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

### 1.1. Product identifier

Product form : Mixture  
Trade name/designation : Aviation Gasoline  
Product group : Trade product

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

#### 1.2.1. Relevant identified uses

Use of the substance/mixture : Fuels

#### 1.2.2. Uses advised against

No data available

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

Trafigura Ventures V.B.V.  
Evert van de Beekstraat 1-82  
The Base, Tower B - 5th Floor  
1118 CL Schiphol - The Netherlands  
T +31 20 504 1800  
[TrafiguraReach@trafigura.com](mailto:TrafiguraReach@trafigura.com)

### 1.4. Emergency telephone number

Emergency number : +32 3 575 03 30  
This telephone number is available 24 hours per day, 7 days per week.

Country	Official advisory body	Address	Emergency number
Ireland	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	+353 1 809 21 66 (public, 8am - 10pm, 7/7) +353 01 809 2566 (Professionals, 24/7)
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre, Wolfson Unit	Claremont Place Newcastle-upon-Tyne NE1 4LP Newcastle	0844 892 0111 (UK only, 24/7, healthcare professionals only)


## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

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

Flam. Liq. 2 H225  
Skin Irrit. 2 H315  
Muta. 1B H340  
Carc. 1A H350  
Repr. 2 H361fd  
STOT SE 3 H336  
STOT RE 2 H373  
Asp. Tox. 1 H304  
Aquatic Chronic 2 H411

Full text of H statements : see section 16

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**Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]**

Carc.Cat.1; R45  
Muta.Cat.2; R46  
Repr.Cat.3; R62  
Repr.Cat.3; R63  
F+; R12  
Xn; R20/21/22  
Xn; R65  
Xn; R48/20  
Xi; R38  
N; R51/53

Full text of R-phrases: see section 16

**2.2. Label elements**

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

Hazard pictograms (CLP) :



Signal word : Danger

Hazardous ingredients : butane (containing  $\geq 0,1$  % butadiene (203-450-8)); Toluene; 1,2-dibromoethane; Naphtha (petroleum), isomerization

Hazard statements (CLP) :

- H225 - Highly 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. Suspected of damaging the unborn child..
- H373 - May cause damage to organs through prolonged or repeated exposure.
- H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) :

- P201 - Obtain special instructions before use.
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P260 - Do not breathe vapours.
- P273 - Avoid release to the environment.
- P280 - Wear eye protection, face protection, protective clothing, protective gloves.
- P308+P313 - IF exposed or concerned: Get medical advice.

**2.3. Other hazards**

Other hazards : PBT/vPvB data. This information is not available.

**SECTION 3: Composition/information on ingredients**

**3.1. Substances**

Not applicable

**3.2. Mixtures**



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Substance name	Product identifier	%	Classification according to Directive 67/548/EEC	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Naphtha (petroleum), full-range alkylate, butane-contg., Low boiling point modified naphtha	(CAS-No.) 68527-27-5 (EC-No.) 271-267-0 (EC Index) 649-282-00-2 (REACH-no) 01-2119471477-29-XXXX	70 - 90	F; R11 Xi; R38 Xn; R65 R67 N; R51/53	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Toluene	(CAS-No.) 108-88-3 (EC-No.) 203-625-9 (EC Index) 601-021-00-3 (REACH-no) 01-2119471310-51-XXXX	3 - 25	Not classified	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304
Naphtha (petroleum), isomerization	(CAS-No.) 64741-70-4 (EC-No.) 265-073-5 (EC Index) 649-277-00-5 (REACH-no) 01-2119480399-24-XXXX	<= 12	F+; R12 Carc.Cat.2; R45 Muta.Cat.2; R46 Xi; R38 N; R51/53 R67 Repr.Cat.3; R62 Xn; R65	Flam. Liq. 1, H224 Skin Irrit. 2, H315 Muta. 1B, H340 Carc. 1B, H350 Repr. 2, H361f STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Isopentane	(CAS-No.) 78-78-4 (EC-No.) 201-142-8 (EC Index) 601-006-00-1;601-085-00-2	0 - 5	F+; R12 N; R51/53 Xn; R65 R66 R67	Flam. Liq. 1, H224 Asp. Tox. 1, H304 STOT SE 3, H336 Aquatic Chronic 2, H411
butane (containing ≥ 0,1 % butadiene (203-450-8))	(CAS-No.) 106-97-8 (EC-No.) 203-448-7 (EC Index) 601-004-00-0	< 1,2	F+; R12 Carc.Cat.1; R45 Muta.Cat.2; R46	Flam. Gas 1, H220 Muta. 1B, H340 Carc. 1A, H350 Press. Gas (Comp.), H280
Tetraethyl lead substance listed as REACH Candidate (Tetraethyllead)	(CAS-No.) 78-00-2 (EC-No.) 201-075-4 (EC Index) 082-002-00-1 (REACH-no) 01-2119622080-57-XXXX	<= 0,15	Repr.Cat.1; R61 Repr.Cat.3; R62 T+; R26/27/28 N; R50/53 R33	Acute Tox. 2 (Oral), H300 Acute Tox. 1 (Dermal), H310 Repr. 1A, H360Df STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Acute Tox. 1 (Inhalation), H330
1,2-dibromoethane	(CAS-No.) 106-93-4 (EC-No.) 203-444-5 (EC Index) 602-010-00-6 (REACH-no) 01-2119539453-38-XXXX	<= 0,1	T; R23/24/25 Xi; R36/37/38 Carc.Cat.2; R45 N; R51/53	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:vapour), H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 1B, H350 STOT SE 3, H335 Aquatic Chronic 2, H411

Full text of R- and H-statements: see section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- Additional advice : First aider: Pay attention to self-protection. See also section 8 . Never give anything by mouth to an unconscious person. Show this safety data sheet to the doctor in attendance. Treat symptomatically. In case of doubt or persistent symptoms, consult always a physician.
- Inhalation : Keep at rest. Provide fresh air. Give oxygen or artificial respiration if necessary. Call a physician immediately.
- Skin contact : Take off immediately all contaminated clothing. Wash with plenty of water/. Wash contaminated clothing before reuse. In case of doubt or persistent symptoms, consult always a physician.

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Eyes contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion : Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

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

Inhalation : The following symptoms may occur: Vapours may cause drowsiness and dizziness. Headache . Cough. Nausea. Vomiting. Mental confusion.

Skin contact : Irritating to skin. The following symptoms may occur: Irritation. erythema (redness). Dry skin.

Eyes contact : Contact with eyes may cause irritation. The following symptoms may occur: erythema (redness), Pain.

Ingestion : Harmful: may cause lung damage if swallowed. Aspiration may cause pulmonary oedema and pneumonitis. May cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

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

No data available

### **SECTION 5: Firefighting measures**

#### **5.1. Extinguishing media**

Suitable extinguishing media : Water spray, Alcohol resistant foam, Carbon dioxide, Dry extinguishing powder.

Unsuitable extinguishing media : Strong water jet. Do not use a solid water stream as it may scatter and spread fire.

