

SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2015/830

CLEAR LUBE S

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

1.1. Product identifier

Product name : CLEAR LUBE S
Registration number REACH : Not applicable (mixture)
Product type REACH : Mixture

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

1.2.1 Relevant identified uses

Lubricant

1.2.2 Uses advised against

No uses advised against

1.3. Details of the supplier of the safety data sheet

Supplier of the safety data sheet

Novatio*
Industrielaan 5B
B-2250 Olen
☎ +32 14 25 76 40
☎ +32 14 22 02 66
info@novatio.be
*NOVATIO is a registered trademark of Novatech International N.V.

Manufacturer of the product

Novatech International N.V.
Industrielaan 5B
B-2250 Olen
☎ +32 14 85 97 37
☎ +32 14 85 97 38
info@tec7.be

1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch) :
+32 14 58 45 45 (BIG)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Aerosol	category 1	H222: Extremely flammable aerosol.
Aerosol	category 1	H229: Pressurised container: May burst if heated.
Aquatic Chronic	category 3	H412: Harmful to aquatic life with long lasting effects.

2.2. Label elements



Signal word : Danger

H-statements

H222 : Extremely flammable aerosol.
H229 : Pressurised container: May burst if heated.
H412 : Harmful to aquatic life with long lasting effects.

P-statements

P210 : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 : Do not spray on an open flame or other ignition source.
P251 : Do not pierce or burn, even after use.
P273 : Avoid release to the environment.
P410 + P412 : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122°F.

2.3. Other hazards

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Gas/vapour spreads at floor level: ignition hazard

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark
n-hexane	110-54-3 203-777-6	C<5 %	Flam. Liq. 2; H225 Repr. 2; H361f Asp. Tox. 1; H304 STOT RE 2; H373 Skin Irrit. 2; H315 STOT SE 3; H336 Aquatic Chronic 2; H411	(19)(1)(2)(8)(10)	Constituent
hydrocarbons, C6, isoalkanes, <5% n-hexane 01-2119484651-34		C<5 %	Flam. Liq. 2; H225 Asp. Tox. 1; H304 Skin Irrit. 2; H315 STOT SE 3; H336 Aquatic Chronic 2; H411	(19)(1)(10)	Constituent
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics 01-2119475515-33		5%<C<15%	Flam. Liq. 2; H225 Asp. Tox. 1; H304 Skin Irrit. 2; H315 STOT SE 3; H336 Aquatic Chronic 2; H411	(19)(1)(10)	Constituent
propane 01-2119486944-21	74-98-6 200-827-9	15%<C<30%	Flam. Gas 1; H220 Press. Gas - Liquefied gas; H280	(1)(2)(10)	Propellant
butane 01-2119474691-32	106-97-8 203-448-7	C>30 %	Flam. Gas 1; H220 Press. Gas - Liquefied gas; H280	(1)(2)(10)	Propellant

(1) For H-statements in full: see heading 16

(2) Substance with a Community workplace exposure limit

(8) Specific concentration limits, see heading 16

(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

(19) The total concentration of corrosive and irritant substances is lower than that of the classification criterion

SECTION 4: First aid measures

4.1. Description of first aid measures

General:

If you feel unwell, seek medical advice.

After inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

After skin contact:

Rinse with water. Take victim to a doctor if irritation persists.

After eye contact:

Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Take victim to an ophthalmologist if irritation persists.

After ingestion:

Rinse mouth with water. Consult a doctor/medical service if you feel unwell.

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

4.2.1 Acute symptoms

After inhalation:

No effects known.

After skin contact:

No effects known.

After eye contact:

No effects known.

After ingestion:

No effects known.

4.2.2 Delayed symptoms

No effects known.

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

If applicable and available it will be listed below.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media:

Small fire: Quick-acting ABC powder extinguisher, Quick-acting BC powder extinguisher.

5.1.2 Unsuitable extinguishing media:

Small fire: Quick-acting CO2 extinguisher, Water (water can be used to control jet flame), Foam.

Major fire: Water (water can be used to control jet flame), Foam.

