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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 : Unleaded Aviation Gasoline

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

Puma Aviation Europe OÜ
Rae põik 6
Paldiski city, Harju county 76806 - Estonia
T + 372 679 0999
AvgasOps@pumaenergy.com

1.4. Emergency telephone number

Emergency number : +32 3 575 03 30

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

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; R11

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Xn; R48/20
Xi; R38
N; R51/53
R67

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; Isopentane; Naphtha (petroleum), isomerization; 1,2-dibromoethane; Naphtha (petroleum), full-range alkylate

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.
H361fd - 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 :

Vapours can form explosive mixtures with air. Results of PBT and vPvB assessment : Not applicable.

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	(CAS-No.) 64741-64-6 (EC-No.) 265-066-7 (EC Index) 649-274-00-9 (REACH-no) 01-2119485026-38-XXXX	55 - 90	F; R11 Carc.Cat.2; R45 Muta.Cat.2; R46 Repr.Cat.3; R62 Repr.Cat.3; R63 Xn; R65 R67 Xi; R38 N; R51/53	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Muta. 1B, H340 Carc. 1B, H350 Repr. 2, H361fd 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	0 - 20	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 - 8	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
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. Concerning personal protective equipment to use, see section 8. Never give anything by mouth to an unconscious person. In case of doubt or persistent symptoms, consult always a physician. Show this safety data sheet to the doctor in attendance. Treat symptomatically.
Inhalation	: Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. Call a physician immediately.
Skin contact	: Take off contaminated clothing. Gently wash with plenty of soap and water. In case of doubt or persistent symptoms, consult always a physician.
Eyes contact	: Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing. In case of doubt or persistent symptoms, consult always a physician.
Ingestion	: Rinse mouth thoroughly with water. Do NOT induce vomiting. Get immediate medical advice/attention.

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

Inhalation	: Vapours may cause drowsiness and dizziness. The following symptoms may occur: Cough. Nausea. Vomiting. Mental confusion. Headache .
Skin contact	: Causes skin irritation. The following symptoms may occur: erythema (redness). Dry skin.
Eyes contact	: Contact with eyes may cause irritation. The following symptoms may occur: erythema (redness), Pain.
Ingestion	: May be fatal if swallowed and enters airways. Aspiration may cause pulmonary oedema and pneumonitis. The following symptoms may occur: 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. dry extinguishing powder. Carbon dioxide.
Unsuitable extinguishing media	: Strong water jet.

5.2. Special hazards arising from the substance or mixture

Specific hazards	: Heating causes rise in pressure with risk of bursting. Hazardous combustion products COx. Vapours may form explosive mixture with air. Vapours are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapours. Vapours can travel considerable distances to a source of ignition where they can ignite, flash back, or explode.
Hazardous decomposition products in case of fire	: Carbon oxides (CO, CO2).

5.3. Advice for firefighters

Firefighting instructions	: Special protective equipment for firefighters. In case of fire: Wear self-contained breathing apparatus. Use water spray or fog for cooling exposed containers. Do not allow run-off from fire-fighting to enter drains or water courses. Evacuate personnel to a safe area.
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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. Do not breathe vapour/aerosol. Avoid contact with skin, eyes and clothing. 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.
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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. Notify authorities if product enters sewers or public waters.

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.
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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 ventilation. Use personal protective equipment as required. Concerning personal protective equipment to use, see section 8. Do not breathe vapour/aerosol. Avoid contact with skin, eyes and clothing. 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. Obtain special instructions before use. (Do not handle until all safety precautions have been read and understood.). 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.

Hygiene measures

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

7.2. Conditions for safe storage, including any incompatibilities

Technical measures

: Store in a dry, cool and well-ventilated place. Refer to the detailed list of incompatible materials in section 10 Stability/Reactivity. Bund storage facilities to prevent soil and water pollution in the event of spillage. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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