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

Specific hazards : Vapours may form explosive mixture with air. Vapours are heavier than air and may spread along floors. Vapours are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapours. Heating causes rise in pressure with risk of bursting. Do not allow run-off from fire-fighting to enter drains or water courses.

Hazardous decomposition products in case of fire : Carbon oxides (CO, CO<sub>2</sub>).

#### **5.3. Advice for firefighters**

Firefighting instructions : Evacuate personnel to a safe area. Special protective equipment for firefighters. . In case of fire: Wear self-contained breathing apparatus. Use water spray or fog for cooling exposed containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

### **SECTION 6: Accidental release measures**


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

##### **6.1.1. For non-emergency personnel**

For non-emergency personnel : Evacuate personnel to a safe area. Stay upwind/keep distance from source. Provide adequate ventilation. Use personal protective equipment as required. Concerning personal protective equipment to use, see section 8. Avoid contact with skin and eyes. Do not breathe vapour/aerosol. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ensure equipment is adequately earthed. Use explosion-proof equipment. Use only non-sparking tools.

##### **6.1.2. For emergency responders**

For emergency responders : Ensure procedures and training for emergency decontamination and disposal are in place. Concerning personal protective equipment to use, see section 8 .

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## 6.2. Environmental precautions

Do not allow to enter into surface water or drains.

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

Methods for cleaning up : Stop leak if safe to do so. Dam up. Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite or powdered limestone. Collect in closed and suitable containers for disposal. Recover large spills by pumping (use an explosion proof or hand pump). Dispose of as special waste in compliance with local and national regulations. Site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases.

## 6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. Concerning disposal elimination after cleaning, see section 13.

# SECTION 7: Handling and storage

## 7.1. Precautions for safe handling

Precautions for safe handling : Provide adequate information, instruction and training for operators. Provide adequate ventilation. Use personal protective equipment as required. Concerning personal protective equipment to use, see section 8. Avoid contact with skin, eyes and clothing. Do not breathe vapour/aerosol. Take precautionary measures against static discharges. Ensure equipment is adequately earthed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take any precaution to avoid mixing with combustibles... See also section 10. Ensure proper process control to avoid excess waste discharge (temperature, concentration, pH, time). Do not allow to enter into surface water or drains.

Hygiene measures : Keep good industrial hygiene. Take off contaminated clothing. Wash hands and face before breaks and immediately after handling of the product. When using do not eat, drink or smoke. Separate working clothes from town clothes. Keep away from food, drink and animal feedingstuffs.

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

Technical measures : Storage of flammable liquids. Keep container tightly closed in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not store near or with any of the incompatible materials listed in section 10.

Packaging materials : Keep only in the original container.


## 7.3. Specific end use(s)

No data available.

# SECTION 8: Exposure controls/personal protection

## 8.1. Control parameters

<b>butane (containing ≥ 0,1 % butadiene (203-450-8)) (106-97-8)</b>		
Austria	MAK (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
Austria	MAK (ppm)	800 ppm
Austria	MAK Short time value (mg/m <sup>3</sup> )	3800 mg/m <sup>3</sup>
Austria	MAK Short time value (ppm)	1600 ppm
Belgium	Limit value (ppm)	1000 ppm (gas)
Bulgaria	OEL TWA (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
Croatia	GVI (granična vrijednost izloženosti) (mg/m <sup>3</sup> )	1450 mg/m <sup>3</sup> 22 mg/m <sup>3</sup> (containing ≥0.1% 1,3-Butadiene)
Croatia	GVI (granična vrijednost izloženosti) (ppm)	600 ppm 10 ppm (containing ≥0.1% 1,3-Butadiene)

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<b>butane (containing <math>\geq 0,1</math> % butadiene (203-450-8)) (106-97-8)</b>		
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m <sup>3</sup> )	1810 mg/m <sup>3</sup>
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	750 ppm
Denmark	Grænseværdie (langvarig) (mg/m <sup>3</sup> )	1200 mg/m <sup>3</sup>
Denmark	Grænseværdie (langvarig) (ppm)	500 ppm
Estonia	OEL TWA (mg/m <sup>3</sup> )	1500 mg/m <sup>3</sup>
Estonia	OEL TWA (ppm)	800 ppm
Finland	HTP-arvo (8h) (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
Finland	HTP-arvo (8h) (ppm)	800 ppm
Finland	HTP-arvo (15 min)	2400 mg/m <sup>3</sup>
Finland	HTP-arvo (15 min) (ppm)	1000 ppm
France	VME (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
France	VME (ppm)	800 ppm
Germany	TRGS 900 Occupational exposure limit value (mg/m <sup>3</sup> )	2400 mg/m <sup>3</sup>
Germany	TRGS 900 Occupational exposure limit value (ppm)	1000 ppm
Greece	OEL TWA (mg/m <sup>3</sup> )	2350 mg/m <sup>3</sup>
Greece	OEL TWA (ppm)	1000 ppm
Hungary	AK-érték	2350 mg/m <sup>3</sup>
Hungary	CK-érték	9400 mg/m <sup>3</sup>
Ireland	OEL (8 hours ref) (ppm)	1000 ppm
Ireland	OEL (15 min ref) (ppm)	3000 ppm (calculated)
Latvia	OEL TWA (mg/m <sup>3</sup> )	300 mg/m <sup>3</sup>
Poland	NDS (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
Poland	NDSCh (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup>
Slovenia	OEL TWA (mg/m <sup>3</sup> )	2400 mg/m <sup>3</sup> (containing $\geq 0.1\%$ Butadiene)
Slovenia	OEL TWA (ppm)	1000 ppm (containing $\geq 0.1\%$ Butadiene)
Slovenia	OEL STEL (mg/m <sup>3</sup> )	9600 mg/m <sup>3</sup> (containing $\geq 0.1\%$ Butadiene)
Slovenia	OEL STEL (ppm)	4000 ppm (containing $\geq 0.1\%$ Butadiene)
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	1450 mg/m <sup>3</sup>
United Kingdom	WEL TWA (ppm)	600 ppm
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	1810 mg/m <sup>3</sup>
United Kingdom	WEL STEL (ppm)	750 ppm
Norway	Grenseverdier (AN) (mg/m <sup>3</sup> )	600 mg/m <sup>3</sup>
Norway	Grenseverdier (AN) (ppm)	250 ppm
Norway	Grenseverdier (Korttidsverdi) (mg/m <sup>3</sup> )	750 mg/m <sup>3</sup> (value calculated)
Norway	Grenseverdier (Korttidsverdi) (ppm)	312,5 ppm (value calculated)
Switzerland	MAK (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
Switzerland	MAK (ppm)	800 ppm
Switzerland	KZGW (mg/m <sup>3</sup> )	7600 mg/m <sup>3</sup>



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### butane (containing $\geq 0,1$ % butadiene (203-450-8)) (106-97-8)

Switzerland	KZGW (ppm)	3200 ppm
Australia	TWA (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
Australia	TWA (ppm)	800 ppm
Canada (Quebec)	VEMP (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
Canada (Quebec)	VEMP (ppm)	800 ppm
USA - ACGIH	ACGIH STEL (ppm)	1000 ppm (explosion hazard)
USA - IDLH	US IDLH (ppm)	1600 ppm (>10% LEL)
USA - NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
USA - NIOSH	NIOSH REL (TWA) (ppm)	800 ppm