5.2. Special hazards arising from the substance or mixture

Upon combustion: CO and CO2 are formed. Pressurised container: May burst if heated.

5.3. Advice for firefighters

5.3.1 Instructions:

If exposed to fire cool the closed containers by spraying with water. Physical explosion risk: extinguish/cool from behind cover. Do not move the load if exposed to heat. After cooling: persistent risk of physical explosion. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.

5.3.2 Special protective equipment for fire-fighters:

Gloves. Protective clothing. Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment.

6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

6.1.2 Protective equipment for emergency responders

Gloves. Protective clothing.

Suitable protective clothing

See heading 8.2

6.2. Environmental precautions

Dam up the liquid spill.

6.3. Methods and material for containment and cleaning up

Take up liquid spill into absorbent material. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections

See heading 13.

SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1. Precautions for safe handling

Use spark-/explosionproof appliances and lighting system. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Gas/vapour heavier than air at 20°C. Observe normal hygiene standards.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

Storage temperature: < 50 °C. Store in a cool area. Protect against frost. Keep out of direct sunlight. Ventilation at floor level. Fireproof storeroom. Meet the legal requirements.

7.2.2 Keep away from:

Heat sources, ignition sources.

7.2.3 Suitable packaging material:

Aerosol.

7.2.4 Non suitable packaging material:

No data available

7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

EU

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n-Hexane	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	20 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	72 mg/m ³

Belgium

Hydrocarbures aliphatiques sous forme gazeuse: (Alcanes C1-C3)	Time-weighted average exposure limit 8 h	1000 ppm
	Short time value	980 ppm
	Short time value	2370 mg/m ³
n-Hexane	Time-weighted average exposure limit 8 h	20 ppm
	Time-weighted average exposure limit 8 h	72 mg/m ³

The Netherlands

n-Hexaan	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	20 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	72 mg/m ³
	Short time value (Public occupational exposure limit value)	40 ppm
	Short time value (Public occupational exposure limit value)	144 mg/m ³

France

n-Butane	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	800 ppm
	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	1900 mg/m ³
n-Hexane	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	20 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	72 mg/m ³

Germany

Butan	Time-weighted average exposure limit 8 h (TRGS 900)	1000 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	2400 mg/m ³
n-Hexan	Time-weighted average exposure limit 8 h (TRGS 900)	50 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	180 mg/m ³
Propan	Time-weighted average exposure limit 8 h (TRGS 900)	1000 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	1800 mg/m ³

UK

Butane	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	600 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	1450 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	750 ppm
	Short time value (Workplace exposure limit (EH40/2005))	1810 mg/m ³
n-Hexane	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	20 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	72 mg/m ³

USA (TLV-ACGIH)

Butane, all isomers	Short time value (TLV - Adopted Value)	1000 ppm
n-Hexane	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	50 ppm

b) National biological limit values

If limit values are applicable and available these will be listed below.

Germany

Hexan (n-Hexan) (2,5-Hexandion plus 4,5-Dihydroxy-2-Hexanon (nach Hydrolyse))	Urin: expositionsende, bzw. schichtende	5 mg/l	5/2013 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG
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USA (BEI-ACGIH)

n-Hexane (2,5-Hexanedion)	Urine: end of shift	0,5 mg/L	
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8.1.2 Sampling methods

Product name	Test	Number
n-Hexane (Hydrocarbons, BP36 to 126C)	NIOSH	1500
n-Hexane (organic and inorganic gases by Extractive FTIR)	NIOSH	3800
n-Hexane (Volatile Organic compounds)	NIOSH	2549
n-Hexane	OSHA	2248
n-Hexane	OSHA	7

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8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

8.1.4 Threshold values

DNEL/DMEL - Workers

n-hexane

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	75 mg/m ³	
	Long-term systemic effects dermal	11 mg/kg bw/day	

hydrocarbons, C6, isoalkanes, < 5% n-hexane

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	5306 mg/m ³	
	Long-term systemic effects dermal	13964 mg/kg bw/day	

hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	2085 mg/m ³	
	Long-term systemic effects dermal	300 mg/kg bw/day	

