Safety Data Sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)

Transition document following GB exit from the EU

CyclOn Wet Spray

Version number: 1.0 Date of compilation: 2023-07-19

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

1.1 Product identifier

Trade name **CyclOn Wet Spray**

Unique formula identifier (UFI) EK50-P0FY-900T-P3HW

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

Relevant identified uses Lubricant
Professional use
Consumer use

1.3 Details of the supplier of the safety data sheet

CyclOn B.V.
Scheltseweg 4c
5374 EB Schaijk
Netherlands

Telephone: (+31) 085 0204 122
e-mail: sales@cyclon.nl
Website: www.cyclon.nl

e-mail (competent person) sales@cyclon.nl

1.4 Emergency telephone number

Emergency information service (+31) 085 0204 122
This number is only available during the following office hours: Mon-Fri 09:00 - 16:30

Poison centre

Country	Name	Telephone
United Kingdom	National Poisons Information Service (NPIS)	0344-8920111 (medical professionals only)
United Kingdom	NHS (general public)	non-emergency: 111 or a doctor; emergency: 999

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (acc. to GB CLP)

Section	Hazard class	Category	Hazard class and category	Hazard statement
2.3	aerosols	1	Aerosol 1	H222,H229
3.2	skin corrosion/irritation	2	Skin Irrit. 2	H315
3.8D	specific target organ toxicity - single exposure (narcotic effects, drowsiness)	3	STOT SE 3	H336
4.1C	hazardous to the aquatic environment - chronic hazard	2	Aquatic Chronic 2	H411

For full text of H-phrases: see SECTION 16

Code	Supplemental hazard information
EUH208	contains . May produce an allergic reaction

The most important adverse physicochemical, human health and environmental effects

Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

Labelling (acc. to GB CLP)

- signal word Danger

- pictograms

GHS02, GHS07, GHS09

- hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

- precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
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.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P312	Call a POISON CENTRE/doctor if you feel unwell.
P391	Collect spillage.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

- supplemental hazard information

EUH208 Contains . May produce an allergic reaction.

- hazardous ingredients for labelling

Contains: Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics; Hydrocarbons, C6, isoalkanes, <5% n-hexane.

Additional labelling according to Directive 75/324/EEC relating to aerosol dispensers

Extremely flammable. Keep out of reach of children. Pressurized container: may burst if heated. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not pierce or burn, even after use. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

2.3 Other hazards

There is no additional information.

Results of PBT and vPvB assessment

Does not contain any substances that are assessed to be PBT or vPvB ≥ 0.1%.

Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of ≥ 0.1%.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture).

3.2 Mixtures

The product does not contain (other) ingredients which are classified according to present knowledge of the supplier and contribute to the classification of the product and hence require reporting in this section.

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
Butane	CAS No 106-97-8 EC No 203-448-7 Index No 601-004-00-0	≤ 40	Flam. Gas 1A / H220 Press. Gas C / H280		C U
Propane	CAS No 74-98-6 EC No 200-827-9 Index No 601-003-00-5	≤ 20	Flam. Gas 1A / H220 Press. Gas C / H280		U(b)
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	EC No 927-510-4	≤ 20	Flam. Liq. 2 / H225 Skin Irrit. 2 / H315 STOT SE 3 / H336 Asp. Tox. 1 / H304 Aquatic Chronic 2 / H411		
Hydrocarbons, C6, isoalkanes, <5% n-hexane	EC No 931-254-9	≤ 20	Flam. Liq. 2 / H225 Skin Irrit. 2 / H315 STOT SE 3 / H336 Asp. Tox. 1 / H304 Aquatic Chronic 2 / H411		
n-hexane	CAS No 110-54-3 EC No 203-777-6 Index No 601-037-00-0	≤ 0.7	Flam. Liq. 2 / H225 Skin Irrit. 2 / H315 Repr. 2 / H361f STOT SE 3 / H336 STOT RE 1 / H372 Asp. Tox. 1 / H304 Aquatic Chronic 2 / H411		
Cyclohexane; Hexahydrobenzene	CAS No 110-82-7 EC No 203-806-2 Index No 601-017-00-1	≤ 0.2	Flam. Liq. 2 / H225 Skin Irrit. 2 / H315 STOT SE 3 / H336 Asp. Tox. 1 / H304 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410		

Notes

C: Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

U(b): The allocation to the group 'compressed gas' is based on the physical state in which the gas is packaged

U: When put on the market gases have to be classified as 'Gases under pressure', in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case.