### Toluene (108-88-3)

EU	IOELV TWA (mg/m <sup>3</sup> )	192 mg/m <sup>3</sup>
EU	IOELV TWA (ppm)	50 ppm
EU	IOELV STEL (mg/m <sup>3</sup> )	384 mg/m <sup>3</sup>
EU	IOELV STEL (ppm)	100 ppm
EU	Notes	Possibility of significant uptake through the skin
Austria	MAK (mg/m <sup>3</sup> )	190 mg/m <sup>3</sup>
Austria	MAK (ppm)	50 ppm
Austria	MAK Short time value (mg/m <sup>3</sup> )	380 mg/m <sup>3</sup>
Austria	MAK Short time value (ppm)	100 ppm
Belgium	Limit value (mg/m <sup>3</sup> )	77 mg/m <sup>3</sup>
Belgium	Limit value (ppm)	20 ppm
Belgium	Short time value (mg/m <sup>3</sup> )	384 mg/m <sup>3</sup>
Belgium	Short time value	100 ppm
Bulgaria	OEL TWA (mg/m <sup>3</sup> )	192 mg/m <sup>3</sup>
Bulgaria	OEL TWA (ppm)	50 ppm
Bulgaria	OEL STEL (mg/m <sup>3</sup> )	384 mg/m <sup>3</sup>
Bulgaria	OEL STEL (ppm)	100 ppm
Croatia	GVI (granična vrijednost izloženosti) (mg/m <sup>3</sup> )	192 mg/m <sup>3</sup>
Croatia	GVI (granična vrijednost izloženosti) (ppm)	50 ppm
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m <sup>3</sup> )	384 mg/m <sup>3</sup>
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	100 ppm
Cyprus	OEL TWA (mg/m <sup>3</sup> )	192 mg/m <sup>3</sup>
Cyprus	OEL TWA (ppm)	50 ppm
Cyprus	OEL STEL (mg/m <sup>3</sup> )	384 mg/m <sup>3</sup>
Cyprus	OEL STEL (ppm)	100 ppm
Czech Republic	Expoziční limity (PEL) (mg/m <sup>3</sup> )	200 mg/m <sup>3</sup>
Denmark	Grænseværdie (langvarig) (mg/m <sup>3</sup> )	94 mg/m <sup>3</sup>
Denmark	Grænseværdie (langvarig) (ppm)	25 ppm
Estonia	OEL TWA (mg/m <sup>3</sup> )	192 mg/m <sup>3</sup>
Estonia	OEL TWA (ppm)	50 ppm
Estonia	OEL STEL (mg/m <sup>3</sup> )	384 mg/m <sup>3</sup>
Estonia	OEL STEL (ppm)	100 ppm


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<b>Toluene (108-88-3)</b>		
Finland	HTP-arvo (8h) (mg/m <sup>3</sup> )	81 mg/m <sup>3</sup>
Finland	HTP-arvo (8h) (ppm)	25 ppm
Finland	HTP-arvo (15 min)	380 mg/m <sup>3</sup>
Finland	HTP-arvo (15 min) (ppm)	100 ppm
France	VME (mg/m <sup>3</sup> )	76,8 mg/m <sup>3</sup> (restrictive limit)
France	VME (ppm)	20 ppm (restrictive limit)
France	VLE (mg/m <sup>3</sup> )	384 mg/m <sup>3</sup> (restrictive limit)
France	VLE (ppm)	100 ppm (restrictive limit)
Germany	TRGS 900 Occupational exposure limit value (mg/m <sup>3</sup> )	190 mg/m <sup>3</sup> (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 900 Occupational exposure limit value (ppm)	50 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 903 (BGW)	600 µg/l Parameter: Toluene - Medium: whole blood - Sampling time: end of shift 1,5 mg/l Parameter: o-Cresol - Medium: urine - Sampling time: end of several shifts (after hydrolysis) 1,5 mg/l Parameter: o-Cresol - Medium: urine - Sampling time: end of shift (after hydrolysis)
Gibraltar	8h mg/m <sup>3</sup>	192 mg/m <sup>3</sup>
Gibraltar	8h ppm	50 ppm
Gibraltar	Short-term mg/m <sup>3</sup>	384 mg/m <sup>3</sup>
Gibraltar	Short-term ppm	100 ppm
Greece	OEL TWA (mg/m <sup>3</sup> )	192 mg/m <sup>3</sup>
Greece	OEL TWA (ppm)	50 ppm
Greece	OEL STEL (mg/m <sup>3</sup> )	384 mg/m <sup>3</sup>
Greece	OEL STEL (ppm)	100 ppm
Hungary	AK-érték	190 mg/m <sup>3</sup>
Hungary	CK-érték	380 mg/m <sup>3</sup>
Ireland	OEL (8 hours ref) (mg/m <sup>3</sup> )	192 mg/m <sup>3</sup>
Ireland	OEL (8 hours ref) (ppm)	50 ppm
Ireland	OEL (15 min ref) (mg/m <sup>3</sup> )	384 mg/m <sup>3</sup>
Ireland	OEL (15 min ref) (ppm)	100 ppm
Italy	OEL TWA (mg/m <sup>3</sup> )	192 mg/m <sup>3</sup>
Italy	OEL TWA (ppm)	50 ppm
Latvia	OEL TWA (mg/m <sup>3</sup> )	50 mg/m <sup>3</sup>
Latvia	OEL TWA (ppm)	14 ppm
Lithuania	IPRV (mg/m <sup>3</sup> )	192 mg/m <sup>3</sup>
Lithuania	IPRV (ppm)	50 ppm
Lithuania	TPRV (mg/m <sup>3</sup> )	384 mg/m <sup>3</sup>
Lithuania	TPRV (ppm)	100 ppm
Luxembourg	OEL TWA (mg/m <sup>3</sup> )	192 mg/m <sup>3</sup>