DNEL/DMEL - General population

n-hexane

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	16 mg/m ³	
	Long-term systemic effects dermal	5.3 mg/kg bw/day	
	Long-term systemic effects oral	4 mg/kg bw/day	

hydrocarbons, C6, isoalkanes, < 5% n-hexane

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	1131 mg/m ³	
	Long-term systemic effects dermal	1377 mg/kg bw/day	
	Long-term systemic effects oral	1301 mg/kg bw/day	

hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	447 mg/m ³	
	Long-term systemic effects dermal	149 mg/kg bw/day	
	Long-term systemic effects oral	149 mg/kg bw/day	

8.1.5 Control banding

If applicable and available it will be listed below.

8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

Use spark-/explosionproof appliances and lighting system. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Measure the concentration in the air regularly.

8.2.2 Individual protection measures, such as personal protective equipment

Observe normal hygiene standards. Do not eat, drink or smoke during work.

a) Respiratory protection:

Full face mask with filter type A at conc. in air > exposure limit.

b) Hand protection:

Protective gloves against chemicals (EN374).

Materials	Measured breakthrough time	Thickness	Protection index
nitrile rubber	> 480 minutes	0.35 mm	Class 6

- materials (good resistance)

Nitrile rubber.

c) Eye protection:

Safety glasses.

d) Skin protection:

Protective clothing.

8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Aerosol
Odour	Characteristic odour
Odour threshold	No data available
Colour	No data available on colour
Particle size	Not applicable (gas)
Explosion limits	1.1 - 9.5 vol %
Flammability	Extremely flammable aerosol.
Log Kow	Not applicable (mixture)
Dynamic viscosity	1 mPa.s ; 20 °C ; Liquid

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Kinematic viscosity	1 mm ² /s ; 20 °C ; Liquid
Melting point	No data available
Boiling point	-140 °C - 95 °C ; Liquid
Evaporation rate	7 ; Butyl acetate
Relative vapour density	> 1
Vapour pressure	8530 hPa ; 20 °C
Solubility	Water ; insoluble
Relative density	0.85 ; 20 °C ; Liquid
Decomposition temperature	No data available
Auto-ignition temperature	No data available
Flash point	No data available
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	No data available

9.2. Other information

Absolute density	852 kg/m ³ ; 20 °C ; Liquid
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SECTION 10: Stability and reactivity

10.1. Reactivity

May be ignited by sparks. Gas/vapour spreads at floor level: ignition hazard.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Precautionary measures

Use spark-/explosionproof appliances and lighting system. Keep away from naked flames/heat. Keep away from ignition sources/sparks.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

Upon combustion: CO and CO₂ are formed.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

11.1.1 Test results

Acute toxicity

CLEAR LUBE S

No (test)data on the mixture available

Judgement is based on the relevant ingredients

n-hexane

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	16000 mg/kg bw		Rat (male / female)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	> 3350 mg/kg bw	4 h	Rabbit (male)	Read-across	
Inhalation (vapours)	LC50	Equivalent to OECD 403	> 5000 ppm	24 h	Rat (male)	Experimental value	

hydrocarbons, C6, isoalkanes, < 5% n-hexane

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	> 16750 mg/kg bw		Rat (male)	Read-across	
Dermal	LD50	Equivalent to OECD 402	> 3350 mg/kg bw	4 h	Rabbit (male)	Read-across	
Inhalation (vapours)	LC50	Equivalent to OECD 403	259.354 mg/l	4 h	Rat (male)	Read-across	

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hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		> 5840 mg/kg bw		Rat (male / female)	Read-across	
Dermal	LD50	Other	> 2800 mg/kg bw	24 h	Rat (male / female)	Read-across	
Inhalation (vapours)	LC50	Equivalent to OECD 403	> 23.3 mg/l air	4 h	Rat (male / female)	Read-across	

