



# MATERIAL SAFETY DATA SHEET

Written in accordance with Regulation No EC 1907/2006 (REACH)

## Section 1: Identification of the substance/mixture and of the company

### 1.1 Product identification

Product name: **Aviation Gasoline Avgas 100LL**

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

Identified uses: fuel for spark-ignition aviation engines

Uses advised against: not determined.

### 1.3 Information on the Material Safety Data Sheet supplier

Manufacturer: **Ośrodek Badawczo Rozwojowy Przemysłu Rafineryjnego S.A. (OBR JSC)**

Address: ul. Chemików 5, 09-411 Płock

Telephone number: + 48 24/ 365 33 07/+ 48 24/ 365 22 83

E-mail address of the material safety data sheet coordinator: [biuro@theta-doradztwo.pl](mailto:biuro@theta-doradztwo.pl)

### 1.4 Emergency telephone number

112 (main emergency telephone number), 998 (fire brigade), 999 (medical aid)

## Section 2: Identification of hazards

### 2.1 Classification of the substance or mixture

#### Human health hazards:

Harmful product; harmful by inhalation, by skin contact and by ingestion, may accumulate in the body causing adverse effects. Harmful for the respiratory tract; poses severe hazard to human health upon prolonged exposure. Possible risk of harming an unborn child. Harmful: may cause acute lung damage if swallowed. Skin-irritant.

#### Environmental effects:

Hazardous for the environment. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### Hazards resulting from physical and chemical properties:

Highly flammable product.

### 2.2 Markings

#### Hazard inscriptions and symbols:

<b>F</b>	<b>Xn</b>	<b>N</b>
<b>Highly flammable</b>	<b>Harmful</b>	<b>Hazardous for the environment</b>

#### Specification of hazardous components for labeling

Contains: toluene, naphtha (petroleum, tetraethyllead)

#### Hazard identification:

R11	Highly flammable.
R20/21/22	Harmful by inhalation, by skin contact and by ingestion.
R33	Danger of cumulative effects.
R38	Skin irritant.
R48/20	Harmful: May cause adverse effects by prolonged exposure through inhalation.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.



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R63	May pose hazard to the unborn child.
R65	Harmful: may cause lung damage when swallowed
<u>Mixture handling safety phrases:</u>	
S9	Keep the container in a well-ventilated place.
S16	Keep away from sources of ignition – No smoking.
S36/37	Apply appropriate protective clothing and gloves.
S53	Avoid exposure – read all instruction manuals before use.
S62	If swallowed, do not induce vomiting; seek medical assistance immediately, show this container or label to the M.D.

## 2.3 Other hazards

No indication of compliance with PBT or vPvB criteria pursuant to Annex XIII of the REACH EC Regulation. Applicable test have not been carried out.

## Section 3: Composition/information on ingredients

### 3.1 Substances

Not applicable.

### 3.2 Mixtures

#### Naphtha (petroleum), light alkylate

Range of concentrations:	>30%
CAS number:	64741-66-8
EC number:	265-068-8
REACH registration number:	01-2119463272-43-0004
Classification acc. to 67/548/EEC*	<b>F</b> R11, <b>N</b> R51/53, <b>Xn</b> R65, <b>Xi</b> R38, R67
Classification acc. to 1272/2008/EC*	Flam. Liq. 2 H225, Aquatic Chronic 2 H411, Asp. Tox. 1 H304, Skin Irrit. 2 H315, STOT SE. 3 H336

\*accounting for the H & P notes, the product contains less than 0.1 w/w of benzene

#### Isomerized naphtha (petroleum)

Range of concentrations:	<30%
CAS number:	64741-70-4
EC number:	265-073-5
REACH registration number:	01-2119480399-24-XXXX
Classification acc. to 67/548/EEC*	<b>F</b> R11, <b>N</b> R51/53, <b>Xn</b> R65, <b>Xi</b> R38, R67
Classification acc. to 1272/2008/EC*	Flam. Liq. 2 H225, Aquatic Chronic 2 H411, Asp. Tox. 1 H304, Skin Irrit. 2 H315, STOT SE. 3 H336

