

## Safety Data Sheet

According to Annex II to REACH - Regulation 2020/878 and to Annex II to UK REACH

### SECTION 1. Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

UFI: JF10-J05G-500F-WSS9  
Product name: BIO-E85 - BIOFUEL E85

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

Intended use: Special fuel for professional use

Identified Uses	Industrial	Professional	Consumer
Special fuel	-	✓	-

#### 1.3. Details of the supplier of the safety data sheet

Name: Magigas S.p.A.  
Full address: Via Datini 6  
District and Country: 51037 Montale (PT)  
ITALIA  
tel. +39 0573 98561  
fax +39 0573 558454

e-mail address of the competent person  
responsible for the Safety Data Sheet

sds@pec.magigas.it

#### 1.4. Emergency telephone number

For urgent inquiries refer to tel. +39 0573 98561 (office hours)

### SECTION 2. Hazards identification

#### 2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

#### Hazard classification and indication:

Flammable liquid, category 2	H225	Highly flammable liquid and vapour.
Carcinogenicity, category 1A	H350	May cause cancer.
Germ cell mutagenicity, category 1B	H340	May cause genetic defects.
Reproductive toxicity, category 2	H361	Suspected of damaging fertility or the unborn child.
Aspiration hazard, category 1	H304	May be fatal if swallowed and enters airways.
Eye irritation, category 2	H319	Causes serious eye irritation.
Skin irritation, category 2	H315	Causes skin irritation.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long lasting effects.

#### 2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words:

Danger

Hazard statements:

<b>H225</b>	Highly flammable liquid and vapour.
<b>H350</b>	May cause cancer.
<b>H340</b>	May cause genetic defects.
<b>H361</b>	Suspected of damaging fertility or the unborn child.
<b>H304</b>	May be fatal if swallowed and enters airways.
<b>H319</b>	Causes serious eye irritation.
<b>H315</b>	Causes skin irritation.
<b>H412</b>	Harmful to aquatic life with long lasting effects. Restricted to professional users.

Precautionary statements:

<b>P210</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
<b>P331</b>	Do NOT induce vomiting.
<b>P201</b>	Obtain special instructions before use.
<b>P280</b>	Wear protective gloves/ protective clothing / eye protection / face protection.
<b>P308+P313</b>	IF exposed or concerned: Get medical advice / attention.
<b>P301+P310</b>	IF SWALLOWED: Immediately call a POISON CENTER / doctor.

**Contains:** BENZENE  
Gasoline

### 2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration  $\geq$  0.1%.

## SECTION 3. Composition/information on ingredients

### 3.1. Substances

Information not relevant

### 3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
<b>ETHANOL</b>		
INDEX 603-002-00-5	78 ≤ x < 82	Flam. Liq. 2 H225, Eye Irrit. 2 H319
EC 200-578-6		Eye Irrit. 2 H319: ≥ 50%
CAS 64-17-5		
REACH Reg. 01-2119457610-43-XXXX		
<b>Gasoline</b>		
INDEX 649-378-00-4	15 ≤ x < 16,5	Flam. Liq. 1 H224, Carc. 1B H350, Muta. 1B H340, Repr. 2 H361, Asp. Tox. 1 H304, Skin Irrit. 2 H315, STOT SE 3 H336, Aquatic Chronic 2 H411
EC 289-220-8		
CAS 86290-81-5		
REACH Reg. 01-2119471335-39-XXXX		
<b>tert-butyl methyl ether</b>		
INDEX 603-181-00-X	1 ≤ x < 1,5	Flam. Liq. 2 H225, Skin Irrit. 2 H315
EC 216-653-1		
CAS 1634-04-4		
REACH Reg. 01-2119452786-27-XXXX		
<b>TOLUENE</b>		
INDEX 601-021-00-3	0,6 ≤ x < 0,7	Flam. Liq. 2 H225, Repr. 2 H361d, Asp. Tox. 1 H304, STOT RE 2 H373, Skin Irrit. 2 H315, STOT SE 3 H336
EC 203-625-9		
CAS 108-88-3		
<b>N-HEXANE</b>		
INDEX 601-037-00-0	0,6 ≤ x < 0,7	Flam. Liq. 2 H225, Repr. 2 H361f, Asp. Tox. 1 H304, STOT RE 2 H373, Skin Irrit. 2 H315, STOT SE 3 H336, Aquatic Chronic 2 H411 STOT RE 2 H373: ≥ 5%
EC 203-777-6		
CAS 110-54-3		
<b>BENZENE</b>		
INDEX 601-020-00-8	0,1 ≤ x < 0,15	Flam. Liq. 2 H225, Carc. 1A H350, Muta. 1B H340, STOT RE 1 H372, Asp. Tox. 1 H304, Eye Irrit. 2 H319, Skin Irrit. 2 H315
EC 200-753-7		
CAS 71-43-2		

The full wording of hazard (H) phrases is given in section 16 of the sheet.