Conclusion

Not classified for acute toxicity

Corrosion/irritation

CLEAR LUBE S

No (test) data on the mixture available

Judgement is based on the relevant ingredients

n-hexane

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	Equivalent to OECD 405		72 hours	Rabbit	Read-across	
Skin	Slightly irritating	Equivalent to OECD 404	24 h	24; 72 hours	Rabbit	Read-across	
Skin	Irritating; category 2					Annex VI	

Classification of this substance according to Annex VI is debatable as it does not correspond to the conclusion from the test

hydrocarbons, C6, isoalkanes, < 5% n-hexane

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	Equivalent to OECD 405	72 h	72 hours	Rabbit	Read-across	
Skin	Moderately irritating	OECD 404	4 h	24; 48; 72 hours	Rabbit	Experimental value	

hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating			7 days	Rabbit	Read-across	Single treatment
Skin	Irritating	Equivalent to OECD 404	4 h	24; 48; 72 hours	Rabbit	Read-across	

Conclusion

Not classified as irritating to the skin

Not classified as irritating to the eyes

Not classified as irritating to the respiratory system

Respiratory or skin sensitisation

CLEAR LUBE S

No (test) data on the mixture available

Judgement is based on the relevant ingredients

n-hexane

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Equivalent to OECD 429			Mouse	Read-across	

hydrocarbons, C6, isoalkanes, < 5% n-hexane

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Equivalent to OECD 429			Mouse (male / female)	Read-across	

hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Equivalent to OECD 406		24; 48 hours	Guinea pig (male / female)	Read-across	

Conclusion

Not classified as sensitizing for inhalation

Not classified as sensitizing for skin

Specific target organ toxicity

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No (test)data on the mixture available

Judgement is based on the relevant ingredients

n-hexane

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	Subchronic toxicity test	567 mg/kg bw/day - 1135 mg/kg bw/day		No effect	13 weeks (5 days / week)	Rat (male)	Experimental value
Oral (stomach tube)	LOAEL	Subchronic toxicity test	3956 mg/kg bw/day	Central nervous system	neurotoxic effects	17 weeks (5 days / week)	Rat (male)	Experimental value
Dermal								Data waiving
Inhalation (vapours)	LOAEC	Subchronic toxicity test	3000 ppm	Central nervous system	Impairment of the nervous system	16 weeks (daily)	Rat (male)	Experimental value
Inhalation (vapours)			STOT SE cat.3		Drowsiness, dizziness			Literature study

hydrocarbons, C6, isoalkanes, < 5% n-hexane

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Dermal								Data waiving
Inhalation (vapours)	NOAEC	Equivalent to OECD 413	10504 mg/m ³ air		No effect	13 weeks (6h / day, 5 days / week)	Rat (male)	Read-across
Inhalation (vapours)	LOAEC	Equivalent to OECD 413	31652 mg/m ³ air	Liver; kidney	Organ damage	13 weeks (6h / day, 5 days / week)	Rat (male)	Read-across

hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Inhalation (vapours)	NOAEL	Equivalent to OECD 413	12350 mg/m ³ air		No adverse systemic effects	26 weeks (6h / day, 5 days / week)	Rat (male / female)	Read-across
Inhalation (vapours)	LOAEL	Equivalent to OECD 413	1650 mg/m ³ air	Central nervous system	CNS depression	26 weeks (6h / day, 5 days / week)	Rat (male / female)	Read-across

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

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No (test)data on the mixture available

n-hexane

Result	Method	Test substrate	Effect	Value determination
Negative	OECD 476	Mouse (lymphoma L5178Y cells)	No effect	Experimental value
Negative	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value

hydrocarbons, C6, isoalkanes, < 5% n-hexane

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Read-across

hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	OECD 476	Human lymphocytes	No effect	Read-across

Mutagenicity (in vivo)

CLEAR LUBE S

No (test)data on the mixture available

Judgement is based on the relevant ingredients

n-hexane

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative		8 weeks (6h / day, 5 days / week)	Mouse (male)		Experimental value

hydrocarbons, C6, isoalkanes, < 5% n-hexane

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	Equivalent to OECD 475	5 days (6h / day)	Rat (male / female)	Bone marrow	Experimental value