\*accounting for the H & P notes, the product contains less than 0.1 w/w of benzene and <1% w/w of n-hexane

#### Toluene

Range of concentrations:	15-25%
CAS number:	108-88-3
EC number:	203-625-9
REACH registration number:	01-2119471310-51-XXXX
Classification acc. to 67/548/EEC*	<b>F</b> R11, <b>Repro. Cat. 3</b> R63, <b>Xi</b> R38, <b>Xn</b> R48/20-65, R76
Classification acc. to 1272/2008/EC*	Flam. Liq. 2 H225, Repr. 2 H361d, Asp. Tox. 1 H304, STOT RE 2 H373, Skin Irrit. 2 H315, STOT SE. 3 H336



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Substance with State-specified value of maximum occupational concentration.

## Tetraethyllead

Range of concentrations:	<1%
CAS number:	78-00-2
EC number:	201-075-4
REACH registration number:	substance subject to temporary regulations
Classification acc. to 67/548/EEC*	<b>Repro. Cat. R61, Repro. Cat. 3 R62, T+ R26/27/28, R33, N R50/53</b>
Classification acc. to 1272/2008/EC*	Repro. 1A H360FD, Repro. 2 H361fd, Acute Tox. 2 H330, Acute Tox. 1 H310, Acute Tox. 2 H300, STOT RE 2 H373, Aquatic Acute 1 H400, Aquatic Chronic 1 H410

Substance with State-specified value of maximum occupational concentration.

\*accounting for the A note.

## 1,2-dibromoethane

Range of concentrations:	< 0.1%
CAS number:	106-93-4
EC number:	203-444-5
REACH registration number:	substance subject to temporary regulations
Classification acc. to 67/548/EEC*	<b>Carc. Cat. R45, T R23/24/25, Xi R36/37/38, N R51/53</b>
Classification acc. to 1272/2008/EC*	Carc. 1B H350, Acute Tox. 3 H331, Acute Tox. 3 H311, Acute Tox. 3 H301, Eye Irrit. 2 H319, STOT SE 3 H335, Skin Irrit. 2 H315, Aquatic Chronic 2 H411

Full text of all relevant H and R phrases is provided in section 16.

## Section 4: First aid measures

### 4.1 Description of first aid measures

Skin contact: remove contaminated clothing, immediately wash skin abundantly with water. With no irritation effect, use soap. If irritation occurs, consult a doctor.

Eye contact: consult a doctor if irritation occurs. Protect the non-irritated eye, remove contact lenses. Rinse the contaminated eye thoroughly with water for 10-15 minutes. Avoid a strong stream of water, which could potentially damage the cornea.

Ingestion: do not induce vomiting. Seek medical assistance immediately. Show this MSDS or product label to the M.D. Upon self-induced vomit, do not allow the preparation mixed with vomit to penetrate the respiratory tract. Do not administer anything orally to an unconscious person.

Inhalation: seek medical assistance immediately. If conscious, escort the injured outside. If unconscious, carry the injured out of the contaminated environment out into fresh air. Keep them warm and at rest. Place the conscious in a semi-sitting position; lay the unconscious in the recovery position; control and maintain respiratory tract patency. With obstructed breathing, apply oxygen. With no breath, apply resuscitation techniques, using the AMBU apparatus.



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## 4.2 Essential symptoms and effects, both acute and delayed

Poisoning symptoms may appear in delay.

Eye contact: irritation, tearing, mild burning sensation

Skin contact: upon frequent or prolonged contact, the product may cause redness, dryness, inflammation, irritation.

Inhalation: respiratory tract irritation, sore throat and respiratory tract ache, headache and dizziness. In severe cases, bronchitis and pneumonia may occur after 24 hours. The most acute cases involve pulmonary edema or loss of consciousness.