## SECTION 4. First aid measures

### 4.1. Description of first aid measures

**EYES:** Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

**SKIN:** Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.

**INHALATION:** Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.

**INGESTION:** Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

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

Acute dose-dependent effects.

Skin: irritation, delipidation

Nervous system: in case of ingestion depression

Eyes: irritation, corneal damage  
Upper respiratory tract: irritation  
Lungs: irritation  
Chronic effects.  
Skin: irritation, delipidation  
Nervous system: headache, asthenia, depression  
Upper respiratory tract: irritation Lungs: irritation

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

Useful medical intervention

## SECTION 5. Firefighting measures

### 5.1. Extinguishing media

#### SUITABLE EXTINGUISHING EQUIPMENT

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

#### UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

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

#### HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

### 5.3. Advice for firefighters

#### GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

#### SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

## SECTION 6. Accidental release measures

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

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

Send away individuals who are not suitably equipped. Use explosion-proof equipment. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.

### 6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

### 6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

#### 6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

## SECTION 7. Handling and storage

### 7.1. Precautions for safe handling

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

### 7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

Storage class TRGS 510 (Germany):

3

### 7.3. Specific end use(s)

Information not available

## SECTION 8. Exposure controls/personal protection

### 8.1. Control parameters

Regulatory References:

BGR	България	НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. ЗА ЗАЩИТА НА РАБОТЕЩИТЕ ОТ РИСКОВЕ, СВЪРЗАНИ С ЕКСПОЗИЦИЯ НА ХИМИЧНИ АГЕНТИ ПРИ РАБОТА (изм. ДВ. бр.5 от 17 Януари 2020г.)
CZE	Česká Republika	Nařízení vlády č. 41/2020 Sb. Nařízení vlády, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci, ve znění pozdějších předpisů
DEU	Deutschland	Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56
DNK	Danmark	Bekendtgørelse om grænseværdier for stoffer og materialer - BEK nr 1458 af 13/12/2019
ESP	España	Límites de exposición profesional para agentes químicos en España 2021
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
FIN	Suomi	HTP-VÄRDEN 2020. Koncentrationer som befunnits skadliga. SOCIAL - OCH HÄLSOVÄRDSMINISTERIETS PUBLIKATIONER 2020:25
GRC	Ελλάδα	Π.Δ. 26/2020 (ΦΕΚ 50/Α' 6.3.2020) Εναρμόνιση της ελληνικής νομοθεσίας προς τις διατάξεις των οδηγιών 2017/2398/ΕΕ, 2019/130/ΕΕ και 2019/983/ΕΕ «για την τροποποίηση της οδηγίας 2004/37/ΕΚ ``σχετικά με την προστασία των εργαζομένων από τους κινδύνους που συνδέονται με την έκθεση σε καρκινογόνους ή μεταλλαξιογόνους παράγοντες κατά την εργασία``»
HUN	Magyarország	Az innovációért és technológiáért felelős miniszter 5/2020. (II. 6.) ITM rendelete a kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
HRV	Hrvatska	Pravilnik o izmjenama i dopunama Pravilnika o zaštiti radnika od izloženosti opasnimkemijskim na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 1/2021)
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
NOR	Norge	Forskrift om endring i forskrift om tiltaksverdier og grenseverdier for fysiske og kjemiske faktorer i



Inhalation	640 mg/m3	1152 mg/m3	178,57 mg/m3	0,41 mg/m3	1066,67 mg/m3	1286,4 mg/m3	837,5 mg/m3	1,9 mg/m3
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## tert-butyl methyl ether

Predicted no-effect concentration - PNEC

Normal value in fresh water	5,1	mg/l
Normal value in marine water	0,26	mg/l
Normal value for fresh water sediment	23	mg/kg
Normal value for marine water sediment	1,17	mg/kg
Normal value of STP microorganisms	71	mg/l