Conclusion

Not classified for mutagenic or genotoxic toxicity

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Carcinogenicity

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No (test)data on the mixture available

Judgement is based on the relevant ingredients

n-hexane

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation (vapours)	NOAEC	Equivalent to OECD 451	3000 ppm	104 weeks (6h / day, 5 days / week)	Mouse (female)	No carcinogenic effect		Read-across
Inhalation (vapours)	LOAEC	Equivalent to OECD 451	9018 ppm	104 weeks (6h / day, 5 days / week)	Mouse (female)	Tumor formation	Liver	Read-across
Inhalation (vapours)	NOAEC	Equivalent to OECD 451	9018 ppm	104 weeks (6h / day, 5 days / week)	Mouse (male)	No carcinogenic effect		Read-across

hydrocarbons, C6, isoalkanes, < 5% n-hexane

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation (vapours)	NOAEC	Equivalent to OECD 451	9016 ppm	104 weeks (6h / day, 5 days / week)	Rat (male / female)	No carcinogenic effect		Experimental value

hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation								Data waiving
Dermal								Data waiving
Oral								Data waiving

Conclusion

Not classified for carcinogenicity

Reproductive toxicity

CLEAR LUBE S

No (test)data on the mixture available

Judgement is based on the relevant ingredients
n-hexane

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Inhalation (vapours))	NOAEC	Equivalent to OECD 414	9000 ppm	10 days (gestation, 6h / day)	Rat	No effect		Experimental value
Maternal toxicity	NOAEC	Equivalent to OECD 414	3000 ppm	10 days (gestation, 6h / day)	Rat	No effect		Experimental value
Maternal toxicity (Inhalation (vapours))	LOAEL	Equivalent to OECD 414	9000 ppm	10 days (gestation, 6h / day)	Rat	Weight gain		Experimental value
Effects on fertility (Inhalation (vapours))	NOAEC	Equivalent to OECD 416	9000 ppm	≥ 13 weeks (6h / day, 5 days / week)	Rat (male / female)	No effect		Experimental value

Classification of this substance according to Annex VI is debatable as it does not correspond to the conclusion from the test

hydrocarbons, C6, isoalkanes, < 5% n-hexane

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEC	Equivalent to OECD 414	> 7000 ppm	10 days (6h / day)	Rat	No effect		Read-across
Maternal toxicity	NOAEC	Equivalent to OECD 414	2000 ppm	10 days (6h / day)	Rat (female)	No effect		Read-across
Effects on fertility	NOAEC	Equivalent to OECD 416	9000 ppm		Rat (male / female)	No effect		Read-across

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hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL	Equivalent to OECD 414	31680 mg/m ³ air	10 days (6h / day)	Mouse	No effect		Read-across
Maternal toxicity	NOAEL	Equivalent to OECD 414	10560 mg/m ³ air	10 days (6h / day)	Rat (female)	No effect		Read-across
	LOAEL	Equivalent to OECD 414	31680 mg/m ³ air	10 days (6h / day)	Rat (female)	Lung tissue affection/degeneration	Lungs	Read-across
Effects on fertility	NOAEL (P/F1)	Equivalent to OECD 416	31680 mg/m ³ air		Rat (male / female)	No effect		Read-across

Conclusion

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

CLEAR LUBE S

No (test)data on the mixture available

hydrocarbons, C6, isoalkanes, < 5% n-hexane

Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
NOAEC	Equivalent to OECD 424	9000 ppm	Central nervous system	Overall effects	13 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value

Chronic effects from short and long-term exposure

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No effects known.