Ingestion: abdominal pain, nausea, vomiting, risk of pulmonary aspiration and chemical pneumonia. Severe cases involve loss of consciousness, hemolysis, internal organ disorders.

## 4.3 Indication of immediate medical assistance and special treatment measures required

The physician shall determine the first aid measures to be applied, following thorough examination of the injured. Upon inhalation of decay products in the event of fire, the occurrence of any symptoms may be delayed. The injured may require medical supervision for 48 hours.

## Section 5: Firefighting measures

### 5.1 Extinguishing agents

Suitable extinguishing agents: powder (CO<sub>2</sub>) extinguishers, foam extinguishers, liquid extinguishers with a water solution of the medium, powder extinguishers with the ABC extinguishing powder, powder extinguishers with the BC extinguishing powder, a water jet may be applied as last resort.

Unsuitable extinguishing agents: tight water jet – risk of propelling the flame.

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

During combustion, such toxic gasses as: carbon monoxide, nitrogen oxides, organic vapors, etc. may be generated. Avoid inhaling combustion products, which may pose a health risk.

### 5.3 Information for the fire brigade

Safety and protective measures typical for fires. Do not stay in the hazard zone without adequate chemical-resistant clothing and a breathing apparatus with independent air circulation. Highly flammable. When under fire or when heated up, the tank may pressurize, which may cause an explosion hazard. Isolate the area under hazard and refrain from taking any actions which could potentially cause a risk to human health or life. Product vapors are heavier than air and accumulate in the lower parts of the rooms. There is a great likelihood of an explosive mixture of product and air creating – proceed with evacuation if such hazard occurs. All containers exposed to fire must be cooled down at a safe distance using a dispersed water jet. Do not allow fire extinguishing water to enter the sewage system, or penetrate surface or ground water.

## Section 6: Accidental release measures

### 6.1 Personal protection, protective equipment and emergency procedures

For all parties not involved in removing the effects of accident: restrict the access of any outsiders to the failure area until all clearing operations are completed. In the case of major leaks, isolate the hazard area. Avoid direct contact with the leaking product. Apply means of personal protection. Avoid contaminating your eyes and skin. Ensure adequate ventilation. Remove the source of ignition, extinguish flames, ban smoking in the premises. Be careful not to slip on the product leak.



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For the rescue and technical teams: make sure that only fully trained personnel is dispatched to removing the failure and its effects. Apply means of personal protection.

## 6.2 Measures for environmental protection

Upon the release of large amounts of the mixture, all measures must be taken to prevent it from penetrating the natural environment. Secure all drains; prevent the product from accessing the sewage system. Notify adequate emergency and rescue services. Remove and replace all contaminated soil.

## 6.3 Methods and materials applied for containment and cleaning

Major leak: embank all liquid accumulation areas. Pump the accumulated liquid out. Minor leak: use liquid-binding material (e.g. sand, universal binders, vermiculite, etc.) to absorb and remove the accumulated liquid to properly marked containers. The product collected must be treated as waste. Clear and ventilate the contaminated area.

## 6.4 Reference to other sections

Product waste disposal – see section 13. Means of personal protection – see section 8.

## Section 8: Handling and storage

### 7.1 Safe handling measures

All works must be carried out in line with occupational health and safety principles. Avoid eye and skin contamination. Wash your hands before every break and after finishing work. Keep unused containers sealed. Ensure adequate ventilation of the area, in which the product is used. Do not inhale any fumes. Do not allow the product in your mouth. Do not allow for the accumulation of vapors in the air. Do not allow the formation of a concentration within or above the limits of explosive properties or MPC. Eliminate the sources of ignition – do not use open flames, do not smoke, do not use sparking tools or items of clothing made of electrostatic fabric; protect containers against overheating, install anti-explosive electrical devices only. Open containers with the product with caution, releasing all pressure build-ups. Empty containers may still hold some product remainders (liquid, vapor), which may create an explosive mixture when mixed with air. Do not: cut, drill in, mill, weld the container or perform these works in the vicinity of the container. When loading or unloading, ensure adequate earthing.