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<b>Toluene (108-88-3)</b>		
Luxembourg	OEL TWA (ppm)	50 ppm
Luxembourg	OEL STEL (mg/m <sup>3</sup> )	384 mg/m <sup>3</sup>
Luxembourg	OEL STEL (ppm)	100 ppm
Malta	OEL TWA (mg/m <sup>3</sup> )	192 mg/m <sup>3</sup>
Malta	OEL TWA (ppm)	50 ppm
Malta	OEL STEL (mg/m <sup>3</sup> )	384 mg/m <sup>3</sup>
Malta	OEL STEL (ppm)	100 ppm
Netherlands	Grenswaarde TGG 8H (mg/m <sup>3</sup> )	150 mg/m <sup>3</sup>
Netherlands	Grenswaarde TGG 15MIN (mg/m <sup>3</sup> )	384 mg/m <sup>3</sup>
Poland	NDS (mg/m <sup>3</sup> )	100 mg/m <sup>3</sup>
Poland	NDSch (mg/m <sup>3</sup> )	200 mg/m <sup>3</sup>
Portugal	OEL TWA (mg/m <sup>3</sup> )	192 mg/m <sup>3</sup> (indicative limit value)
Portugal	OEL TWA (ppm)	50 ppm (indicative limit value)
Portugal	OEL STEL (mg/m <sup>3</sup> )	384 mg/m <sup>3</sup> (indicative limit value)
Portugal	OEL STEL (ppm)	100 ppm (indicative limit value)
Romania	OEL TWA (mg/m <sup>3</sup> )	192 mg/m <sup>3</sup>
Romania	OEL TWA (ppm)	50 ppm
Romania	OEL STEL (mg/m <sup>3</sup> )	384 mg/m <sup>3</sup>
Romania	OEL STEL (ppm)	100 ppm
Slovakia	NPHV (priemerná) (mg/m <sup>3</sup> )	192 mg/m <sup>3</sup>
Slovakia	NPHV (priemerná) (ppm)	50 ppm
Slovakia	NPHV (Hraničná) (mg/m <sup>3</sup> )	384 mg/m <sup>3</sup>
Slovenia	OEL TWA (mg/m <sup>3</sup> )	192 mg/m <sup>3</sup>
Slovenia	OEL TWA (ppm)	50 ppm
Slovenia	OEL STEL (mg/m <sup>3</sup> )	384 mg/m <sup>3</sup>
Slovenia	OEL STEL (ppm)	100 ppm
Spain	VLA-ED (mg/m <sup>3</sup> )	192 mg/m <sup>3</sup> (indicative limit value)
Spain	VLA-ED (ppm)	50 ppm (indicative limit value)
Spain	VLA-EC (mg/m <sup>3</sup> )	384 mg/m <sup>3</sup>
Spain	VLA-EC (ppm)	100 ppm
Sweden	nivågränsvärde (NVG) (mg/m <sup>3</sup> )	192 mg/m <sup>3</sup>
Sweden	nivågränsvärde (NVG) (ppm)	50 ppm
Sweden	kortidsvärde (KTV) (mg/m <sup>3</sup> )	384 mg/m <sup>3</sup>
Sweden	kortidsvärde (KTV) (ppm)	100 ppm
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	191 mg/m <sup>3</sup>
United Kingdom	WEL TWA (ppm)	50 ppm
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	384 mg/m <sup>3</sup>
United Kingdom	WEL STEL (ppm)	100 ppm
Norway	Grenseverdier (AN) (mg/m <sup>3</sup> )	94 mg/m <sup>3</sup>
Norway	Grenseverdier (AN) (ppm)	25 ppm
Norway	Grenseverdier (Korttidsverdi) (mg/m <sup>3</sup> )	141 mg/m <sup>3</sup> (value calculated)
Norway	Grenseverdier (Korttidsverdi) (ppm)	37,5 ppm (value calculated)

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<b>Toluene (108-88-3)</b>		
Switzerland	MAK (mg/m <sup>3</sup> )	190 mg/m <sup>3</sup>
Switzerland	MAK (ppm)	50 ppm
Switzerland	KZGW (mg/m <sup>3</sup> )	760 mg/m <sup>3</sup>
Switzerland	KZGW (ppm)	200 ppm
Australia	TWA (mg/m <sup>3</sup> )	191 mg/m <sup>3</sup>
Australia	TWA (ppm)	50 ppm
Australia	STEL (mg/m <sup>3</sup> )	574 mg/m <sup>3</sup>
Australia	STEL (ppm)	150 ppm
Canada (Quebec)	VEMP (mg/m <sup>3</sup> )	188 mg/m <sup>3</sup>
Canada (Quebec)	VEMP (ppm)	50 ppm
USA - ACGIH	ACGIH TWA (ppm)	20 ppm
USA - IDLH	US IDLH (ppm)	500 ppm
USA - NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	375 mg/m <sup>3</sup>
USA - NIOSH	NIOSH REL (TWA) (ppm)	100 ppm
USA - NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup> )	560 mg/m <sup>3</sup>
USA - NIOSH	NIOSH REL (STEL) (ppm)	150 ppm
USA - OSHA	OSHA PEL (TWA) (ppm)	200 ppm
USA - OSHA	OSHA PEL (Ceiling) (ppm)	300 ppm
<b>Tetraethyl lead (78-00-2)</b>		
Austria	MAK (mg/m <sup>3</sup> )	0,05 mg/m <sup>3</sup>
Austria	MAK Short time value (mg/m <sup>3</sup> )	0,2 mg/m <sup>3</sup>
Belgium	Limit value (mg/m <sup>3</sup> )	0,1 mg/m <sup>3</sup>
Bulgaria	OEL TWA (mg/m <sup>3</sup> )	0,05 mg/m <sup>3</sup>
Czech Republic	Expoziční limity (PEL) (mg/m <sup>3</sup> )	0,05 mg/m <sup>3</sup>
Denmark	Grænseværdie (langvarig) (mg/m <sup>3</sup> )	0,05 mg/m <sup>3</sup>
Denmark	Grænseværdie (langvarig) (ppm)	0,007 ppm
Estonia	OEL TWA (mg/m <sup>3</sup> )	0,05 mg/m <sup>3</sup>
Estonia	OEL STEL (mg/m <sup>3</sup> )	0,2 mg/m <sup>3</sup>
Finland	HTP-arvo (8h) (mg/m <sup>3</sup> )	0,075 mg/m <sup>3</sup>
Finland	HTP-arvo (15 min)	0,23 mg/m <sup>3</sup>
France	VME (mg/m <sup>3</sup> )	0,1 mg/m <sup>3</sup>
Germany	TRGS 900 Occupational exposure limit value (mg/m <sup>3</sup> )	0,05 mg/m <sup>3</sup> (The risk of damage to the embryo or fetus cannot be excluded even when AGW and BGW values are observed)
Germany	TRGS 903 (BGW)	25 µg/l Parameter: Diethyl lead - Medium: urine - Sampling time: end of shift (measured as Pb) 50 µg/l Parameter: Total lead - Medium: urine - Sampling time: end of shift (applies also for mixtures with Tetraethyl lead)
Greece	OEL TWA (mg/m <sup>3</sup> )	0,1 mg/m <sup>3</sup>
Hungary	AK-érték	0,05 mg/m <sup>3</sup>
Hungary	CK-érték	0,2 mg/m <sup>3</sup>
Ireland	OEL (8 hours ref) (mg/m <sup>3</sup> )	0,1 mg/m <sup>3</sup>
Ireland	OEL (15 min ref) (mg/m <sup>3</sup> )	0,3 mg/m <sup>3</sup> (calculated)