SECTION 12: Ecological information

12.1. Toxicity

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No (test)data on the mixture available

Classification is based on the relevant ingredients

n-hexane

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LL50		12.51 mg/l	96 h	Oncorhynchus mykiss		Fresh water	Estimated value; Nominal concentration
Acute toxicity crustacea	EL50		21.85 mg/l	48 h	Daphnia magna		Fresh water	Estimated value; Nominal concentration
Toxicity algae and other aquatic plants	EL50		9.285 mg/l	72 h	Pseudokirchneriella subcapitata		Fresh water	Estimated value; Growth rate
Long-term toxicity fish	NOELR		2.8 mg/l	28 day(s)	Oncorhynchus mykiss		Fresh water	Estimated value; Nominal concentration
Long-term toxicity aquatic crustacea	NOELR		4.888 mg/l	21 day(s)	Daphnia magna		Fresh water	Estimated value; Nominal concentration

hydrocarbons, C6, isoalkanes, < 5% n-hexane

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LL50		18.27 mg/l	96 h	Oncorhynchus mykiss		Fresh water	QSAR
Acute toxicity crustacea	EL50		31.9 mg/l	48 h	Daphnia magna		Fresh water	QSAR
Toxicity algae and other aquatic plants	EL50		13.56 mg/l	72 h	Pseudokirchneriella subcapitata		Fresh water	QSAR
Long-term toxicity fish	NOELR		4.089 mg/l	28 day(s)	Oncorhynchus mykiss		Fresh water	QSAR
Long-term toxicity aquatic crustacea	NOELR		7.138 mg/l	21 day(s)	Daphnia magna		Fresh water	QSAR

Classification of this substance is debatable as it does not correspond to the conclusion from the test

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hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LL50	OECD 203	> 13.4 mg/l WAF	96 h	Oncorhynchus mykiss	Semi-static system	Fresh water	Experimental value; Nominal concentration
Acute toxicity crustacea	EL50	OECD 202	3.0 mg/l WAF	48 h	Daphnia magna	Static system	Fresh water	Experimental value; GLP
Toxicity algae and other aquatic plants	EL50	OECD 201	29 mg/l WAF	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; GLP
Long-term toxicity fish	NOELR		1.534 mg/l	28	Oncorhynchus mykiss		Fresh water	QSAR; Nominal concentration
Long-term toxicity aquatic crustacea	NOEC	OECD 211	0.17 mg/l WAF	21 day(s)	Daphnia magna	Static system	Fresh water	Read-across; GLP
	EL50	OECD 211	1.6 mg/l WAF	21 day(s)	Daphnia magna	Static system	Fresh water	Read-across
Toxicity aquatic micro-organisms	EL50		26.81 mg/l	48 h	Tetrahymena pyriformis		Fresh water	QSAR; Growth rate

Conclusion

Harmful to aquatic life with long lasting effects.

12.2. Persistence and degradability

n-hexane

Biodegradation water

Method	Value	Duration	Value determination
OECD 301F: Manometric Respirometry Test	98 %; GLP	28 day(s)	Read-across

Biodegradation soil

Method	Value	Duration	Value determination
			Data waiving

hydrocarbons, C6, isoalkanes, < 5% n-hexane

Biodegradation water

Method	Value	Duration	Value determination
OECD 301F: Manometric Respirometry Test	98 %; GLP	28 day(s)	Read-across

hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Biodegradation water

Method	Value	Duration	Value determination
OECD 301F: Manometric Respirometry Test	98 %; GLP	28 day(s)	Experimental value

Conclusion

Contains readily biodegradable component(s)

12.3. Bioaccumulative potential

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Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

n-hexane

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF	Other	501.187		Pimephales promelas	QSAR

Log Kow

Method	Remark	Value	Temperature	Value determination
Equivalent to OECD 107		4	20 °C	Experimental value

hydrocarbons, C6, isoalkanes, < 5% n-hexane

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		501.187		Pimephales promelas	Calculated value

Log Kow

Method	Remark	Value	Temperature	Value determination
Equivalent to OECD 107		3.6	20 °C	Read-across

hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Log Kow

Method	Remark	Value	Temperature	Value determination
		> 3		

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Conclusion

Contains bioaccumulative component(s)

12.4. Mobility in soil

n-hexane

(log) Koc

Parameter	Method	Value	Value determination
log Koc		3.34	QSAR

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level III	91.6 %	0 %	0.7 %	2.8 %	4.9 %	Calculated value

hydrocarbons, C6, isoalkanes, < 5% n-hexane

(log) Koc

Parameter	Method	Value	Value determination
log Koc		3.34	Calculated value

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level III	93.6 %	0 %	2.1 %	0.5 %	3.8 %	Calculated value

hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level III	96 %	0 %	1.8 %	0.55 %	1.4 %	Calculated value

Conclusion

Contains component(s) that adsorb(s) into the soil

12.5. Results of PBT and vPvB assessment

Due to insufficient data no statement can be made whether the component(s) fulfil(s) the criteria of PBT and vPvB according to Annex XIII of Regulation (EC) No 1907/2006.