### 7.2 Conditions for safe storage, including information on inconsistencies

Store the product in certified, properly marked, sealed, steel containers only. Store the containers in cool, adequately ventilated warehouses. Store the containers on hard, impenetrable ground, made of materials resistant to hydrocarbons. Fill the containers up to 90% of their total volume. Do not smoke, eat, use open flames or sparking devices within the storehouse. Keep away from oxidants.

### 7.3 Specific end use(s)

## Section 8: Exposure control/means of personal protection

### 8.1 Control parameters

Specification	MPC	MPMC	MPTC	PBC
Toluene [CAS 108-88-3]	100 mg/m <sup>3</sup>	200 mg/m <sup>3</sup>	—	80 mg/h* 300 µg/l**
Tetraethyllead [CAS 78-00-2]	0.05 mg/m <sup>3</sup>	0.1 mg/m <sup>3</sup>		—
1,2-dibromoethane [CAS 106-93-4]	0.5 mg/m <sup>3</sup>			—

Fuel for spark-ignition aviation engines



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\*Absorbed substance – Benzoic acid, biological material – urine.

\*\* Absorbed substance – toluene, biological material – capillary blood

Legal basis: Journal of Laws, 2002, No. 217, item 1833, as amended; Journal of Laws, 1996, No. 69, item 332, as amended.

DNEL and PNEC values

## Toluene:

DNEL worker (dermal, long-term exposure – systemic effects): 384 mg/m<sup>3</sup>/per diem

DNEL worker (inhalation, long-term exposure – systemic effects): 192 mg/m<sup>3</sup>

DNEL worker (inhalation, long-term exposure, local effects): 192 mg/m<sup>3</sup>

DNEL worker (inhalation, acute exposure, systemic effects): 384 mg/m<sup>3</sup>

DNEL consumer (dermal - long-term exposure – systemic effects): 226 mg/kg of body weight

DNEL consumer (inhalation – long-term exposure – systemic effects): 56.5 ml/m<sup>3</sup>

DNEL consumer (oral – long-term exposure – systemic effects): 8.13 mg/kg of body weight

DNEL consumer (inhalation – acute exposure – local effects): 226 ml/m<sup>3</sup>.

PNEC fresh water 0.68 mg/l

PNEC salt water 0.68 mg/l

PNES soil 2.89 mg

PNES sediment 16.39 mg/kg

PNEC sewage treatment plant 13.61 mg/kg

## Isomerized naphtha (petroleum)

DN(M)EL (inhalation – acute exposure): 1300 mg/m<sup>3</sup>/ 15 min.

DN(M)EL (inhalation – acute exposure): 4320 mg/m<sup>3</sup>/ 1h

DN(M)EL (inhalation – long-term exposure): 840 mg/m<sup>3</sup>/ 8h

DN(M)EL (inhalation – long-term exposure): 10.000 mg/m<sup>3</sup>/6h/ 5 days

PNEC fresh water: *Tetrahymena pyriformis* LL50 (72h) 15.41 mg/L (this value refers to one of the most sensitive water microorganisms).

## Recommended monitoring procedures:

Apply procedures for monitoring the concentrations of hazardous components in air as well as air cleanness procedures in the workplace – provided that such are available and justified in a given position – pursuant to applicable Polish and European Standards and in consideration of the conditions in the contamination zone, as well as applicable measurement methodology adapted to the working conditions. The type, character and frequency of measurements shall observe the requirements of the ordinance of the Minister of Health of 20 April 2005 (Journal of Laws, No. 73, item 645, as amended).