butane (containing $\geq 0,1$ % butadiene (203-450-8)) (106-97-8)		
Austria	MAK (mg/m ³)	1900 mg/m ³
Austria	MAK (ppm)	800 ppm
Austria	MAK Short time value (mg/m ³)	3800 mg/m ³
Austria	MAK Short time value (ppm)	1600 ppm
Belgium	Limit value (ppm)	1000 ppm (gas)
Bulgaria	OEL TWA (mg/m ³)	1900 mg/m ³
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	1450 mg/m ³ 22 mg/m ³ (containing $\geq 0,1\%$ 1,3-Butadiene)
Croatia	GVI (granična vrijednost izloženosti) (ppm)	600 ppm 10 ppm (containing $\geq 0,1\%$ 1,3-Butadiene)
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m ³)	1810 mg/m ³
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	750 ppm
Denmark	Grænseværdie (langvarig) (mg/m ³)	1200 mg/m ³
Denmark	Grænseværdie (langvarig) (ppm)	500 ppm
Estonia	OEL TWA (mg/m ³)	1500 mg/m ³
Estonia	OEL TWA (ppm)	800 ppm
Finland	HTP-arvo (8h) (mg/m ³)	1900 mg/m ³
Finland	HTP-arvo (8h) (ppm)	800 ppm

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butane (containing $\geq 0,1$ % butadiene (203-450-8)) (106-97-8)		
Finland	HTP-arvo (15 min)	2400 mg/m ³
Finland	HTP-arvo (15 min) (ppm)	1000 ppm
France	VME (mg/m ³)	1900 mg/m ³
France	VME (ppm)	800 ppm
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	2400 mg/m ³
Germany	TRGS 900 Occupational exposure limit value (ppm)	1000 ppm
Greece	OEL TWA (mg/m ³)	2350 mg/m ³
Greece	OEL TWA (ppm)	1000 ppm
Hungary	AK-érték	2350 mg/m ³
Hungary	CK-érték	9400 mg/m ³
Ireland	OEL (8 hours ref) (ppm)	1000 ppm
Ireland	OEL (15 min ref) (ppm)	3000 ppm (calculated)
Latvia	OEL TWA (mg/m ³)	300 mg/m ³
Poland	NDS (mg/m ³)	1900 mg/m ³
Poland	NDSch (mg/m ³)	3000 mg/m ³
Slovenia	OEL TWA (mg/m ³)	2400 mg/m ³ (containing $\geq 0.1\%$ Butadiene)
Slovenia	OEL TWA (ppm)	1000 ppm (containing $\geq 0.1\%$ Butadiene)
Slovenia	OEL STEL (mg/m ³)	9600 mg/m ³ (containing $\geq 0.1\%$ Butadiene)
Slovenia	OEL STEL (ppm)	4000 ppm (containing $\geq 0.1\%$ Butadiene)
United Kingdom	WEL TWA (mg/m ³)	1450 mg/m ³
United Kingdom	WEL TWA (ppm)	600 ppm
United Kingdom	WEL STEL (mg/m ³)	1810 mg/m ³
United Kingdom	WEL STEL (ppm)	750 ppm
Norway	Grenseverdier (AN) (mg/m ³)	600 mg/m ³
Norway	Grenseverdier (AN) (ppm)	250 ppm
Norway	Grenseverdier (Korttidsverdi) (mg/m ³)	750 mg/m ³ (value calculated)
Norway	Grenseverdier (Korttidsverdi) (ppm)	312,5 ppm (value calculated)
Switzerland	MAK (mg/m ³)	1900 mg/m ³
Switzerland	MAK (ppm)	800 ppm
Switzerland	KZGW (mg/m ³)	7600 mg/m ³
Switzerland	KZGW (ppm)	3200 ppm
Australia	TWA (mg/m ³)	1900 mg/m ³
Australia	TWA (ppm)	800 ppm
Canada (Quebec)	VEMP (mg/m ³)	1900 mg/m ³
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 ³)	1900 mg/m ³
USA - NIOSH	NIOSH REL (TWA) (ppm)	800 ppm
Toluene (108-88-3)		
EU	IOELV TWA (mg/m ³)	192 mg/m ³
EU	IOELV TWA (ppm)	50 ppm
EU	IOELV STEL (mg/m ³)	384 mg/m ³