12.6. Other adverse effects

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Fluorinated greenhouse gases (Regulation (EU) No 517/2014)

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1. Waste treatment methods

13.1.1 Provisions relating to waste

European Union

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).

16 05 04* (gases in pressure containers and discarded chemicals: gases in pressure containers (including halons) containing hazardous substances).

Depending on branch of industry and production process, also other waste codes may be applicable.

13.1.2 Disposal methods

Refer to manufacturer/supplier for information on recovery/ recycling. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Specific treatment. Do not discharge into drains or the environment.

13.1.3 Packaging/Container

European Union

Waste material code packaging (Directive 2008/98/EC).

15 01 10* (packaging containing residues of or contaminated by dangerous substances).

SECTION 14: Transport information

Road (ADR)

14.1. UN number

UN number	1950
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14.2. UN proper shipping name

Proper shipping name	Aerosols
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14.3. Transport hazard class(es)

Hazard identification number	
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Class	2
Classification code	5F
14.4. Packing group	
Packing group	
Labels	2.1
14.5. Environmental hazards	
Environmentally hazardous substance mark	no
14.6. Special precautions for user	
Special provisions	190
Special provisions	327
Special provisions	344
Special provisions	625
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Rail (RID)

14.1. UN number	
UN number	1950
14.2. UN proper shipping name	
Proper shipping name	Aerosols
14.3. Transport hazard class(es)	
Hazard identification number	23
Class	2
Classification code	5F
14.4. Packing group	
Packing group	
Labels	2.1
14.5. Environmental hazards	
Environmentally hazardous substance mark	no
14.6. Special precautions for user	
Special provisions	190
Special provisions	327
Special provisions	344
Special provisions	625
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Inland waterways (ADN)

14.1. UN number	
UN number	1950
14.2. UN proper shipping name	
Proper shipping name	Aerosols
14.3. Transport hazard class(es)	
Class	2
Classification code	5F
14.4. Packing group	
Packing group	
Labels	2.1
14.5. Environmental hazards	
Environmentally hazardous substance mark	no
14.6. Special precautions for user	
Special provisions	190
Special provisions	327
Special provisions	344
Special provisions	625
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Sea (IMDG/IMSBC)

14.1. UN number	
UN number	1950
14.2. UN proper shipping name	
Proper shipping name	Aerosols
14.3. Transport hazard class(es)	
Class	2.1
14.4. Packing group	
Packing group	
Labels	2.1
14.5. Environmental hazards	
Marine pollutant	-
Environmentally hazardous substance mark	no

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14.6. Special precautions for user

Special provisions	63
Special provisions	190
Special provisions	277
Special provisions	327
Special provisions	344
Special provisions	381
Special provisions	959
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Annex II of MARPOL 73/78	Not applicable
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Air (ICAO-TI/IATA-DGR)

14.1. UN number

UN number	1950
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14.2. UN proper shipping name

Proper shipping name	Aerosols, flammable
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14.3. Transport hazard class(es)

Class	2.1
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14.4. Packing group

Packing group	
Labels	2.1

14.5. Environmental hazards

Environmentally hazardous substance mark	no
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14.6. Special precautions for user

Special provisions	A145
Special provisions	A167
Special provisions	A802

Passenger and cargo transport

Limited quantities: maximum net quantity per packaging	30 kg G
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SECTION 15: Regulatory information

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

European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
67.00 %	
445.649 g/l	