Name of sub-stance	Identifier	Specific Conc. Limits	M-Factors	ATE	Exposure route
n-hexane	CAS No 110-54-3 EC No 203-777-6	STOT RE 2; H373: C ≥ 5 %	-	-	

Remarks

All the percentages given are percentages by weight unless stated otherwise. For full text of H-phrases: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. In case of unconsciousness place person in the recovery position. Never give anything by mouth. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

Provide fresh air. If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician.

Following skin contact

Wash with plenty of soap and water. Call a POISON CENTER/doctor.

Following eye contact

Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Call a POISON CENTER or doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Narcotic effects.

4.3 Indication of any immediate medical attention and special treatment needed

For specialist advice physicians should contact the poison centre.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray; Dry extinguishing powder;
Co-ordinate firefighting measures to the fire surroundings.

Unsuitable extinguishing media

Water jet.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

During fire hazardous fumes/smoke could be produced.

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

Self-contained breathing apparatus (SCBA). Standard protective clothing for firefighters.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety. Ventilate affected area.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases. Use personal protective equipment as required.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas. Ground/bond container and receiving equipment.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- flammability hazards

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Do not spray on an open flame or other ignition source. Protect from sunlight.

- incompatible substances or mixtures

Keep away from alkalis, oxidising substances, acids.

Control of effects

Protect against external exposure, such as

High temperatures. UV-radiation/sunlight.

Consideration of other advice

Store in a well-ventilated place. Keep container tightly closed.

- packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

7.3 Specific end use(s)

There is no additional information.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Notation	Source
GB	butane	106-97-8	WEL	600	1,450	750	1,810		EH40/2005
GB	n-hexane	110-54-3	WEL	20	72				EH40/2005
GB	cyclohexane	110-82-7	WEL	100	350	300	1,050		EH40/2005

Notation

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs/DMELs/PNECs and other threshold levels

Relevant DNELs of components of the mixture

Name of substance	EC No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	DNEL	2,085 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	DNEL	300 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	DNEL	447 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	DNEL	149 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	DNEL	149 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects

Relevant DNELs of components of the mixture

Name of substance	EC No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Hydrocarbons, C6, isoalkanes, <5% n-hexane	931-254-9	DNEL	5,306 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Hydrocarbons, C6, isoalkanes, <5% n-hexane	931-254-9	DNEL	13,964 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Hydrocarbons, C6, isoalkanes, <5% n-hexane	931-254-9	DNEL	1,131 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects
Hydrocarbons, C6, isoalkanes, <5% n-hexane	931-254-9	DNEL	1,377 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
Hydrocarbons, C6, isoalkanes, <5% n-hexane	931-254-9	DNEL	1,301 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects
n-hexane	203-777-6	DNEL	75 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
n-hexane	203-777-6	DNEL	11 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
n-hexane	203-777-6	DNEL	16 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects
n-hexane	203-777-6	DNEL	5.3 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
n-hexane	203-777-6	DNEL	4 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects
Cyclohexane; Hexahydrobenzene	203-806-2	DNEL	700 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Cyclohexane; Hexahydrobenzene	203-806-2	DNEL	1,400 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
Cyclohexane; Hexahydrobenzene	203-806-2	DNEL	700 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
Cyclohexane; Hexahydrobenzene	203-806-2	DNEL	1,400 mg/m³	human, inhalatory	worker (industry)	acute - local effects
Cyclohexane; Hexahydrobenzene	203-806-2	DNEL	2,016 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Cyclohexane; Hexahydrobenzene	203-806-2	DNEL	206 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects
Cyclohexane; Hexahydrobenzene	203-806-2	DNEL	412 mg/m³	human, inhalatory	consumer (private households)	acute - systemic effects
Cyclohexane; Hexahydrobenzene	203-806-2	DNEL	206 mg/m³	human, inhalatory	consumer (private households)	chronic - local effects
Cyclohexane; Hexahydrobenzene	203-806-2	DNEL	412 mg/m³	human, inhalatory	consumer (private households)	acute - local effects
Cyclohexane; Hexahydrobenzene	203-806-2	DNEL	1,186 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects

Relevant DNELs of components of the mixture

Name of substance	EC No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Cyclohexane; Hexahydrobenzene	203-806-2	DNEL	59.4 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects

Relevant PNECs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
Cyclohexane; Hexahydrobenzene	110-82-7	PNEC	44.7 µg/l	aquatic organisms	freshwater	short-term (single instance)
Cyclohexane; Hexahydrobenzene	110-82-7	PNEC	4.47 µg/l	aquatic organisms	marine water	short-term (single instance)
Cyclohexane; Hexahydrobenzene	110-82-7	PNEC	3.24 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Cyclohexane; Hexahydrobenzene	110-82-7	PNEC	3.6 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Cyclohexane; Hexahydrobenzene	110-82-7	PNEC	0.36 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Cyclohexane; Hexahydrobenzene	110-82-7	PNEC	0.694 mg/kg	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation. Provide eyewash stations and safety showers at the workplace.