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Toluene (108-88-3)		
EU	IOELV STEL (ppm)	100 ppm
EU	Notes	Possibility of significant uptake through the skin
Austria	MAK (mg/m ³)	190 mg/m ³
Austria	MAK (ppm)	50 ppm
Austria	MAK Short time value (mg/m ³)	380 mg/m ³
Austria	MAK Short time value (ppm)	100 ppm
Belgium	Limit value (mg/m ³)	77 mg/m ³
Belgium	Limit value (ppm)	20 ppm
Belgium	Short time value (mg/m ³)	384 mg/m ³
Belgium	Short time value	100 ppm
Bulgaria	OEL TWA (mg/m ³)	192 mg/m ³
Bulgaria	OEL TWA (ppm)	50 ppm
Bulgaria	OEL STEL (mg/m ³)	384 mg/m ³
Bulgaria	OEL STEL (ppm)	100 ppm
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	192 mg/m ³
Croatia	GVI (granična vrijednost izloženosti) (ppm)	50 ppm
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m ³)	384 mg/m ³
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	100 ppm
Cyprus	OEL TWA (mg/m ³)	192 mg/m ³
Cyprus	OEL TWA (ppm)	50 ppm
Cyprus	OEL STEL (mg/m ³)	384 mg/m ³
Cyprus	OEL STEL (ppm)	100 ppm
Czech Republic	Expoziční limity (PEL) (mg/m ³)	200 mg/m ³
Denmark	Grænseværdie (langvarig) (mg/m ³)	94 mg/m ³
Denmark	Grænseværdie (langvarig) (ppm)	25 ppm
Estonia	OEL TWA (mg/m ³)	192 mg/m ³
Estonia	OEL TWA (ppm)	50 ppm
Estonia	OEL STEL (mg/m ³)	384 mg/m ³
Estonia	OEL STEL (ppm)	100 ppm
Finland	HTP-arvo (8h) (mg/m ³)	81 mg/m ³
Finland	HTP-arvo (8h) (ppm)	25 ppm
Finland	HTP-arvo (15 min)	380 mg/m ³
Finland	HTP-arvo (15 min) (ppm)	100 ppm
France	VME (mg/m ³)	76,8 mg/m ³ (restrictive limit)
France	VME (ppm)	20 ppm (restrictive limit)
France	VLE (mg/m ³)	384 mg/m ³ (restrictive limit)
France	VLE (ppm)	100 ppm (restrictive limit)
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	190 mg/m ³ (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)

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Toluene (108-88-3)		
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 ³	192 mg/m ³
Gibraltar	8h ppm	50 ppm
Gibraltar	Short-term mg/m ³	384 mg/m ³
Gibraltar	Short-term ppm	100 ppm
Greece	OEL TWA (mg/m ³)	192 mg/m ³
Greece	OEL TWA (ppm)	50 ppm
Greece	OEL STEL (mg/m ³)	384 mg/m ³
Greece	OEL STEL (ppm)	100 ppm
Hungary	AK-érték	190 mg/m ³
Hungary	CK-érték	380 mg/m ³
Ireland	OEL (8 hours ref) (mg/m ³)	192 mg/m ³
Ireland	OEL (8 hours ref) (ppm)	50 ppm
Ireland	OEL (15 min ref) (mg/m ³)	384 mg/m ³
Ireland	OEL (15 min ref) (ppm)	100 ppm
Italy	OEL TWA (mg/m ³)	192 mg/m ³
Italy	OEL TWA (ppm)	50 ppm
Latvia	OEL TWA (mg/m ³)	50 mg/m ³
Latvia	OEL TWA (ppm)	14 ppm
Lithuania	IPRV (mg/m ³)	192 mg/m ³
Lithuania	IPRV (ppm)	50 ppm
Lithuania	TPRV (mg/m ³)	384 mg/m ³
Lithuania	TPRV (ppm)	100 ppm
Luxembourg	OEL TWA (mg/m ³)	192 mg/m ³
Luxembourg	OEL TWA (ppm)	50 ppm
Luxembourg	OEL STEL (mg/m ³)	384 mg/m ³
Luxembourg	OEL STEL (ppm)	100 ppm
Malta	OEL TWA (mg/m ³)	192 mg/m ³
Malta	OEL TWA (ppm)	50 ppm
Malta	OEL STEL (mg/m ³)	384 mg/m ³
Malta	OEL STEL (ppm)	100 ppm
Netherlands	Grenswaarde TGG 8H (mg/m ³)	150 mg/m ³
Netherlands	Grenswaarde TGG 15MIN (mg/m ³)	384 mg/m ³
Poland	NDS (mg/m ³)	100 mg/m ³
Poland	NDSch (mg/m ³)	200 mg/m ³
Portugal	OEL TWA (mg/m ³)	192 mg/m ³ (indicative limit value)
Portugal	OEL TWA (ppm)	50 ppm (indicative limit value)
Portugal	OEL STEL (mg/m ³)	384 mg/m ³ (indicative limit value)
Portugal	OEL STEL (ppm)	100 ppm (indicative limit value)
Romania	OEL TWA (mg/m ³)	192 mg/m ³

