5 mg/l based on growth rate.

Toxicity to microorganisms

The estimated 40 h  $\text{EL}_{50}$  value for *Tetrahymena pyriformis* is 15.41 mg/l.

**12.2. Persistence and degradability**

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Substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for the risk assessment of this complex substance.

**12.3. Bioaccumulative potential**

Substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for the risk assessment of this complex substance.

**12.4. Mobility in soil**

Substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for the risk assessment of this complex substance.

**12.5. Results of PBT and vPvB assessment**

This substance does not contain constituents included in the SVHC candidate list as PBT/vPvB at concentrations above 0.1%.

**12.6. Endocrine disrupting properties**

This material does not contain any hydrocarbon structures that have been identified as having endocrine disrupting properties at concentrations equal to or greater than 0.1%.

**12.7. Other adverse effects**

No data available.

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1. Waste treatment methods**

Waste disposed of by decontamination in accordance with national requirements and local regulations or via a licensed waste disposal contractor. Note hazards arising from waste, and undertake required safety measures when handling it. Personnel involved in waste handling should wear personal protective equipment.

Empty storage tanks and railway tank cars may contain product residues; therefore, warning labels are to be retained as a guide to the safe tank handling and waste disposal. Empty containers represent a fire hazard as they may contain flammable product residues and vapour.

DO NOT weld, solder and repair in other ways the tanks without proper preparation.

**SECTION 14: TRANSPORT INFORMATION**

**Labels**



Marine pollutant

**Land transport (ADR-RID)**

**14.1. UN number or ID number**

1203

**14.2. UN proper shipping name**

UN 1203, GASOLINE

**14.3. Transport hazard class(es)**

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**14.4. Packing group**

II

**14.5. Environmental hazards**

Environmentally hazardous.

**14.6. Special precautions for user**

Hazard identification No.	33
Classification code	F1
Labels	3
Special provisions	243, 534, 664
Tunnel restriction code	2 (D/E)

For details on special provisions, see In chapter 3.3 of the ADR / RID regulation.  
See also SECTION 7 of the SDS for handling and storage advice.

**14.7. Maritime transport in bulk according to IMO instruments**

Not applicable

**Inland waterway transport (UN RTDG/ADN(R))****14.1. UN number or ID number**

1203

**14.2. UN proper shipping name**

UN 1203, GASOLINE

**14.3. Transport hazard class(es)**

3

**14.4. Packing group**

II

**14.5. Environmental hazards**

Environmentally hazardous.

**14.6. Special precautions for user**

Classification code	F1
Labels	3
Special provisions	243, 534
Equipment required	PP, EX, A

**14.7. Maritime transport in bulk according to IMO instruments**

Not applicable

**Marine transport (UN RTDG/IMDG)****14.1. UN number or ID number**

1203

**14.2. UN proper shipping name**

UN 1203, GASOLINE

**14.3. Transport hazard class(es)**

3

**14.4. Packing group**

II

**14.5. Environmental hazards**

Environmentally hazardous.

**14.6. Special precautions for user**

EmS number	F-E, S-E
Limited and excepted quantities	1 L



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IBC instructions IBC02  
1203 is category E for stacking and separation

**14.7. Maritime transport in bulk according to IMO instruments**

IMO tank instructions -

**Air transport (UN RTDG/ICAO/IATA)**

**14.1. UN number or ID number**

1203

**14.2. UN proper shipping name**

UN 1203, GASOLINE

**14.3. Transport hazard class(es)**

3

**14.4. Packing group**

II

**14.5. Environmental hazards**

Environmentally hazardous.