## **8.2 Exposure control**

Observe general occupational health and safety principles. Do not eat, drink or smoke tobacco during work. Avoid skin and eye contamination. Ensure effective local ventilation in workplaces as well as general ventilation – as to ensure that the concentrations of hazardous components in the atmosphere are contained below exposure limit values. In case of a risk of the worker being drenched with the substance, safety sprinklers and eye washing units should be installed in the vicinity of the workplace

### Hand and body protection

Use protective, chemical-resistant gloves. Recommended glove material: PVA. Use adequate protective clothing and footwear – antistatic and chemical-resistant.

The material the gloves are made of must be impenetrable and resistant to the product's effects. Selecting the material, account for the piercing time, penetration time and degradation time. Moreover, selection of the most adequate gloves, consider other qualitative features and the properties offered by particular manufacturers. Change your gloves regularly. Upon noticing any symptoms of wear, damage or change in appearance (color, flexibility, shape), change the gloves immediately.

### Eye protection

Use protective goggles.

### Respiratory tract protection



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If steam or aerosols are generated, use absorbing or absorbing-filtering equipment of adequate protection class (class 1/protection against gasses or vapors of volumetric concentration in air up to 0.1%; class 2/ protection against gasses or vapors of volumetric concentration in air up to 0.5%; class 3/ protection against gasses or vapors of volumetric concentration in air up to 1%). Should the concentration of air fall below < 17% and/or the max concentration of hazardous substance in air exceed > 1.0% of total volume, apply isolating equipment.

The means of personal protection applied must comply with the requirements of the ordinance of the Minister of Economy of 28.12.2005 (Journal of Laws, No. 259, item 2173) and directive 89/686/EEC (as amended). The employer shall be obliged to provide sufficient means of personal protection to the operations performed and in compliance with all pertinent qualitative requirements, as including maintenance and cleaning.

## Environmental exposure control

Prevent direct leaks to the sewage system/ ground water reservoirs. Do not contaminate surface waters and drainage troughs with chemicals or used packages. Report product leaks or uncontrolled leaks to surface water reservoirs to pertinent authorities according to state and local regulations. Dispose of the product as chemical waste, according to state and local regulations.

## Section 9: Physical and chemical properties

### 9.1 Control parameters

physical state:	liquid
color:	light blue, transparent
odor:	characteristic for organic solvents
odor threshold:	not determined
pH:	not determined
melting point/freezing point:	< -60°C
initial boiling point and boiling range:	37°C
flash point:	< 0°C
evaporation rate:	not determined
flammability (solid, gas):	not applicable
upper/lower flammability or exposure limits:	1.4% vol./ 11.5% vol.
vapor pressure (37.8°C):	38-49 kPa
vapor density:	> 1 (air = 1)
density (20°C):	710 – 730 kg/m <sup>3</sup>
solubility(ies):	does not dissolve in water, dissolves in organic solvents
partition coefficient: n-octanol/water:	not determined
spontaneous combustion temperature:	not determined
decomposition temperature:	not determined
explosive properties:	vapors can form explosive mixtures with air
oxidizing properties:	no indication
dynamic viscosity:	not determined

### 9.2 Other information

Not applicable.



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## Section 10: Stability and reactivity

### 10.1 Reactivity

The product enters into reaction with potent oxidants. Explosive mixtures with air may be formed. The product may soften some plastics.

### 10.2 Chemical stability

The product is stable when used and stored correctly.

### 10.3 Possibility of hazardous reactions

No hazardous reactions are known at this point.

### 10.4 Conditions to avoid

Avoid heat sourced, excessive heat, open flames, direct sunlight, electrostatic discharges.