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Toluene (108-88-3)		
Romania	OEL TWA (ppm)	50 ppm
Romania	OEL STEL (mg/m ³)	384 mg/m ³
Romania	OEL STEL (ppm)	100 ppm
Slovakia	NPHV (priemerná) (mg/m ³)	192 mg/m ³
Slovakia	NPHV (priemerná) (ppm)	50 ppm
Slovakia	NPHV (Hraničná) (mg/m ³)	384 mg/m ³
Slovenia	OEL TWA (mg/m ³)	192 mg/m ³
Slovenia	OEL TWA (ppm)	50 ppm
Slovenia	OEL STEL (mg/m ³)	384 mg/m ³
Slovenia	OEL STEL (ppm)	100 ppm
Spain	VLA-ED (mg/m ³)	192 mg/m ³ (indicative limit value)
Spain	VLA-ED (ppm)	50 ppm (indicative limit value)
Spain	VLA-EC (mg/m ³)	384 mg/m ³
Spain	VLA-EC (ppm)	100 ppm
Sweden	nivågränsvärde (NVG) (mg/m ³)	192 mg/m ³
Sweden	nivågränsvärde (NVG) (ppm)	50 ppm
Sweden	kortidsvärde (KTV) (mg/m ³)	384 mg/m ³
Sweden	kortidsvärde (KTV) (ppm)	100 ppm
United Kingdom	WEL TWA (mg/m ³)	191 mg/m ³
United Kingdom	WEL TWA (ppm)	50 ppm
United Kingdom	WEL STEL (mg/m ³)	384 mg/m ³
United Kingdom	WEL STEL (ppm)	100 ppm
Norway	Grenseverdier (AN) (mg/m ³)	94 mg/m ³
Norway	Grenseverdier (AN) (ppm)	25 ppm
Norway	Grenseverdier (Korttidsverdi) (mg/m ³)	141 mg/m ³ (value calculated)
Norway	Grenseverdier (Korttidsverdi) (ppm)	37,5 ppm (value calculated)
Switzerland	MAK (mg/m ³)	190 mg/m ³
Switzerland	MAK (ppm)	50 ppm
Switzerland	KZGW (mg/m ³)	760 mg/m ³
Switzerland	KZGW (ppm)	200 ppm
Australia	TWA (mg/m ³)	191 mg/m ³
Australia	TWA (ppm)	50 ppm
Australia	STEL (mg/m ³)	574 mg/m ³
Australia	STEL (ppm)	150 ppm
Canada (Quebec)	VEMP (mg/m ³)	188 mg/m ³
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 ³)	375 mg/m ³
USA - NIOSH	NIOSH REL (TWA) (ppm)	100 ppm
USA - NIOSH	NIOSH REL (STEL) (mg/m ³)	560 mg/m ³
USA - NIOSH	NIOSH REL (STEL) (ppm)	150 ppm
USA - OSHA	OSHA PEL (TWA) (ppm)	200 ppm
USA - OSHA	OSHA PEL (Ceiling) (ppm)	300 ppm