Individual protection measures (personal protective equipment)

Eye/face protection

Use safety goggle with side protection

Skin protection

Chemical protective clothing.

- hand protection

Wear suitable gloves. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- type of material

Nitrile rubber

- material thickness

Use gloves with a minimum material thickness: ≥ 0,38 mm.

- breakthrough time of the glove material

Use gloves with a minimum breakthrough time of the glove material: >480 minutes (permeation: level 6).

- other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

During spraying wear suitable respiratory equipment. In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Take appropriate precautions to avoid uncontrolled release into the environment. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid, solid, gaseous (spray aerosol)
Colour	brown
Odour	characteristic
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	-42 – 95 °C
Flammability	flammable aerosol in accordance with GHS criteria
Lower and upper explosion limit	LEL: 1.1 vol% / UEL: 6.5 vol%
Flash point	-20 °C (fluid) calculated value
Auto-ignition temperature	365 °C (auto-ignition temperature (liquids and gases))
Decomposition temperature	no data available
pH (value)	it is not technically possible to generate the data: aprotic
Kinematic viscosity	1 mm^2/s at 40 °C
Solubility	not determined

Partition coefficient n-octanol/water (log value)	this information is not available

Vapour pressure	25 kPa at 20 °C calculated value, referring to a component of the mixture

Density and/or relative density

Density	0.91 $^{kg}/_{l}$
Relative vapour density	information on this property is not available

Particle characteristics	not relevant (aerosol)

9.2 Other information

There is no additional information.

Information with regard to physical hazard classes

Aerosols

- components (flammable)	99.61 %

Other safety characteristics

Propellant content	59.23 %

SECTION 10: Stability and reactivity

10.1 Reactivity

The mixture contains reactive substance(s). Risk of ignition.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Do not spray on an open flame or other ignition source. Keep away from heat.

Hints to prevent fire or explosion

Protect from sunlight.

10.5 Incompatible materials

Oxidisers.

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to GHS

Acute toxicity

Shall not be classified as acutely toxic.

- acute toxicity of components of the mixture

Acute toxicity of components of the mixture

Name of substance	Exposure route	Endpoint	Value	Species
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	inhalation: vapour	LC50	>23.3 $^{mg}/_{l}$/4h	rat
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	dermal	LD50	>2,800 – 3,100 $^{mg}/_{kg}$	rat
Cyclohexane; Hexahydrobenzene	oral	LD50	>5,000 $^{mg}/_{kg}$	rat
Cyclohexane; Hexahydrobenzene	inhalation: vapour	LC50	>32,880 $^{mg}/_{m^3}$/4h	rat
Cyclohexane; Hexahydrobenzene	dermal	LD50	>2,000 $^{mg}/_{kg}$	rabbit

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Contains . May produce an allergic reaction.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

11.2 Information on other hazards

Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of ≥ 0.1%.

SECTION 12: Ecological information

12.1 Toxicity

Toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Butane	106-97-8	LC50	49.9 mg/l	fish	96 h
Butane	106-97-8	EC50	19.37 mg/l	algae	96 h
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		LL50	>13.4 mg/l	fish	96 h
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		EL50	12 mg/l	aquatic invertebrates	24 h
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		EC50	0.64 mg/l	aquatic invertebrates	48 h
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		NOELR	3 mg/l	algae	24 h
Propane	74-98-6	LC50	49.9 mg/l	fish	96 h
Propane	74-98-6	EC50	19.37 mg/l	algae	96 h
Hydrocarbons, C6, isoalkanes, <5% n-hexane		LL50	18.27 mg/l	fish	96 h
Hydrocarbons, C6, isoalkanes, <5% n-hexane		EL50	31.9 mg/l	aquatic invertebrates	48 h
Hydrocarbons, C6, isoalkanes, <5% n-hexane		NOELR	3.034 mg/l	algae	72 h
n-hexane	110-54-3	LL50	12.51 mg/l	fish	96 h
n-hexane	110-54-3	EL50	21.85 mg/l	aquatic invertebrates	48 h
n-hexane	110-54-3	NOELR	2.077 mg/l	algae	72 h
Cyclohexane; Hexahydrobenzene	110-82-7	LC50	4.53 mg/l	fish	96 h
Cyclohexane; Hexahydrobenzene	110-82-7	EL50	2.331 mg/l	fish	72 h
Cyclohexane; Hexahydrobenzene	110-82-7	EC50	0.9 mg/l	aquatic invertebrates	48 h
Cyclohexane; Hexahydrobenzene	110-82-7	ErC50	9.317 mg/l	algae	72 h
Cyclohexane; Hexahydrobenzene	110-82-7	LL50	35.61 mg/l	microorganisms	72 h
Cyclohexane; Hexahydrobenzene	110-82-7	NOEC	0.952 mg/l	algae	72 h
Cyclohexane; Hexahydrobenzene	110-82-7	growth (EbCx) 10%	6.821 mg/l	microorganisms	72 h