### 10.5 Incompatible materials

Potent oxidants

### 10.6 Hazardous decomposition products

Unknown

## Section 11: Toxicological information

### 11.1 Information on toxicological effects

#### Toxicity of components

##### Naphtha (petroleum):

LD <sub>50</sub> applied orally, rat	> 5000 mg/kg
LC <sub>50</sub> applied by inhalation, rat	> 5610 mg/l (4 h)
LD <sub>50</sub> applied dermally, rabbit	> 5000 mg/kg
NOAEL:	10080 mg/m <sup>3</sup> of air
NOAEC:	9840 mg/rvf of air

##### Tetraethyllead:

LC <sub>50</sub> applied by inhalation, rat	850 mg/m <sup>3</sup> (1 h)
LD <sub>50</sub> applied orally, rat	12300 µg/kg

##### 1,2-dibromoethane:

LD <sub>50</sub> applied dermally, rabbit	300 mg/kg
LD <sub>50</sub> applied orally, rat	108 mg/kg

##### Toluene:

LD <sub>50</sub> applied orally, rat	5580 mg/kg
LD <sub>50</sub> applied dermally, rabbit	> 5000 mg/kg
LC <sub>50</sub> applied by inhalation, rat	> 20 mg/l (4 h)
NOAEC	1131 mg/m <sup>3</sup>

Information on acute and/or delayed effects of exposure have been defined on the basis of product classification information and/or toxicological tests, as well as the manufacturer's general knowledge and experience.

#### Product toxicity

##### Acute toxicity

Harmful by inhalation, by skin contact and by ingestion. Harmful: may cause lung damage if swallowed.

##### Irritation

Irritating to skin

##### Corrosiveness





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Based on available data, the classification criteria are not met.

## Sensitization

May cause allergic reactions in skin contact.

## Repeated dose toxicity

Harmful to the respiratory tract; poses severe threat to health in case of prolonged exposure.

## Carcinogenicity

Based on available data, the classification criteria are not met.

## Mutagenicity

Based on available data, the classification criteria are not met.

## Adverse effects on reproduction

Possible risk of harming the unborn child

## Other hazards

Risk of cumulative effects

## Health effects of acute exposure

May irritate the mucous membrane of the eye, tearing, cause inflammation of the conjunctiva; may irritate the respiratory tract, cause pains, dizziness nausea, vomiting; with more powerful concentrations of vapors, the product may upset motor coordination, may cause confusion, loss of consciousness. Acute, severe, and even fatal instances of aviation gasoline poisoning occur during cistern or storage tank cleaning, and when pouring the product. Clothing items soaked in aviation gasoline, allowing the product to penetrate the body through skin, may pose serious risk to health. Aviation gasoline damages the internal organs, including bone marrow and the liver. The product sensitizes the myocardium. May lead to respiratory paralysis.

## Health effects of chronic exposure:

Symptoms of chronic poisoning include inflammation of the upper respiratory tract, general inflammation of the respiratory tract and skin inflammation (dryness, irritation, cracking), as well as observed symptoms including decreased appetite, general weakness, inflammation of the conjunctiva, central nervous system disorders.

## Section 12: Ecological information

### 12.1 Toxicity

#### **Gasoline (in general)**

##### Acute toxicity test

Fish LL <sub>50</sub> (96 h)	8,2 mg/l ( <i>Pimephales promelas</i> )
Crustacean EL <sub>50</sub> (48 h)	12 mg/l ( <i>Daphnia magna</i> ) in water environment
Algae EL <sub>50</sub> (96 h)	45 mg/l ( <i>Selenastrum capricornutum</i> )

##### Long-term toxicity test

Crustacean NOELR (21 days)	16 mg/l ( <i>Daphnia magna</i> ) in water environment
Algae NOELR (96 h)	18 mg/l ( <i>Selenastrum capricornutum</i> )

#### **Tetraethyllead**

##### Acute toxicity test

Crustacean EL <sub>50</sub> (48 h)	85 µg/l ( <i>Artemia salina</i> )
Fish LC <sub>50</sub> (96 h)	230 µg/l ( <i>Pleuronectes platessa</i> )

#### **1,2-dibromomethane**

##### Acute toxicity test

Fish LC <sub>50</sub> (96 h)	32.1 mg/l
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#### **Toluene**