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Isopentane (78-78-4)		
EU	IOELV TWA (mg/m ³)	3000 mg/m ³
EU	IOELV TWA (ppm)	1000 ppm
Austria	MAK (mg/m ³)	1800 mg/m ³
Austria	MAK (ppm)	600 ppm
Austria	MAK Short time value (mg/m ³)	3600 mg/m ³ (Pentane, all isomers)
Austria	MAK Short time value (ppm)	1200 ppm (Pentane, all isomers)
Belgium	Limit value (mg/m ³)	1800 mg/m ³
Belgium	Limit value (ppm)	600 ppm
Belgium	Short time value (mg/m ³)	2250 mg/m ³
Belgium	Short time value	750 ppm
Bulgaria	OEL TWA (mg/m ³)	3000 mg/m ³
Bulgaria	OEL TWA (ppm)	1000 ppm
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	3000 mg/m ³
Croatia	GVI (granična vrijednost izloženosti) (ppm)	1000 ppm
Cyprus	OEL TWA (mg/m ³)	3000 mg/m ³
Cyprus	OEL TWA (ppm)	1000 ppm
Czech Republic	Expoziční limity (PEL) (mg/m ³)	3000 mg/m ³
Denmark	Grænseværdie (langvarig) (mg/m ³)	1500 mg/m ³
Denmark	Grænseværdie (langvarig) (ppm)	500 ppm
Estonia	OEL TWA (mg/m ³)	3000 mg/m ³
Estonia	OEL TWA (ppm)	1000 ppm
Finland	HTP-arvo (8h) (mg/m ³)	1500 mg/m ³
Finland	HTP-arvo (8h) (ppm)	500 ppm
Finland	HTP-arvo (15 min)	1900 mg/m ³
Finland	HTP-arvo (15 min) (ppm)	630 ppm
France	VME (mg/m ³)	3000 mg/m ³ (indicative limit)
France	VME (ppm)	1000 ppm (indicative limit)
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	3000 mg/m ³
Germany	TRGS 900 Occupational exposure limit value (ppm)	1000 ppm
Gibraltar	8h mg/m ³	3000 mg/m ³
Gibraltar	8h ppm	1000 ppm
Greece	OEL TWA (mg/m ³)	2950 mg/m ³
Greece	OEL TWA (ppm)	1000 ppm
Hungary	AK-érték	3000 mg/m ³
Ireland	OEL (8 hours ref) (mg/m ³)	3000 mg/m ³
Ireland	OEL (8 hours ref) (ppm)	1000 ppm
Ireland	OEL (15 min ref) (mg/m ³)	9000 mg/m ³ (calculated)
Ireland	OEL (15 min ref) (ppm)	3000 ppm (calculated)
Italy	OEL TWA (mg/m ³)	2000 mg/m ³
Italy	OEL TWA (ppm)	667 ppm
Latvia	OEL TWA (mg/m ³)	3000 mg/m ³
Latvia	OEL TWA (ppm)	1000 ppm
Lithuania	IPRV (mg/m ³)	3000 mg/m ³

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Isopentane (78-78-4)		
Lithuania	IPRV (ppm)	1000 ppm
Luxembourg	OEL TWA (mg/m ³)	3000 mg/m ³
Luxembourg	OEL TWA (ppm)	1000 ppm
Malta	OEL TWA (mg/m ³)	3000 mg/m ³
Malta	OEL TWA (ppm)	1000 ppm
Netherlands	Grenswaarde TGG 8H (mg/m ³)	1800 mg/m ³
Poland	NDS (mg/m ³)	3000 mg/m ³
Portugal	OEL TWA (mg/m ³)	3000 mg/m ³ (indicative limit value)
Portugal	OEL TWA (ppm)	1000 ppm (indicative limit value)
Romania	OEL TWA (mg/m ³)	3000 mg/m ³
Romania	OEL TWA (ppm)	1000 ppm
Slovakia	NPHV (priemerná) (mg/m ³)	3000 mg/m ³
Slovakia	NPHV (priemerná) (ppm)	1000 ppm
Slovenia	OEL TWA (mg/m ³)	3000 mg/m ³
Slovenia	OEL TWA (ppm)	1000 ppm
Spain	VLA-ED (mg/m ³)	3000 mg/m ³ (indicative limit value)
Spain	VLA-ED (ppm)	1000 ppm (indicative limit value)
Sweden	nivågränsvärde (NVG) (mg/m ³)	1800 mg/m ³
Sweden	nivågränsvärde (NVG) (ppm)	600 ppm
Sweden	kortidsvärde (KTV) (mg/m ³)	2000 mg/m ³
Sweden	kortidsvärde (KTV) (ppm)	750 ppm
United Kingdom	WEL TWA (mg/m ³)	1800 mg/m ³
United Kingdom	WEL TWA (ppm)	600 ppm
United Kingdom	WEL STEL (mg/m ³)	5400 mg/m ³ (calculated)
United Kingdom	WEL STEL (ppm)	1800 ppm (calculated)
Norway	Grenseverdier (AN) (mg/m ³)	750 mg/m ³
Norway	Grenseverdier (AN) (ppm)	250 ppm
Norway	Grenseverdier (Korttidsverdi) (mg/m ³)	937,5 mg/m ³ (value calculated)
Norway	Grenseverdier (Korttidsverdi) (ppm)	312,5 ppm (value calculated)
Switzerland	MAK (mg/m ³)	1800 mg/m ³
Switzerland	MAK (ppm)	600 ppm
Switzerland	KZGW (mg/m ³)	3600 mg/m ³
Switzerland	KZGW (ppm)	1200 ppm
USA - ACGIH	ACGIH TWA (ppm)	1000 ppm