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		EL50	1.6 mg/l	aquatic invertebrates	21 d
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		EC50	0.23 mg/l	aquatic invertebrates	21 d

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		NOELR	1.534 mg/l	fish	28 d
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		NOEC	0.17 mg/l	aquatic invertebrates	21 d
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		LOEC	0.32 mg/l	aquatic invertebrates	21 d
Hydrocarbons, C6, isoalkanes, <5% n-hexane		NOELR	4.089 mg/l	fish	28 d
n-hexane	110-54-3	EL50	>1,000 mg/l	microorganisms	15 h
n-hexane	110-54-3	NOELR	2.8 mg/l	fish	28 d

12.2 Persistence and degradability

Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time	Method
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		oxygen depletion	83 %	16 d	
Hydrocarbons, C6, isoalkanes, <5% n-hexane		oxygen depletion	83 %	10 d	
n-hexane	110-54-3	oxygen depletion	83 %	10 d	
Cyclohexane; Hexahydrobenzene	110-82-7	oxygen depletion	77 %	28 d	

12.3 Bioaccumulative potential

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW	BOD5/COD
Butane	106-97-8		1.09 (pH value: 7, 20 °C)	
Propane	74-98-6		2.31 (pH value: 7, 20 °C)	
Hydrocarbons, C6, isoalkanes, <5% n-hexane		501.2	3.6 (pH value: 7, 20 °C)	
n-hexane	110-54-3	≥26.26 – ≤316	4 (pH value: 7, 20 °C)	
Cyclohexane; Hexahydrobenzene	110-82-7	167	3.44 (pH value: 7, 25 °C)	

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Does not contain any substances that are assessed to be PBT or vPvB ≥ 0.1%.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of ≥ 0.1%.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number

ADR/RID	UN 1950
IMDG-Code	UN 1950
ICAO-TI	UN 1950

14.2 UN proper shipping name

ADR/RID	AEROSOLS flammable
IMDG-Code	AEROSOLS
ICAO-TI	Aerosols, flammable

14.3 Transport hazard class(es)

ADR/RID	2 (2.1)
IMDG-Code	2.1
ICAO-TI	2.1

14.4 Packing group

not assigned

14.5 Environmental hazards

hazardous to the aquatic environment

Environmentally hazardous substance (aquatic environment): Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

14.7 Maritime transport in bulk according to IMO instruments

No data available.

Information for each of the UN Model Regulations

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) - additional information

Classification code	5F
Danger label(s)	2.1, fish and tree

Environmental hazards	yes (hazardous to the aquatic environment)
Special provisions (SP)	190, 327, 344, 625
Excepted quantities (EQ)	E0
Limited quantities (LQ)	1 L
Transport category (TC)	2
Tunnel restriction code (TRC)	D

Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) - additional information

Classification code	5F
Danger label(s)	2.1, fish and tree

Environmental hazards	yes (hazardous to water)
Special provisions (SP)	190, 327, 344, 625
Excepted quantities (EQ)	E0
Limited quantities (LQ)	1 L
Transport category (TC)	2
Hazard identification No	23

International Maritime Dangerous Goods Code (IMDG) - additional information

Marine pollutant	yes (hazardous to the aquatic environment)
Danger label(s)	2.1, fish and tree

Special provisions (SP)	63, 190, 277, 327, 344, 381, 959
Excepted quantities (EQ)	E0
Limited quantities (LQ)	1 L
EmS	F-D, S-U
Stowage category	-

International Civil Aviation Organization (ICAO-IATA/DGR) - additional information

Environmental hazards	yes (hazardous to the aquatic environment)
Danger label(s)	2.1

Special provisions (SP)	A145, A167

Excepted quantities (EQ)	E0
Limited quantities (LQ)	30 kg

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Seveso Directive

2012/18/EU (Seveso III)

No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements		Notes
P3a	flammable aerosols (containing Flam. Gas or Flam. Liq., cat. 1)	150	500	46)

Notation

46) 'flammable' aerosols category 1 or 2, containing flammable gases category 1 or 2 or flammable liquids category 1
Note: qualifying quantity = net

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

None of the ingredients are listed.