##### Acute toxicity test



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Fish LC <sub>50</sub> (96 h)	24 mg/l ( <i>Lepomis macrochirus</i> )
LC <sub>50</sub> (96 h)	13 mg/l ( <i>Carassius auratus</i> )
LC <sub>50</sub> (96 h)	6.3 mg/l ( <i>Oncorhynchus kisutch</i> )
LC <sub>50</sub> (96 h)	59.3 mg/l ( <i>Peocillia reticulata</i> )
Crustacean EL <sub>50</sub> (48 h)	10 mg/l ( <i>Daphnia magna</i> )
Algae EL <sub>50</sub> (72 h)	32 mg/l ( <i>Selenastrum capricornutum</i> )
Long-term toxicity test	
Fresh water fish LOEC (32 days)	1.6 mg/l ( <i>Pimephales promelas</i> )
EC <sub>10</sub>	3.5 mg/l ( <i>Oncorhynchus mykiss</i> )
Salt water fish NOEC (28 days)	3.1 mg/l ( <i>Morone saxatilis</i> )
LOEC (28 days)	5.3 mg/l ( <i>Morone saxatilis</i> )
Crustacean NOEC (7 days)	38µM ( <i>Ceriodaphnia dubia</i> )
LOEC (7 days)	114µM ( <i>Ceriodaphnia dubia</i> )

## Product toxicity

Toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment.

### 12.2 Persistence and degradability

Product components are poorly degradable.

### 12.3 Bioaccumulative properties

Potentially bioaccumulative; the product may accumulate in organisms.

### 12.4 Mobility in soil

The product does not dissolve in water, floats on the surface of water. The product is mobile in soil.

### 12.5 PBT and vPvB REACH assessment results

Not applicable.

### 12.6 Other adverse effects

Permissible atmosphere pollution: 0.5µg/m<sup>3</sup> / per Pb.

## Section 12: Disposal considerations

### 13.1 Waste treatment methods

Disposal of the mixture: dispose in accordance with applicable regulations. Do not dispose of the mixture into the sewage system. Keep residues in sealed, steel containers. Classify waste as hazardous.

Disposal of used packages: packaging waste recycling / disposal must be carried out according to applicable regulations. Only completely emptied packages may be recycled. Classification of this waste type observes the requirements for hazardous waste.

Legal basis: European Union regulations: European Parliament and Council directives: 2008/98/EC and 94/62/EC. State regulations: Journal of Laws, 2001, No. 62, item 628, as amended, Journal of Laws, 2001, No. 63, item 638, as amended.

## Section 13: Transport information

### 14.1 UN Number

1203

### 14.2 Proper UN shipping name

ENGINE FUEL (GASOLINE)

### 14.3 Transport hazard class



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3

## 14.4 Packing group

II

## 14.5 Environmental hazards

According to ADR, RID, IMDG regulations, the product may pose a hazard to the environment.

## 14.6 Special safety measures for the user

Wear adequate protective equipment, as specified in section 8 when handling the load. Avoid sources of ignition.

## 14.7 Transport in bulk according to Annex II of MARPOL 74/78 and the IBC Code

Not applicable.

## Section 15: Regulatory Information

### 15.1 Safety, health and environmental regulations applicable to the substance or mixture

Act of 25 February 2011 on chemical substances and their mixtures (Journal of Laws, No. 63, item 322)

Ordinance of the Minister of Health of 20 April 2012 on the marking of hazardous substances and hazardous mixtures and particular mixtures (Journal of Laws.2012.445)

Ordinance of the Minister of Labor and Social Policy of 29 November 2002 on maximum permissible concentrations and volumes of hazardous factors in the occupational environment (Journal of Laws, No. 217, item 1833, as amended)

Governmental statement dated 23 March 2011 regarding entry into force of amendments to Annexes A and B of European treaty on International Carriage of Dangerous Goods (ADR), concluded in Geneva on 30 September 1957 (Official Journal of the European Union, No. 110, item 641).