8.2. Exposure controls

Engineering measure(s)

: Provide adequate ventilation. Organisational measures to prevent /limit releases, dispersion and exposure. Safe handling: see section 7 . Use only outdoors or in a well-ventilated area. Store locked up. Handle substance within a closed system. Take precautionary measures against static discharges. Ensure equipment is adequately earthed. Use explosion-proof machinery, apparatus, ventilation facilities, tools etc.

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	: Use suitable eye protection. (EN166): face shield. tightly fitting safety goggles
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 (EN 140). Full face mask (EN 136). Filter type: A (EN 141). The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used. (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.
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	: > 35 - 170 °C
Flash point	: < 21 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable,liquid
Vapour pressure	: 38 - 49 kPa (37.8 °C)
Vapour density	: No data available
Relative density	: No data available
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

Highly flammable liquid and vapour. Reference to other sections: 10.4 & 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 heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Safe handling: see section 7.

10.5. Incompatible materials

Oxidising substances. Safe handling: see section 7.

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.)

butane (containing ≥ 0,1 % butadiene (203-450-8)) (106-97-8)	
LC50/inhalation/4h/rat	658 g/m ³ (Exposure time: 4 h)
Toluene (108-88-3)	
LD50/oral/rat	> 5000 mg/kg
LD50/dermal/rabbit	> 5000 mg/kg
LC50/inhalation/4h/rat	> 20 mg/l
Naphtha (petroleum), isomerization (64741-70-4)	
LD50/oral/rat	> 5000 mg/kg
LD50/dermal/rabbit	> 2000 mg/kg
LC50/inhalation/4h/rat	> 5610 mg/m ³
1,2-dibromoethane (106-93-4)	
LD50/oral/rat	108 mg/kg
LD50/dermal/rat	300 mg/kg
LD50/dermal/rabbit	300 mg/kg
Naphtha (petroleum), full-range alkylate (64741-64-6)	
LD50/oral/rat	> 5000 mg/kg
LD50/dermal/rabbit	> 2000 mg/kg
LC50/inhalation/4h/rat	> 5,61 mg/l/4h

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

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.

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Aspiration hazard	: May be fatal if swallowed and enters airways.
Other adverse effects	: May cause damage to organs through prolonged or repeated exposure. Suspected of damaging fertility. Suspected of damaging the unborn child. May cause cancer. May cause genetic defects.
Other information	: Symptoms related to the physical, chemical and toxicological characteristics. For further information see section 4.

SECTION 12: Ecological information

12.1. Toxicity

Environmental properties : Toxic to aquatic life with long lasting effects.

Toluene (108-88-3)	
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

Isopentane (78-78-4)	
EC50 Daphnia 1	2,3 mg/l (Exposure time: 48 h - Species: Daphnia magna)

Naphtha (petroleum), isomerization (64741-70-4)	
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)

1,2-dibromoethane (106-93-4)	
LC50 fish 1	(96h) 32,1 mg/l <i>Oryzias latipes</i> (Ricefish)
LC50, Minnows	0.036 mg/l (96 hours)
LC50, fish	183 mg/l (48 hours)

Naphtha (petroleum), full-range alkylate (64741-64-6)	
EC50 Daphnia 1	2 mg/l (Exposure time: 48 h - Species: <i>Mysidopsis bahia</i>)
LL50, <i>Pimephales promelas</i> (fathead minnow)	8.2 mg/l (96 hours)
EL50, <i>Daphnia magna</i> (Big water flea)	4.5 mg/l (48 hours, OECD 202)
EL50, <i>Pseudokirchneriella subcapitata</i>	3.1 mg/l (72 hours)

12.2. Persistence and degradability

Unleaded Aviation Gasoline	
Persistence and degradability	No data available.