**14.6. Special precautions for user**

Limited and excepted quantities 1 L  
Special provisions A100

**14.7. Maritime transport in bulk according to IMO instruments**

Not applicable

**SECTION 15: REGULATORY INFORMATION**

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

**Relevant EU/international legislations:**

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)  
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (CLP)  
Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)  
Council Regulation (EC) No 440/2008 of 30 May 2008 laying down test methods pursuant to Regulation (EC) No 1907/2006 (REACH)  
Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal protective equipment  
Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste  
Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances  
Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work  
Council Directive 89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work  
Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work  
European Agreement on the International Carriage of Dangerous Goods by Road / Waterways (ADR / MDG)  
European Agreement on the International Carriage of Dangerous Goods by Air (IATA)



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2000/532/EC: Commission Decision of 3 May 2000 replacing Decision 94/3/EC establishing a list of wastes

Regulation (EC) No 1907/2006 (REACH):

SVHC (Candidate List of substances of very high concern for Authorisation): Not applicable

REACH Annex XIV (Authorisation List): Not applicable

REACH Annex XVII (Substances restricted under REACH): Not applicable

Regulation (EU) No 649/2012 (PIC): Not applicable

Regulation (EC) No 850/2004 (POT): Not applicable

Regulation (EC) No 1107/2009 (Plant protection products): Not applicable

Regulation (EU) No 528/2012 (Biocidal products): Not applicable

Regulation (EC) No 648/2004 (Detergents): Not applicable

Regulation (EC) No 1005/2009 (OSAM): Not applicable

Directive 2004/37/EC (related to exposure to carcinogens or mutagens at work): Not applicable

**Note:** Any subsequent updates, amendments and/or additions to the legislation should be duly considered. The list of legal acts is not exhaustive.

### 15.2. Chemical safety assessment

Chemical safety assessment has been conducted.

## SECTION 16: OTHER INFORMATION

Revision of safety data sheet: 2022-12-14

Revised: all sections.

During the review of the SDS, the data presented were clarified and arranged in accordance with the European Commission Regulation (EU) No. 2020/878 requirements.

### Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road
BLV	Biological limit values
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures
DNEL	Derived No-Effect Level
EC	EINECS (European Inventory of Existing Commercial Chemical Substances) or ELINCS (European List of Notified Chemical Substances)
EL <sub>50</sub>	Effective loading rate resulting in 50% effect
EmS	Emergency Response Procedures for Ships Carrying Dangerous Goods
EN	European standard of European Committee for Standardization
ErL <sub>50</sub>	Loading Rate of Test Substance (in dilution water) which causes 50% reduction in algal growth rate
EU	European Union
IATA	International Air Transport Association
IBC	Intermediate bulk container
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
IMO	International Maritime Organization
JT	United Nations
LC <sub>50</sub>	Lethal concentration for 50 % percent of test organisms
LD <sub>50</sub>	Lethal dose for 50 % of test organisms (median lethal dose)
LL <sub>50</sub>	Lethal load for 50 % of the test organisms
LR	Republic of Lithuania
LTEL	Long-term exposure limit value

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NOAEC No observed adverse effect concentration  
NOAEL No observed adverse effect level  
NOEL Non observed effect level  
OECD Organization for Economic Cooperation and Development  
PBT Persistent, bioaccumulative and toxic  
PNEC Predicted no-effect concentration  
RCR Risk characterization ratio  
RID The Regulation concerning the International Carriage of Dangerous Goods by Rail  
RTDG Recommendations on the Transport of Dangerous Goods  
REACH Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals  
STEL Short-term exposure limit value  
STOT Specific target organ toxicity  
UFI Unique Formula Identifier  
UVCB Substance of unknown or variable composition, complex reaction products or biological materials  
vPvB very Persistent and very Bioaccumulative

**Full text of Hazard Statements:**

H224: Extremely flammable liquid and vapour.  
H304: May be fatal if swallowed and enters airways.  
H315: Causes skin irritation.  
H336: May cause drowsiness or dizziness.  
H340: May cause genetic defects.  
H350: May cause cancer.  
H361: Suspected of damaging fertility or the unborn child. Suspected of damaging fertility and the unborn child, when inhaled.  
H411: Toxic to aquatic life with long lasting effects.

**Key literature references and sources for data**

Registration documentation  
Publicly available data from the national limit value databases of the European Chemicals Agency (ECHA), The GESTIS International Limit values Database.

**Training advice**

Employees/users must be trained/familiarized with the relevant safety information provided.

Do not use the product for any purposes other than indicated in the manufacturer's information. During such use the user may be exposed to unforeseen hazards. Should you have any questions or doubts regarding SDS, its contents or any other concerns related to safety of the product, please contact us by e mail: [post@orlenlietuva.lt](mailto:post@orlenlietuva.lt)

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