## TOLUENE

### Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	192	50	384	100	SKIN
TLV	CZE	192	50,112	384	100,224	SKIN
AGW	DEU	190	50	760	200	SKIN
MAK	DEU	190	50	760	200	SKIN
TLV	DNK	94	25			SKIN E
VLA	ESP	192	50	384	100	SKIN
VLEP	FRA	76,8	20	384	100	SKIN
HTP	FIN	81	25	380	100	SKIN Buller
TLV	GRC	192	50	384	100	
AK	HUN	190		380		SKIN
GVI/KGVI	HRV	192	50	384	100	SKIN
VLEP	ITA	192	50			SKIN
TLV	NOR	94	25			SKIN
TGG	NLD	150		384		
VLE	PRT	192	50	384	100	SKIN
NDS/NDSch	POL	100		200		SKIN
TLV	ROU	192	50	384	100	SKIN
NGV/KGV	SWE	192	50	384	100	SKIN
NPEL	SVK	192	50	384	100	SKIN
MV	SVN	192	50	384	100	SKIN
WEL	GBR	191	50	384	100	SKIN
OEL	EU	192	50	384	100	SKIN
TLV-ACGIH			20			

## N-HEXANE

### Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	72	20			
TLV	CZE	70	19,53	200	55,8	SKIN
AGW	DEU	180	50	1440	400	


MAK	DEU	180	50	1440	400	
TLV	DNK	72	20			E
VLA	ESP	72	20			Como n-esano
VLEP	FRA	72	20			
HTP	FIN	72	20			SKIN
TLV	GRC	72	20			
AK	HUN	72				SKIN
GVI/KGVI	HRV	72	20			SKIN
VLEP	ITA	72	20			
TLV	NOR	72	20			
TGG	NLD	72		144		
VLE	PRT	72	20			
NDS/NDSch	POL	72				SKIN
TLV	ROU	72	20			
NGV/KGV	SWE	72	20	180	50	
NPEL	SVK	72	20	140	40	
MV	SVN	72	20	576	160	
WEL	GBR	72	20			
OEL	EU	72	20			
TLV-ACGIH		176	50			SKIN

## BENZENE

### Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	3,25				SKIN
TLV	CZE	3	0,924	10	3,08	SKIN
TLV	DNK	1,6	0,5			SKIN E
VLA	ESP	3,25	1			SKIN
VLEP	FRA	3,25	1			SKIN
TLV	GRC	3,25	1			SKIN
AK	HUN	3,25				SKIN
GVI/KGVI	HRV	3,25	1			SKIN
VLEP	ITA	3,25	1			SKIN
TLV	NOR	3	1			SKIN
TGG	NLD	0,7				SKIN
VLE	PRT	3,25	1			SKIN
NDS/NDSch	POL	1,6				SKIN
TLV	ROU	3,25	1			SKIN
NGV/KGV	SWE	1,5	0,5	9	3	SKIN
NPEL	SVK	3,25	1			SKIN
MV	SVN	3,25	1	13	4	SKIN
WEL	GBR	3,25	1			SKIN



 <b>magigas</b> <sup>®</sup> extremecompetition.it	<b>BIO-E85 - BIOFUEL E85</b>						Revision nr. 1
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OEL	EU	3,25	1			SKIN
TLV-ACGIH		1,6	0,5	8	2,5	SKIN

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

## 8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

The product must be used inside a closed circuit, in a well-ventilated environment and with strong localised aspiration systems in place.

### HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

Gloves in:

- PVC (permeability time between 1.00 and 2.5 hours)
- Nitrile (thickness 0.3 mm, permeation time > 1 hour)
- Neoprene (thickness 0.3 mm, permeability time between 1 and 3 hours)

Latex gloves can be used by checking the conditions of use.

PVA gloves are contraindicated.

### SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

### EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

### RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

### ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

## SECTION 9. Physical and chemical properties

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

Properties	Value	Information
Appearance	liquid	
Colour	colourless	
Odour	alcohol	
Melting point / freezing point	-117 °C	
Initial boiling point	79 °C	
Flammability	not available	
Lower explosive limit	1,4	
Upper explosive limit	19	
Flash point	-40 °C	
Auto-ignition temperature	363 °C	
Decomposition temperature	not available	
pH	7	Temperature: 20 °C
Kinematic viscosity	not available	
Dynamic viscosity	1,2	Temperature: 20 °C
Solubility	not available	
Partition coefficient: n-octanol/water	0,35	Temperature: 20 °C
Vapour pressure	57,26 hPa	
Density and/or relative density	0,79	
Relative vapour density	not available	
Particle characteristics	not applicable	

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

Information not available

#### 9.2.2. Other safety characteristics

Information not available

## SECTION 10. Stability and reactivity

### 10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

TOLUENE

Avoid exposure to: light.