12.3. Bioaccumulative potential

Unleaded Aviation Gasoline	
Partition coefficient n-octanol/water	NA: UVCB

butane (containing $\geq 0,1$ % butadiene (203-450-8)) (106-97-8)	
Partition coefficient n-octanol/water	2,89

Isopentane (78-78-4)	
Partition coefficient n-octanol/water	3,2 - 3,3

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12.4. Mobility in soil

Unleaded Aviation Gasoline	
Ecology - soil	No data available.

12.5. Results of PBT and vPvB assessment

No data available

12.6. Other adverse effects

Additional information : No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Do not allow to enter into surface water or drains. Dispose of empty containers and wastes safely. Safe handling: see section 7. Refer to manufacturer/supplier for information on recovery/recycling. Recycling is preferred to disposal or incineration. If recycling is not possible, eliminate in accordance with local valid waste disposal regulations.

Additional information : Never use pressure to empty container. Do not pierce or burn, even after use. Handle contaminated packages in the same way as the substance itself. Dispose of contaminated materials in accordance with current regulations.

European waste catalogue (2001/573/EC, 75/442/EEC, 91/689/EEC) : This material and its container must be disposed of as hazardous waste. Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
1268	1268	1268	1268	1268
14.2. UN proper shipping name				
PETROLEUM PRODUCTS, N.O.S. (Naphtha (petroleum), full-range alkylate; Naphtha (petroleum), isomerization)	PETROLEUM DISTILLATES, N.O.S. (Naphtha (petroleum), full-range alkylate; Naphtha (petroleum), isomerization)	Petroleum distillates, n.o.s. (Naphtha (petroleum), full-range alkylate; Naphtha (petroleum), isomerization)	PETROLEUM DISTILLATES, N.O.S. (Naphtha (petroleum), full-range alkylate; Naphtha (petroleum), isomerization)	PETROLEUM DISTILLATES, N.O.S. (Naphtha (petroleum), full-range alkylate; Naphtha (petroleum), isomerization)
Transport document description				
UN 1268 PETROLEUM PRODUCTS, N.O.S. (Naphtha (petroleum), full-range alkylate; Naphtha (petroleum), isomerization), 3, I, (D/E), ENVIRONMENTALLY HAZARDOUS	UN 1268 PETROLEUM DISTILLATES, N.O.S. (Naphtha (petroleum), full-range alkylate; Naphtha (petroleum), isomerization), 3, I, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 1268 Petroleum distillates, n.o.s. (Naphtha (petroleum), full-range alkylate; Naphtha (petroleum), isomerization), 3, I, ENVIRONMENTALLY HAZARDOUS	UN 1268 PETROLEUM DISTILLATES, N.O.S. (Naphtha (petroleum), full-range alkylate; Naphtha (petroleum), isomerization), 3, I, ENVIRONMENTALLY HAZARDOUS	UN 1268 PETROLEUM DISTILLATES, N.O.S. (Naphtha (petroleum), full-range alkylate; Naphtha (petroleum), isomerization), 3, I, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)				
3	3	3	3	3
14.4. Packing group				
I	I	I	I	I

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ADR	IMDG	IATA	ADN	RID
14.5. Environmental hazards				
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

Special precautions for user : No data available

- Overland transport

Classification code (ADR) : F1
 Special provisions : 664
 Limited quantities (ADR) : 500ml
 Excepted quantities (ADR) : E3
 Packing instructions (ADR) : P001
 Mixed packing provisions (ADR) : MP7, MP17
 Portable tank and bulk container instructions (ADR) : T11
 Portable tank and bulk container special provisions (ADR) : TP1, TP8
 Tank code (ADR) : L4BN
 Vehicle for tank carriage : FL
 Transport category (ADR) : 1
 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