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<b>Tetraethyl lead (78-00-2)</b>		
Latvia	OEL TWA (mg/m <sup>3</sup> )	0,005 mg/m <sup>3</sup>
Lithuania	IPRV (mg/m <sup>3</sup> )	0,05 mg/m <sup>3</sup>
Lithuania	TPRV (mg/m <sup>3</sup> )	0,2 mg/m <sup>3</sup>
Poland	NDS (mg/m <sup>3</sup> )	0,05 mg/m <sup>3</sup>
Poland	NDSch (mg/m <sup>3</sup> )	0,1 mg/m <sup>3</sup>
Portugal	OEL TWA (mg/m <sup>3</sup> )	0,1 mg/m <sup>3</sup>
Romania	OEL TWA (mg/m <sup>3</sup> )	0,01 mg/m <sup>3</sup>
Romania	OEL STEL (mg/m <sup>3</sup> )	0,03 mg/m <sup>3</sup>
Slovakia	NPHV (priemerná) (mg/m <sup>3</sup> )	0,05 mg/m <sup>3</sup>
Slovakia	NPHV (Hraničná) (mg/m <sup>3</sup> )	0,2 mg/m <sup>3</sup>
Slovenia	OEL TWA (mg/m <sup>3</sup> )	0,05 mg/m <sup>3</sup>
Slovenia	OEL STEL (mg/m <sup>3</sup> )	0,2 mg/m <sup>3</sup>
Spain	VLA-ED (mg/m <sup>3</sup> )	0,1 mg/m <sup>3</sup>
Sweden	nivågränsvärde (NVG) (mg/m <sup>3</sup> )	0,05 mg/m <sup>3</sup>
Sweden	kortidsvärde (KTV) (mg/m <sup>3</sup> )	0,2 mg/m <sup>3</sup>
Norway	Grenseverdier (AN) (mg/m <sup>3</sup> )	0,075 mg/m <sup>3</sup>
Norway	Grenseverdier (AN) (ppm)	0,01 ppm
Norway	Grenseverdier (Korttidsverdi) (mg/m <sup>3</sup> )	0,225 mg/m <sup>3</sup> (value calculated)
Norway	Grenseverdier (Korttidsverdi) (ppm)	0,03 ppm (value calculated)
Switzerland	MAK (mg/m <sup>3</sup> )	0,05 mg/m <sup>3</sup>
Switzerland	KZGW (mg/m <sup>3</sup> )	0,1 mg/m <sup>3</sup>
Australia	TWA (mg/m <sup>3</sup> )	0,1 mg/m <sup>3</sup>
Canada (Quebec)	VEMP (mg/m <sup>3</sup> )	0,05 mg/m <sup>3</sup>
USA - ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0,1 mg/m <sup>3</sup>
USA - IDLH	US IDLH (mg/m <sup>3</sup> )	40 mg/m <sup>3</sup>
USA - NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0,075 mg/m <sup>3</sup>
USA - OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	0,075 mg/m <sup>3</sup>
<b>Isopentane (78-78-4)</b>		
EU	IOELV TWA (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup>
EU	IOELV TWA (ppm)	1000 ppm
Austria	MAK (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
Austria	MAK (ppm)	600 ppm
Austria	MAK Short time value (mg/m <sup>3</sup> )	3600 mg/m <sup>3</sup> (Pentane, all isomers)
Austria	MAK Short time value (ppm)	1200 ppm (Pentane, all isomers)
Belgium	Limit value (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
Belgium	Limit value (ppm)	600 ppm
Belgium	Short time value (mg/m <sup>3</sup> )	2250 mg/m <sup>3</sup>
Belgium	Short time value	750 ppm
Bulgaria	OEL TWA (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup>
Bulgaria	OEL TWA (ppm)	1000 ppm
Croatia	GVI (granična vrijednost izloženosti) (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup>
Croatia	GVI (granična vrijednost izloženosti) (ppm)	1000 ppm

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<b>Isopentane (78-78-4)</b>		
Cyprus	OEL TWA (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup>
Cyprus	OEL TWA (ppm)	1000 ppm
Czech Republic	Expoziční limity (PEL) (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup>
Denmark	Grænseværdie (langvarig) (mg/m <sup>3</sup> )	1500 mg/m <sup>3</sup>
Denmark	Grænseværdie (langvarig) (ppm)	500 ppm
Estonia	OEL TWA (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup>
Estonia	OEL TWA (ppm)	1000 ppm
Finland	HTP-arvo (8h) (mg/m <sup>3</sup> )	1500 mg/m <sup>3</sup>
Finland	HTP-arvo (8h) (ppm)	500 ppm
Finland	HTP-arvo (15 min)	1900 mg/m <sup>3</sup>
Finland	HTP-arvo (15 min) (ppm)	630 ppm
France	VME (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup> (indicative limit)
France	VME (ppm)	1000 ppm (indicative limit)
Germany	TRGS 900 Occupational exposure limit value (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup>
Germany	TRGS 900 Occupational exposure limit value (ppm)	1000 ppm
Gibraltar	8h mg/m <sup>3</sup>	3000 mg/m <sup>3</sup>
Gibraltar	8h ppm	1000 ppm
Greece	OEL TWA (mg/m <sup>3</sup> )	2950 mg/m <sup>3</sup>
Greece	OEL TWA (ppm)	1000 ppm
Hungary	AK-érték	3000 mg/m <sup>3</sup>
Ireland	OEL (8 hours ref) (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup>
Ireland	OEL (8 hours ref) (ppm)	1000 ppm
Ireland	OEL (15 min ref) (mg/m <sup>3</sup> )	9000 mg/m <sup>3</sup> (calculated)
Ireland	OEL (15 min ref) (ppm)	3000 ppm (calculated)
Italy	OEL TWA (mg/m <sup>3</sup> )	2000 mg/m <sup>3</sup>
Italy	OEL TWA (ppm)	667 ppm
Latvia	OEL TWA (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup>
Latvia	OEL TWA (ppm)	1000 ppm
Lithuania	IPRV (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup>
Lithuania	IPRV (ppm)	1000 ppm
Luxembourg	OEL TWA (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup>
Luxembourg	OEL TWA (ppm)	1000 ppm
Malta	OEL TWA (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup>
Malta	OEL TWA (ppm)	1000 ppm
Netherlands	Grenswaarde TGG 8H (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
Poland	NDS (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup>
Portugal	OEL TWA (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup> (indicative limit value)
Portugal	OEL TWA (ppm)	1000 ppm (indicative limit value)
Romania	OEL TWA (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup>
Romania	OEL TWA (ppm)	1000 ppm

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<b>Isopentane (78-78-4)</b>		
Slovakia	NPHV (priemerná) (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup>
Slovakia	NPHV (priemerná) (ppm)	1000 ppm
Slovenia	OEL TWA (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup>
Slovenia	OEL TWA (ppm)	1000 ppm
Spain	VLA-ED (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup> (indicative limit value)
Spain	VLA-ED (ppm)	1000 ppm (indicative limit value)
Sweden	nivågränsvärde (NVG) (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
Sweden	nivågränsvärde (NVG) (ppm)	600 ppm
Sweden	kortidsvärde (KTV) (mg/m <sup>3</sup> )	2000 mg/m <sup>3</sup>
Sweden	kortidsvärde (KTV) (ppm)	750 ppm
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
United Kingdom	WEL TWA (ppm)	600 ppm
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	5400 mg/m <sup>3</sup> (calculated)
United Kingdom	WEL STEL (ppm)	1800 ppm (calculated)
Norway	Grenseverdier (AN) (mg/m <sup>3</sup> )	750 mg/m <sup>3</sup>
Norway	Grenseverdier (AN) (ppm)	250 ppm
Norway	Grenseverdier (Korttidsverdi) (mg/m <sup>3</sup> )	937,5 mg/m <sup>3</sup> (value calculated)
Norway	Grenseverdier (Korttidsverdi) (ppm)	312,5 ppm (value calculated)
Switzerland	MAK (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
Switzerland	MAK (ppm)	600 ppm
Switzerland	KZGW (mg/m <sup>3</sup> )	3600 mg/m <sup>3</sup>
Switzerland	KZGW (ppm)	1200 ppm
USA - ACGIH	ACGIH TWA (ppm)	1000 ppm