#### 10.2. Chemical stability

The product is stable in normal conditions of use and storage.

#### 10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

#### ETHANOL

Risk of explosion on contact with: alkaline metals,alkaline oxides,calcium hypochlorite,sulphur monofluoride,acetic anhydride,acids,concentrated hydrogen peroxide,perchlorates,perchloric acid,perchloronitrile,mercury nitrate,nitric acid,silver,silver nitrate,ammonia,silver oxide,ammonia,strong oxidising agents,nitrogen dioxide.May react dangerously with: bromoacetylene,chlorine acetylene,bromine trifluoride,chromium trioxide,chromyl chloride,fluorine,potassium tert-butoxide,lithium hydride,phosphorus trioxide,black platinum,zirconium (IV) chloride,zirconium (IV) iodide.Forms explosive mixtures with: air.

#### TOLUENE

Risk of explosion on contact with: fuming sulphuric acid,nitric acid,silver perchlorate,nitrogen dioxide,non-metal halogenates,acetic acid,organic nitrocompounds.May form explosive mixtures with: air.May react dangerously with: strong oxidising agents,strong acids,sulphur.

#### 10.4. Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

#### ETHANOL

Avoid exposure to: sources of heat,naked flames.

#### 10.5. Incompatible materials

Information not available

#### 10.6. Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

## SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

#### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

##### Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

TOLUENE

WORKERS: inhalation; contact with the skin.

POPULATION: ingestion of contaminated food or water; inhalation of ambient air; contact with the skin of products containing the substance.

N-HEXANE

WORKERS: inhalation; contact with the skin.

POPULATION: inhalation of ambient air.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

TOLUENE

Toxic effect on the central and peripheral nervous system with encephalopathy and polyneuritis; irritating for the skin, conjunctiva, cornea and respiratory apparatus.

N-HEXANE

The chronic toxic effect concerns the central and peripheral nervous system; this is also affected by an acute effect. The irritating action affects the respiratory tract, conjunctiva and skin.

Interactive effects

TOLUENE

Certain drugs and other industrial products can interfere with the metabolism of the toluene.

N-HEXANE

Simultaneous exposure to toluene or methyl ethyl ketone inhibits the metabolism of the substance and the formation of 2,5-hexanedione (INRS, 2008).

ACUTE TOXICITY

ATE (Inhalation) of the mixture:	Not classified (no significant component)
ATE (Oral) of the mixture:	Not classified (no significant component)
ATE (Dermal) of the mixture:	Not classified (no significant component)

ETHANOL

LD50 (Oral):	> 5000 mg/kg Rat
LC50 (Inhalation vapours):	117 mg/l/4h Rat

Gasoline

LD50 (Dermal):	2000 mg/kg
LD50 (Oral):	5000 mg/kg

tert-butyl methyl ether

LD50 (Dermal): 2000 mg/kg OECD 402  
LD50 (Oral): 2000 mg/kg OECD 401  
LC50 (Inhalation vapours): 85 mg/l/4h OECD 403

#### TOLUENE

LD50 (Dermal): 12124 mg/kg Rabbit  
LD50 (Oral): 5580 mg/kg Rat  
LC50 (Inhalation vapours): 28,1 mg/l/4h Rat

#### N-HEXANE

LD50 (Dermal): 3000 mg/kg Rabbit  
LD50 (Oral): 5000 mg/kg Rat

#### BENZENE

LD50 (Dermal): > 8260 mg/kg Rabbit  
LD50 (Oral): 3340 mg/kg Rat  
LC50 (Inhalation vapours): 43,7 mg/l/4h Rat

#### SKIN CORROSION / IRRITATION

Causes skin irritation

#### SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

#### RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

#### GERM CELL MUTAGENICITY

May cause genetic defects

#### CARCINOGENICITY

May cause cancer

#### TOLUENE

Classified in Group 3 (not classifiable as a human carcinogen) by the International Agency for Research on Cancer (IARC) - (IARC, 1999).

The US Environmental Protection Agency (EPA) affirms that "the data is inadequate for an assessment of the carcinogenic potential".

#### N-HEXANE

The US Environmental Protection Agency (EPA) affirms that "the data was inadequate for an assessment of the carcinogenic potential"- (US EPA file on-line 2015).