The Waste Act of 27 April 2001 (Journal of Laws, No. 62, item 682, as amended).

Act of 11 May 2001 on packaging and packaging waste (Journal of Laws, No. 63, item 638, as amended).

Ordinance of the Minister of the Environment of 27 September 2001 on the catalogue of waste (Journal of Laws, No. 112, item 1206)

Ordinance of the Minister of the Economy of 21 December 2005 on the fundamental requirements for means of personal protection (Journal of Laws, 259, item 2173)

Ordinance of the Minister of Health of 2 February 2011 on tests and measurements of hazardous factors in the occupational environment (Journal of Laws, No. 33, item 166)

**Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16 December 2008 on the classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006.**

Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labeling of dangerous preparations

Commission Regulation (EC) No. 790/2009 of 10 August 2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No. 1272/2008 of the European Parliament and of the Council on classification, labeling and packaging of substances and mixtures.

Commission Regulation (EU) No. 453/2010 of 20 May 2010 amending Regulation (EC) No. 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives

European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste

### 15.2 Chemical safety assessment

No data regarding any chemical assessments performed for the substances contained in the mixture.

#### Full text of indicated R and H phrases referred to in section 3

R11	Highly flammable.
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
R26/27/28	Very toxic by inhalation, in contact with skin and if swallowed.
R33	Danger of cumulative effects.
R36/37/38	Irritating to eyes, the respiratory tract and skin.
R38	Irritating to skin.
R45	May cause cancer.
R48/20	Danger of serious damage to health by prolonged exposure, harmful by inhalation.
R50/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.



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R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R61	May cause harm to the unborn child.
R62	Possible risk of impaired fertility.
R63	Possible risk of harm to the unborn child.
R65	Harmful: May cause lung damage if swallowed.
R67	Vapors may cause drowsiness and dizziness.
H225	Highly flammable liquid and vapor.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H304	May be fatal if swallowed and enters airways.
H310	Fatal in contact with skin.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H350	May cause cancer.
H360	May damage fertility or the unborn child.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

## Classification of abbreviations and acronyms

MPC	Maximum Permissible Concentration
MPMC	Maximum Permissible Momentary Concentration
MPTC	Maximum Permissible Threshold Concentration
MPBC	Maximum Permissible Biological Concentration
Aquatic Chronic 1	Hazardous to the aquatic environment cat. 1
Aquatic Chronic 2	Hazardous to the aquatic environment cat. 2
Asp. Tox. 1	Aspiration hazard cat. 1
Carc 1B	Carcinogenicity cat. B
Eye Irrit. 2	Eye irritation cat. 2
Flam. Liq. 2	Flammable liquid cat. 2
Repr. 1A	Reproductive toxicity cat. 1A
Repr. 2	Reproductive toxicity cat. 2
Skin Irrit. 2	Skin irritation cat. 2
STOT RE 2	Specific target organ toxicity – repeated exposure cat. 2
STOT RE 3	Specific target organ toxicity – repeated exposure cat. 3

## Training programs

Prior to commencing any works with the product, the user must learn all OHS principles regarding the handling of chemicals, and shall particularly undergo proper workplace training.

Pursuant to the ADR Contract, all employees participating in the transport of hazardous materials must undergo proper training in terms of their responsibilities (general-purpose training, training by position, training in OHS).

## Other information

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# MATERIAL SAFETY DATA SHEET

**This Material Safety Data Sheet hereby annuls and replaces all of its previous versions.**

The information provided above is based on current data specifying the product as well as the manufacturer's experience and expertise in this field. The information contained herein is not considered a qualitative description of the product or a guarantee of particular features. The information must be treated as aid for safe handling during transport, storage and use. This Material Safety Data Sheet does not constitute any waiver for the user for incorrect use of the information specified above, or to comply with all applicable legal standards in force in this field.

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