## **8.2. Exposure controls**

Engineering measure(s)

: Provide adequate ventilation. Use only in area provided with appropriate exhaust ventilation. Closed system. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Take precautionary measures against static discharge. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Organisational measures to prevent /limit releases, dispersion and exposure. See also section 7.

Personal protective equipment

: The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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Hand protection	: Wear chemically resistant gloves (tested to EN374) . The selection of specific gloves for a specific application and time of use in a working area, should also take into account other factors on the working space, such as (but not limited to): other chemicals that are possibly used, physical requirements (protection against cutting/drilling, skill, thermal protection), and the instructions/specification of the supplier of gloves. The data about break through time/strength of material are standard values! The exact break through time/strength of material has to be obtained from the producer of the protective glove.
Eye protection	: Safety glasses (EN166). tightly fitting safety goggles (EN 166). face shield (EN 166)
Body protection	: Wear suitable coveralls to prevent exposure to the skin
Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment. Half-face mask (DIN EN 140) (EN 140). full face mask (DIN EN 136) (EN 136). Filter type: A (EN 141). Self-contained open-circuit compressed air breathing apparatus (EN 137)
Thermal hazard protection	: Not required for normal conditions of use. Use dedicated equipment.


## **SECTION 9: Physical and chemical properties**

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

Physical state	: Liquid
Appearance	: liquid. clear.
Colour	: Blue.
Odour	: Characteristic.
Odour threshold	: No data available
pH	: UVCB
Relative evaporation rate (butylacetate=1)	: No data available
Melting / freezing point	: > -65 °C
Freezing point	: No data available
Initial boiling point and boiling range	: 42 - 149,5 °C
Flash point	: < 21 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable,liquid
Vapour pressure	: 45,8 kPa (37.8 °C)
Vapour density	: No data available
Relative density	: No data available
Density	: 718,2 g/cm <sup>3</sup>
Solubility	: No data available. Water: No data available
Partition coefficient n-octanol/water	: NA: UVCB
Kinematic viscosity	: No data available
Dynamic viscosity	: No data available
Explosive properties	: The study does not need to be conducted because there are no chemical groups associated with explosive properties present in the molecule.
Oxidising properties	: The classification procedure needs not to be applied because there are no chemical groups present in the molecule which are associated with oxidising properties.
Explosive limits	: No data available

### **9.2. Other information**

No data available

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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Flammable liquid and vapour. Reference to other sections: 10.5.

### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

### 10.3. Possibility of hazardous reactions

Vapours may form explosive mixture with air. See also section 7. Handling and storage.

### 10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. See also section 7. Handling and storage.

### 10.5. Incompatible materials

oxidising substances. See also section 7. Handling and storage.

### 10.6. Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. Reference to other sections: 5.2.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified (Based on available data, the classification criteria are not met.)


<b>Naphtha (petroleum), full-range alkylate, butane-contg., Low boiling point modified naphtha (68527-27-5)</b>	
LD50/oral/rat	> 5000 mg/kg OECD TG 401
LD50/dermal/rabbit	> 2000 mg/kg OECD TG 402
LC50/inhalation/4h/rat	> 5,61 mg/l OECD TG 403
<b>butane (containing ≥ 0,1 % butadiene (203-450-8)) (106-97-8)</b>	
LC50/inhalation/4h/rat	658 g/m <sup>3</sup> (Exposure time: 4 h)
<b>Toluene (108-88-3)</b>	
LD50/oral/rat	> 5000 mg/kg
LD50/dermal/rabbit	> 5000 mg/kg
LC50/inhalation/4h/rat	> 20 mg/l
<b>Tetraethyl lead (78-00-2)</b>	
LD50/oral/rat	12,3 mg/kg
LD50/dermal/rabbit	990 mg/kg
LC50/inhalation/4h/rat	(1h) 850 mg/m <sup>3</sup>
<b>1,2-dibromoethane (106-93-4)</b>	
LD50/oral/rat	108 mg/kg
LD50/dermal/rat	300 mg/kg
LD50/dermal/rabbit	300 mg/kg
<b>Naphtha (petroleum), isomerization (64741-70-4)</b>	
LD50/oral/rat	> 5000 mg/kg
LD50/dermal/rabbit	> 2000 mg/kg
LC50/inhalation/4h/rat	> 5610 mg/m <sup>3</sup>

Skin corrosion/irritation : Causes skin irritation.

pH: UVCB

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met.)

pH: UVCB

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Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met.)
Germ cell mutagenicity	: May cause genetic defects.
Carcinogenicity	: May cause cancer.
Reproductive toxicity	: Suspected of damaging fertility. Suspected of damaging the unborn child.
STOT-single exposure	: May cause drowsiness or dizziness.
STOT-repeated exposure	: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: May be fatal if swallowed and enters airways.
Other adverse effects	: carcinogenic. Mutagenetic.
Other information	: Symptoms related to the physical, chemical and toxicological characteristics. Reference to other sections: 4.2.


## SECTION 12: Ecological information

### 12.1. Toxicity

Environmental properties	: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
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<b>Naphtha (petroleum), full-range alkylate, butane-contg., Low boiling point modified naphtha (68527-27-5)</b>	
LL50, Pimephales promelas (fathead minnow)	8.2 mg/l (96 hours)
EL50, Daphnia magna (Big water flea)	4.5 mg/l (48 hours, OECD 202)
EL50, Pseudokirchneriella subcapitata	3.1 mg/l (72 hours)
<b>Toluene (108-88-3)</b>	
LC50 fish 1	5,5 mg/l (96h)
LC50 other aquatic organisms 1	3,78 mg/l after 2 days
ErC50 (algae)	134 mg/l
NOEC chronic fish	1,4 mg/l
NOEC chronic algae	10 mg/l
NOEC (additional information)	NOEC Invertebrates. 7 days 0.74 mg/l
<b>Tetraethyl lead (78-00-2)</b>	
LC50 fish 1	84 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus)
EC50 Daphnia 1	0,085 mg/l (Exposure time: 48 h - Species: Artemia salina)
LC50 fish 2	19,3 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
<b>Isopentane (78-78-4)</b>	
EC50 Daphnia 1	2,3 mg/l (Exposure time: 48 h - Species: Daphnia magna)
<b>1,2-dibromoethane (106-93-4)</b>	
LC50 fish 1	(96h) 32,1 mg/l Oryzias latipes (Ricefish)
LC50, Minnows	0.036 mg/l (96 hours)
LC50, fish	183 mg/l (48 hours)
<b>Naphtha (petroleum), isomerization (64741-70-4)</b>	
LC50 fish 1	10 mg/l (96h)
EC50 Daphnia 1	4,5 mg/l (48h)
LC50 fish 2	8,2 mg/l (96h)
ErC50 (algae)	3,1 mg/l (72h)



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### 12.2. Persistence and degradability

<b>Aviation Gasoline</b>	
Persistence and degradability	No data available.