#### REPRODUCTIVE TOXICITY

Suspected of damaging fertility or the unborn child

#### STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

#### STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

#### ASPIRATION HAZARD

Toxic for aspiration

#### **11.2. Information on other hazards**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

## **SECTION 12. Ecological information**

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

#### **12.1. Toxicity**

##### BENZENE

LC50 - for Fish 630 mg/l/96h Fish

##### tert-butyl methyl ether

LC50 - for Fish 574 mg/l/96h

EC50 - for Crustacea 472 mg/l/48h

Chronic NOEC for Fish 299 mg/l

Chronic NOEC for Crustacea 26 mg/l

#### **12.2. Persistence and degradability**

BENZENE	
Solubility in water	1000 - 10000 mg/l
Rapidly degradable	
TOLUENE	
Solubility in water	100 - 1000 mg/l
Rapidly degradable	
N-HEXANE	
Solubility in water	0,1 - 100 mg/l
Rapidly degradable	
ETHANOL	
Solubility in water	1000 - 10000 mg/l
Rapidly degradable	

### 12.3. Bioaccumulative potential

BENZENE	
Partition coefficient: n-octanol/water	2,13
BCF	< 10
TOLUENE	
Partition coefficient: n-octanol/water	2,73
BCF	90
N-HEXANE	
Partition coefficient: n-octanol/water	4
BCF	501,187
ETHANOL	
Partition coefficient: n-octanol/water	-0,35

### 12.4. Mobility in soil

N-HEXANE	
Partition coefficient: soil/water	3,34

### 12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

### 12.6. Endocrine disrupting properties

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

### 12.7. Other adverse effects

Information not available

## SECTION 13. Disposal considerations

### 13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

#### CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

## SECTION 14. Transport information

### 14.1. UN number or ID number

ADR / RID, IMDG, IATA: 1268

### 14.2. UN proper shipping name

ADR / RID: PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S.

IMDG: PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S.

IATA: PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S.

### 14.3. Transport hazard class(es)

ADR / RID: Class: 3 Label: 3

IMDG: Class: 3 Label: 3

IATA: Class: 3 Label: 3



### 14.4. Packing group

ADR / RID, IMDG, IATA: II

### 14.5. Environmental hazards

ADR / RID: NO

IMDG: NO

IATA: NO

### 14.6. Special precautions for user

ADR / RID: HIN - Kemler: 33

Limited  
Quantities: 1  
L

Tunnel  
restriction  
code: (D/E)

Special provision: 640D, 664

IMDG: EMS: F-E, S-E

Limited  
Quantities: 1



IATA:	Cargo:	L Maximum quantity: 60 L	Packaging instructions: 364
	Pass.:	Maximum quantity: 5 L	Packaging instructions: 353
	Special provision:	A3	

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

Information not relevant

## SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EU: P5c

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product  
Point 3 - 40

#### Contained substance

Point	75	
Point	48	TOLUENE
Point	28-29	Gasoline REACH Reg.: 01-2119471335-39-XXXX
Point	28-29-5-72	BENZENE

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

not applicable

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage  $\geq$  than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this health-dangerous chemical agent must undergo sanitary checks carried out in compliance with 2004/37/EC directive.

German regulation on the classification of substances hazardous to water (AwSV, vom 18. April 2017)

WGK 3: Severe hazard to waters

## 15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

## SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Liq. 1	Flammable liquid, category 1
Flam. Liq. 2	Flammable liquid, category 2
Carc. 1A	Carcinogenicity, category 1A
Carc. 1B	Carcinogenicity, category 1B
Muta. 1B	Germ cell mutagenicity, category 1B
Repr. 2	Reproductive toxicity, category 2
STOT RE 1	Specific target organ toxicity - repeated exposure, category 1
Asp. Tox. 1	Aspiration hazard, category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H224	Extremely flammable liquid and vapour.
H225	Highly flammable liquid and vapour.
H350	May cause cancer.
H340	May cause genetic defects.
H361	Suspected of damaging fertility or the unborn child.
H361d	Suspected of damaging the unborn child.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs through prolonged or repeated exposure.
H304	May be fatal if swallowed and enters airways.
H373	May cause damage to organs through prolonged or repeated exposure.

H319	Causes serious eye irritation.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
  2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
  3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
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- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

**Note for users:**

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

**CALCULATION METHODS FOR CLASSIFICATION**

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.