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

	Designation of the substance, of the group of substances or of the mixture	Conditions of restriction
<ul style="list-style-type: none"> n-hexane hydrocarbons, C6, isoalkanes, < 5% n-hexane hydrocarbons, C7, n-alkanes, isoalkanes, cyclics 	<p>Liquid 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:</p> <p>(a) 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;</p> <p>(b) 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;</p> <p>(c) hazard class 4.1;</p> <p>(d) hazard class 5.1.</p>	<p>1. Shall not be used in:</p> <ul style="list-style-type: none"> — ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, — tricks and jokes, — games for one or more participants, or any article intended to be used as such, even with ornamental aspects, <p>2. Articles not complying with paragraph 1 shall not be placed on the market.</p> <p>3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:</p> <ul style="list-style-type: none"> — can be used as fuel in decorative oil lamps for supply to the general public, and, — present an aspiration hazard and are labelled with H304, <p>4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).</p> <p>5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:</p> <p>a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil — or even sucking the wick of lamps — may lead to life-threatening lung damage";</p> <p>b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: "Just a sip of grill lighter may lead to life threatening lung damage";</p> <p>c) lamp oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.</p> <p>6. No later than 1 June 2014, the Commission shall request the European Chemicals</p>

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		Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled H304, intended for supply to the general public. 7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.'
· n-hexane · hydrocarbons, C6, isoalkanes, < 5% n-hexane · hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	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 that Regulation or not.	1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following: — metallic glitter intended mainly for decoration, — artificial snow and frost, — “whoopie” cushions, — silly string aerosols, — imitation excrement, — horns for parties, — decorative flakes and foams, — artificial cobwebs, — stink bombs. 2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with: “For professional users only”. 3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/ 324/EEC. 4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.

National legislation Belgium

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No data available

National legislation The Netherlands

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Waterbezwaarlijkheid	Z (2); Algemene Beoordelingsmethodiek (ABM)
n-hexane	
SZW - Lijst van voor de voortplanting giftige stoffen (vruchtbaarheid)	n-Hexaan; 2; Suspected of damaging fertility.

National legislation France

CLEAR LUBE S

No data available

n-hexane

Catégorie toxique pour la reproduction	n-Hexane; R2
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National legislation Germany

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WGK	2; Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) - 18. April 2017
n-hexane	
TA-Luft	5.2.5/I
TRGS900 - Risiko der Fruchtschädigung	n-Hexan; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden
hydrocarbons, C6, isoalkanes, < 5% n-hexane	
TA-Luft	5.2.5/I
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	
TA-Luft	5.2.5/I

National legislation United Kingdom

CLEAR LUBE S

No data available

Other relevant data

CLEAR LUBE S

No data available

n-hexane

Skin absorption	n-Hexane; Skin; Danger of cutaneous absorption
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15.2. Chemical safety assessment

No chemical safety assessment has been conducted for the mixture.

CLEAR LUBE S

SECTION 16: Other information

Full text of any H-statements referred to under heading 3:

H220 Extremely flammable gas.
H222 Extremely flammable aerosol.
H225 Highly flammable liquid and vapour.
H229 Pressurised container: May burst if heated.
H280 Contains gas under pressure; may explode if heated.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H361f Suspected of damaging fertility.
H373 May cause damage to organs (central nervous system) through prolonged or repeated exposure if inhaled.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

(*)	INTERNAL CLASSIFICATION BY BIG
ADI	Acceptable daily intake
AOEL	Acceptable operator exposure level
CLP (EU-GHS)	Classification, labelling and packaging (Globally Harmonised System in Europe)
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
EC50	Effect Concentration 50 %
ErC50	EC50 in terms of reduction of growth rate
LC50	Lethal Concentration 50 %
LD50	Lethal Dose 50 %
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent, Bioaccumulative & Toxic
PNEC	Predicted No Effect Concentration
STP	Sludge Treatment Process
vPvB	very Persistent & very Bioaccumulative

Specific concentration limits CLP

n-hexane	C ≥ 5 %	STOT RE 2; H373	CLP Annex VI (ATP 0)
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The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.