### 12.3. Bioaccumulative potential

<b>Aviation Gasoline</b>	
Partition coefficient n-octanol/water	NA: UVCB
<b>butane (containing <math>\geq 0,1</math> % butadiene (203-450-8)) (106-97-8)</b>	
Partition coefficient n-octanol/water	2,89
<b>Tetraethyl lead (78-00-2)</b>	
BCF fish 1	92 - 3189
Partition coefficient n-octanol/water	4,32 (at 20 °C)
<b>Isopentane (78-78-4)</b>	
Partition coefficient n-octanol/water	3,2 - 3,3

### 12.4. Mobility in soil

<b>Aviation Gasoline</b>	
Ecology - soil	No data available.

### 12.5. Results of PBT and vPvB assessment

ingredient	
Tetraethyl lead (78-00-2)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

### 12.6. Other adverse effects

No data available

## SECTION 13: Disposal considerations


### 13.1. Waste treatment methods






Product/Packaging disposal recommendations	: Handle with care. Safe handling: see section 7. Handling and storage. Dispose of contaminated materials in accordance with current regulations. Refer to manufacturer/supplier for information on recovery/recycling. Collect and dispose of waste product at an authorised disposal facility.
Additional information	: Do not puncture or incinerate. Do not burn, or use a cutting torch on the empty drum. Delivery to an approved waste disposal company.
Further ecological information	: Do not allow to enter into surface water or drains.
European waste catalogue (2001/573/EC, 75/442/EEC, 91/689/EEC)	: Classified as hazardous waste according to European Union regulations. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
1203	1203	1203	1203	1203
<b>14.2. UN proper shipping name</b>				
GASOLINE	GASOLINE	Gasoline	GASOLINE	GASOLINE
<b>Transport document description</b>				
UN 1203 GASOLINE,	UN 1203 GASOLINE,	UN 1203 Gasoline, 3,	UN 1203 GASOLINE,	UN 1203 GASOLINE,

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ADR	IMDG	IATA	ADN	RID
3, II, (D/E), ENVIRONMENTALLY HAZARDOUS	3, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	II, ENVIRONMENTALLY HAZARDOUS	3, II, ENVIRONMENTALLY HAZARDOUS	3, II, ENVIRONMENTALLY HAZARDOUS
<b>14.3. Transport hazard class(es)</b>				
3	3	3	3	3
				
<b>14.4. Packing group</b>				
II	II	II	II	II
<b>14.5. Environmental hazards</b>				
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
ADN :N2				

**14.6. Special precautions for user**

**- Overland transport**


Classification code (ADR) : F1  
 Special provisions : 243, 534, 664  
 Limited quantities (ADR) : 1I  
 Excepted quantities (ADR) : E2  
 Packing instructions (ADR) : P001, IBC02, R001  
 Special packing provisions (ADR) : BB2  
 Mixed packing provisions (ADR) : MP19  
 Portable tank and bulk container instructions (ADR) : T4  
 Portable tank and bulk container special provisions (ADR) : TP1  
 Tank code (ADR) : LGBF  
 Tank special provisions (ADR) : TU9  
 Vehicle for tank carriage : FL  
 Transport category (ADR) : 2  
 Special provisions for carriage - Operation (ADR) : S2, S20  
 Hazard identification number (Kemler No.) : 33  
 Orange plates :



Tunnel restriction code : D/E  
 EAC code : 3YE

**- Transport by sea**

Special provisions (IMDG) : 243

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Limited quantities (IMDG) : 1 L  
 Excepted quantities (IMDG) : E2  
 Packing instructions (IMDG) : P001  
 IBC packing instructions (IMDG) : IBC02  
 Tank instructions (IMDG) : T4  
 Tank special provisions (IMDG) : TP1  
 EmS-No. (Fire) : F-E  
 EmS-No. (Spillage) : S-E  
 Stowage category (IMDG) : E  
 Properties and observations (IMDG) : Immiscible with water.

**- Air transport**


PCA Excepted quantities (IATA) : E2  
 PCA Limited quantities (IATA) : Y341  
 PCA limited quantity max net quantity (IATA) : 1L  
 PCA packing instructions (IATA) : 353  
 PCA max net quantity (IATA) : 5L  
 CAO packing instructions (IATA) : 364  
 CAO max net quantity (IATA) : 60L  
 Special provisions (IATA) : A100  
 ERG code (IATA) : 3H

**- Inland waterway transport**

Classification code (ADN) : F1  
 Special provisions (ADN) : 243, 534  
 Limited quantities (ADN) : 1 L  
 Excepted quantities (ADN) : E2  
 Carriage permitted (ADN) : T  
 Equipment required (ADN) : PP, EX, A  
 Ventilation (ADN) : VE01  
 Number of blue cones/lights (ADN) : 1

**- Rail transport**

Classification code (RID) : F1  
 Special provisions (RID) : 243, 534  
 Limited quantities (RID) : 1L  
 Excepted quantities (RID) : E2  
 Packing instructions (RID) : P001, IBC02, R001  
 Special packing provisions (RID) : BB2  
 Mixed packing provisions (RID) : MP19  
 Portable tank and bulk container instructions (RID) : T4  
 Portable tank and bulk container special provisions (RID) : TP1  
 Tank codes for RID tanks (RID) : LGBF  
 Special provisions for RID tanks (RID) : TU9  
 Transport category (RID) : 2

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Colis express (express parcels) (RID) : CE7