Water Framework Directive (WFD)

List of pollutants (WFD)

Name of substance	Name acc. to inventory	CAS No	Listed in	Remarks
n-hexane	Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment		a)	
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment		a)	

Legend

A) Indicative list of the main pollutants

Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors, amending Regulation (EC) No 1907/2006 and repealing Regulation (EU) No 98/2013

None of the ingredients are listed.

Regulation on persistent organic pollutants (POP)

None of the ingredients are listed.

National regulations (GB)

List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

none of the ingredients are listed

Restrictions according to GB REACH, Annex 17

Dangerous substances with restrictions (GB REACH, Annex 17)

Name	Name acc. to inventory	Conditions of restriction	No
Butane	flammable / pyrophoric	R40	40
Propane	flammable / pyrophoric	R40	40
n-hexane	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC	R3	3
n-hexane	flammable / pyrophoric	R40	40
Cyclohexane; Hexahydrobenzene	Cyclohexane	R57	57
Cyclohexane; Hexahydrobenzene	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC	R3	3
Cyclohexane; Hexahydrobenzene	flammable / pyrophoric	R40	40
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC	R3	3
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	flammable / pyrophoric	R40	40
Hydrocarbons, C6, isoalkanes, <5% n-hexane	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC	R3	3
Hydrocarbons, C6, isoalkanes, <5% n-hexane	flammable / pyrophoric	R40	40

Legend

R3

1. Shall not be used in:
— 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,
2. Articles not complying with paragraph 1 shall not be placed on the market.
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:
— can be used as fuel in decorative oil lamps for supply to the general public, and,
— present an aspiration hazard and are labelled with R65 or H304,
4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the British Standard Specification on Decorative oil lamps (BS EN 14059) adopted by the British Standards Institute.
5. Without prejudice to the implementation of other legislation 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:
(a) lamp oils, labelled with R65 or 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';
(b) grill lighter fluids, labelled with R65 or 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';
(c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.
7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the Agency.

Legend

R40 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,
— 'whoopee' 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 legislation 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.
(***) OJ L 147, 9.6.1975, p. 40.

R57 1. Shall not be placed on the market for the first time after 27 June 2010 for supply to the general public, as a constituent of neoprene-based contact adhesives in concentrations equal to or greater than 0.1 % by weight in package sizes greater than 350 g.
2. Neoprene-based contact adhesives containing cyclohexane and not conforming to paragraph 1 shall not be placed on the market for supply to the general public after 27 December 2010.
3. Without prejudice to other legislation concerning the classification, packaging and labelling of substances and mixtures, suppliers shall ensure before the placing on the market that neoprene-based contact adhesives containing cyclohexane in concentrations equal to or greater than 0.1 % by weight that are placed on the market for supply to the general public after 27 December 2010 are visibly, legibly and indelibly marked as follows:
— This product is not to be used under conditions of poor ventilation.
— This product is not to be used for carpet laying.'

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
Asp. Tox.	Aspiration hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
COD	Chemical oxygen demand
DGR	Dangerous Goods Regulations (see IATA/DGR)
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval

Abbr.	Descriptions of used abbreviations
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/)
EINECS	European Inventory of Existing Commercial Chemical Substances
EL50	Effective Loading 50 %: the EL50 corresponds to the loading rate required to produce a response in 50% of the test organisms
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Flam. Gas	Flammable gas
Flam. Liq.	Flammable liquid
GB CLP	The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/720 (as amended)
GB REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LEL	Lower explosion limit (LEL)
LL50	Lethal Loading 50 %: the LL50 corresponds to the loading rate causing 50 % lethality
LOEC	Lowest Observed Effect Concentration
log KOW	n-Octanol/water
NLP	No-Longer Polymer
NOEC	No Observed Effect Concentration
NOELR	No Observed Effect Loading Rate
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
Press. Gas	Gas under pressure

Abbr.	Descriptions of used abbreviations
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
Repr.	Reproductive toxicity
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure
TWA	Time-weighted average
UEL	Upper explosion limit (UEL)
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

Key literature references and sources for data

The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended). The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/720 (as amended). GB mandatory classification and labelling.

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.
Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
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.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Code	Text
H411	Toxic to aquatic life with long lasting effects.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.