Limited quantities (IMDG) : 500 ml
 Excepted quantities (IMDG) : E3
 Packing instructions (IMDG) : P001
 Tank instructions (IMDG) : T11
 Tank special provisions (IMDG) : TP1, TP8
 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) : E3
 PCA Limited quantities (IATA) : Forbidden
 PCA limited quantity max net quantity (IATA) : Forbidden
 PCA packing instructions (IATA) : 351
 PCA max net quantity (IATA) : 1L

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CAO packing instructions (IATA) : 361
 CAO max net quantity (IATA) : 30L
 Special provisions (IATA) : A3
 ERG code (IATA) : 3H

- Inland waterway transport

Classification code (ADN) : F1
 Limited quantities (ADN) : 500 ml
 Excepted quantities (ADN) : E3
 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
 Excepted quantities (RID) : E3
 Packing instructions (RID) : P001
 Mixed packing provisions (RID) : MP7, MP17
 Portable tank and bulk container instructions (RID) : T11
 Portable tank and bulk container special provisions (RID) : TP1, TP8
 Tank codes for RID tanks (RID) : L4BN
 Transport category (RID) : 1
 Hazard identification number (RID) : 33

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

Code: IBC : No data available.

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	Unleaded Aviation Gasoline - Toluene - Naphtha (petroleum), full-range alkylate - 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	Unleaded Aviation Gasoline - Toluene - Naphtha (petroleum), full-range alkylate - 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	Unleaded Aviation Gasoline - Toluene - Naphtha (petroleum), full-range alkylate - 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	Unleaded Aviation Gasoline - Naphtha (petroleum), full-range alkylate - 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	butane (containing $\geq 0,1$ % butadiene (203-450-8)) - Naphtha (petroleum), full-range alkylate - 1,2-dibromoethane - Naphtha (petroleum), isomerization

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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	butane (containing $\geq 0,1$ % butadiene (203-450-8)) - Naphtha (petroleum), full-range alkylate - 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.	Unleaded Aviation Gasoline - butane (containing $\geq 0,1$ % butadiene (203-450-8)) - Toluene - Naphtha (petroleum), full-range alkylate - Isopentane - Naphtha (petroleum), isomerization
48. Toluene	Toluene

Contains no substance on the REACH candidate list

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.		
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), isomerization, 1,2-dibromoethane, Naphtha (petroleum), full-range alkylate are listed

SZW-lijst van mutagene stoffen : Naphtha (petroleum), isomerization, Naphtha (petroleum), full-range alkylate 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

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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	
9		Modified	
14		Modified	
15		Modified	
16		Modified	

Abbreviations and acronyms:

	ABM = Algemene beoordelingsmethodiek
	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
	BTT = Breakthrough time (maximum wearing time)
	DMEL = Derived Minimal Effect level
	DNEL = Derived No Effect Level
	EC50 = Median Effective Concentration
	EL50 = Median effective level
	ErC50 = EC50 in terms of reduction of growth rate
	ErL50 = EL50 in terms of reduction of growth rate
	EWC = European waste catalogue
	LC50 = Median lethal concentration
	LD50 = Median lethal dose
	LL50 = Median lethal level
	NA = Not applicable
	NOEC = No observed effect concentration
	NOEL: no-observed-effect level
	NOELR = No observed effect loading rate
	NOAEC = No observed adverse effect concentration
	NOAEL = No observed adverse effect level
	N.O.S. = Not Otherwise Specified
	OEL = Occupational Exposure Limits - Short Term Exposure Limits (STELs)
	PNEC = Predicted No Effect Concentration
	Quantitative structure-activity relationship (QSAR)
	STOT = Specific Target Organ Toxicity
	TWA = time weighted average
	VOC = Volatile organic compounds
	WGK = Wassergefährdungsklasse (Water Hazard Class under German Federal Water Management Act)

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

Other information : Assessment/classification CLP. Article 9. Calculation method.

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

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 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. 2	Reproductive toxicity, Hazard Category 2
Repr. 2	Reproductive toxicity, Hazard Category 2
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.
H301	Toxic if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H340	May cause genetic defects.
H350	May cause cancer.
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.
H411	Toxic to aquatic life with long lasting effects.
R11	Highly flammable.
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.
R67	Vapours may cause drowsiness and dizziness.
F	Highly flammable
N	Dangerous for the environment

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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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