Hazard identification number (RID) : 33

#### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

### SECTION 15: Regulatory information

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

##### 15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008	Aviation Gasoline - Naphtha (petroleum), full-range alkylate, butane-contg., Low boiling point modified naphtha - Toluene - Tetraethyl lead - Isopentane - 1,2-dibromoethane - Naphtha (petroleum), isomerization
3(a) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F	Aviation Gasoline - Naphtha (petroleum), full-range alkylate, butane-contg., Low boiling point modified naphtha - Toluene - Isopentane - Naphtha (petroleum), isomerization
3(b) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10	Aviation Gasoline - Naphtha (petroleum), full-range alkylate, butane-contg., Low boiling point modified naphtha - Toluene - Tetraethyl lead - Isopentane - 1,2-dibromoethane - Naphtha (petroleum), isomerization
3(c) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1	Aviation Gasoline - Naphtha (petroleum), full-range alkylate, butane-contg., Low boiling point modified naphtha - Tetraethyl lead - Isopentane - 1,2-dibromoethane - Naphtha (petroleum), isomerization
28. Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as Carcinogen category 1A or 1B (Table 3.1) or Carcinogen category 1 or 2 (Table 3.2) and listed as follows: Carcinogen category 1A (Table 3.1)/Carcinogen category 1 (Table 3.2) listed in Appendix 1 Carcinogen category 1B (Table 3.1)/Carcinogen category 2 (Table 3.2) listed in Appendix 2	Aviation Gasoline - butane (containing ≥ 0,1 % butadiene (203-450-8)) - 1,2-dibromoethane - Naphtha (petroleum), isomerization
29. Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as Germ cell Mutagen category 1A or 1B (Table 3.1) or Mutagen category 1 or 2 (Table 3.2) and listed as follows: Mutagen category 1A (Table 3.1)/Mutagen category 1 (Table 3.2) listed in Appendix 3 Mutagen category 1B (Table 3.1)/Mutagen category 2 (Table 3.2) listed in Appendix 4	Aviation Gasoline - butane (containing ≥ 0,1 % butadiene (203-450-8)) - Naphtha (petroleum), isomerization
40. Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.	Aviation Gasoline - Naphtha (petroleum), full-range alkylate, butane-contg., Low boiling point modified naphtha - butane (containing ≥ 0,1 % butadiene (203-450-8)) - Toluene - Isopentane - Naphtha (petroleum), isomerization
48. Toluene	Toluene


Contains a substance on the REACH candidate list in concentration ≥ 0.1% or with a lower specific limit: Tetraethyllead (EC 201-075-4, CAS 78-00-2)

Contains no REACH Annex XIV substances

##### 15.1.2. National regulations

###### France

No ICPE	Installations classées Désignation de la rubrique	Code Régime	Rayon
4510.text	Dangereux pour l'environnement aquatique de catégorie aiguë 1 ou chronique 1.		

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4510.1	La quantité totale susceptible d'être présente dans l'installation étant : 1. Supérieure ou égale à 100 t Quantité seuil bas au sens de l'article R. 511-10 : 100 t. Quantité seuil haut au sens de l'article R. 511-10 : 200 t.	A	1
4510.2	La quantité totale susceptible d'être présente dans l'installation étant : 2. Supérieure ou égale à 20 t mais inférieure à 100 t Quantité seuil bas au sens de l'article R. 511-10 : 100 t. Quantité seuil haut au sens de l'article R. 511-10 : 200 t.	DC	

#### Germany

Reference to AwSV : Water hazard class (WGK) 3, severe hazard to waters (Classification according to AwSV, Annex 1)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

TA Luft : Mutagenetic

#### Netherlands

Waterbezwaarlijkheid : 1 - May cause heritable genetic damage Z (1)

SZW-lijst van kankerverwekkende stoffen : Naphtha (petroleum), full-range alkylate, butane-contg., Low boiling point modified naphtha, 1,2-dibromoethane, Naphtha (petroleum), isomerization are listed

SZW-lijst van mutagene stoffen : Naphtha (petroleum), full-range alkylate, butane-contg., Low boiling point modified naphtha, Naphtha (petroleum), isomerization are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : Toluene is listed

#### Denmark

Class for fire hazard : Class I-1

Store unit : 1 liter

Classification remarks : F <Flam. Liq. 2>; Emergency management guidelines for the storage of flammable liquids must be followed

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product  
Pregnant/breastfeeding women working with the product must not be in direct contact with the product  
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal


#### 15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out

#### **SECTION 16: Other information**

Indication of changes:

1		Modified	
2		Modified	
5		Modified	

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9		Modified	
14		Modified	
15		Modified	
16		Modified	

Abbreviations and acronyms:

	ADN = Accord Européen relatif au Transport International des Marchandises Dangereuses par voie de Navigation du Rhin ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route CLP = Classification, Labelling and Packaging Regulation according to 1272/2008/EC IATA = International Air Transport Association IMDG = International Maritime Dangerous Goods Code LEL = Lower Explosive Limit/Lower Explosion Limit UEL = Upper Explosion Limit/Upper Explosive Limit REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
	N = Dangerous for the environment
	TWA = time weighted average
	vPvB = very persistent and very bioaccumulating
	WGK = Wassergefährdungsklasse (Water Hazard Class under German Federal Water Management Act)
	T = Toxic
	TLV = Threshold limits
	STEL = Short term exposure limit
	DNEL = Derived No Effect Level
	CSR = Chemical Safety Report
	EC50 = Median Effective Concentration
	UVCB = Substance of unknown or variable composition, complex reaction products or biological material (UVCB)
	NA = Not applicable
	N.O.S. = Not Otherwise Specified
	ABM = Algemene beoordelingsmethodiek
	EL50 = Median effective level
	persistent, bioaccumulating and toxic (PBT).
	Occupational Exposure Limits - Short Term Exposure Limits (STELs)

Sources of key data used to compile the datasheet : European Chemicals Bureau Supplier SDS.

Full text of R-, H- and EUH-phrases::

Acute Tox. 1 (Dermal)	Acute toxicity (dermal), Category 1
Acute Tox. 1 (Inhalation)	Acute toxicity (inhal.), Category 1
Acute Tox. 2 (Oral)	Acute toxicity Category 2
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation:vapour)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity Category 3
Aquatic Acute 1	Hazardous to the aquatic environment - Aquatic Acute 1
Aquatic Chronic 1	Hazardous to the aquatic environment - chronic hazard category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - chronic hazard category 2
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 1A	Carcinogenicity, Category 1A
Carc. 1B	Carcinogenicity, Category 1B
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Gas 1	Flammable gases, hazard category 1
Flam. Liq. 1	Flammable liquids, Category 1
Flam. Liq. 2	Flammable liquids, Category 2
Muta. 1B	Germ cell mutagenicity, hazard categories 1B
Press. Gas (Comp.)	Gases under pressure : Compressed gas
Repr. 1A	Reproductive toxicity, Category 1A
Repr. 2	Reproductive toxicity, Hazard Category 2
Repr. 2	Reproductive toxicity, Hazard Category 2



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Repr. 2	Reproductive toxicity, Hazard Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H220	Extremely flammable gas.
H224	Extremely flammable liquid and vapour.
H225	Highly flammable liquid and vapour.
H280	Contains gas under pressure; may explode if heated.
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.
H340	May cause genetic defects.
H350	May cause cancer.
H360Df	May damage the unborn child. Suspected of damaging fertility.
H361d	Suspected of damaging the unborn child.
H361f	Suspected of damaging fertility.
H361fd	Suspected of damaging fertility. Suspected of damaging 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.
R12	Extremely flammable.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R38	Irritating to skin
R45	May cause cancer
R46	May cause hereditary genetic damage
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R62	Possible risk of impaired fertility.
R63	Possible risk of harm to the unborn child.
R65	Harmful: may cause lung damage if swallowed.
F+	Extremely flammable
N	Dangerous for the environment
Xi	Irritant
Xn	Harmful

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830  
Classification according to Regulation (EC) No. 1272/2008 [CLP]  
Labelling according to Regulation (EC) No. 1272/2008 [CLP]

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