Safety data sheet according to Regulation (EC) No 1907/2006, Annex II (last amended by Regulation (EU) 2020/878)

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

1.1 Product identifier

Motorbike Kettenspray

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

Relevant identified uses of the substance or mixture:

Lubricant

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

GB

LIQUI MOLY GmbH
Jerg-Wieland-Str. 4
89081 Ulm-Lehr
Tel.: (+49) 0731-1420-0
Fax: (+49) 0731-1420-88

LIQUI MOLY UK
1310 Solihull Parkway
Birmingham Business Park
B37 7YB Solihull
Tel: +44 121 796 5365

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

1.4 Emergency telephone number

Emergency information services / official advisory body:

GB

Landspitali- The National University Hospital of Iceland, tel. +354 543 2222 or 112 (valid only for Iceland)

Telephone number of the company in case of emergencies:

+49 (0) 700 / 24 112 112 (LMR)
+1 872 5888271 (LMR)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008 (CLP)

Hazard class	Hazard category	Hazard statement
Skin Irrit.	2	H315-Causes skin irritation.
Asp. Tox.	1	H304-May be fatal if swallowed and enters airways.
STOT SE	3	H336-May cause drowsiness or dizziness.
Aquatic Chronic	2	H411-Toxic to aquatic life with long lasting effects.
Aerosol	1	H222-Extremely flammable aerosol.

Aerosol	1	H229-Pressurised container: May burst if heated.

2.2 Label elements
Labeling according to Regulation (EC) 1272/2008 (CLP)



Danger

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

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. P261-Avoid breathing vapours or spray. P273-Avoid release to the environment. P280-Wear protective gloves.
P312-Call a POISON CENTRE / doctor if you feel unwell.
P405-Store locked up. P410+P412-Protect from sunlight. Do not expose to temperatures exceeding 50 °C.
P501-Dispose of contents / container to an approved waste disposal facility.

EUH208-Contains Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogene dithiophosphate, Methyl salicylate. May produce an allergic reaction.

Without adequate ventilation, formation of explosive mixtures may be possible.
Pentane
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane

2.3 Other hazards
The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).
The mixture contains a PBT substance (PBT = persistent, bioaccumulative, toxic).
The mixture does not contain any substance with endocrine disrupting properties (< 0,1 %).

SECTION 3: Composition/information on ingredients

Aerosol

3.1 Substances
n.a.

3.2 Mixtures

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	
Registration number (REACH)	01-2119475514-35-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	921-024-6
CAS	---
content %	25-<50
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

Pentane	**Substance for which an EU exposure limit value applies.**

Registration number (REACH)	01-2119459286-30-XXXX
Index	601-006-00-1
EINECS, ELINCS, NLP, REACH-IT List-No.	203-692-4
CAS	109-66-0
content %	10-<20
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	EUH066 Flam. Liq. 1, H224 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

n-Hexane (Contamination in named hydrocarbon mixture(s))	**SVHC-substance**
Registration number (REACH)	---
Index	
EINECS, ELINCS, NLP, REACH-IT List-No.	203-777-6
CAS	110-54-3
content %	<2
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	---

Methyl salicylate	
Registration number (REACH)	01-2119515671-44-XXXX
Index	607-749-00-8
EINECS, ELINCS, NLP, REACH-IT List-No.	204-317-7
CAS	119-36-8
content %	0,1-<1
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Acute Tox. 4, H302 Eye Dam. 1, H318 Skin Sens. 1B, H317 Repr. 2, H361d Aquatic Chronic 3, H412
Specific Concentration Limits and ATE	ATE (oral): 890 mg/kg

O,O,O-triphenyl phosphorothioate	**PBT-substance** **SVHC-substance**
Registration number (REACH)	01-2119979545-21-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	209-909-9
CAS	597-82-0
content %	0,1-<1
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Aquatic Chronic 1, H410 (M=10)

Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogene dithiophosphate	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	947-946-9
CAS	---
content %	0,1-<1
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Chronic 4, H413

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	
Registration number (REACH)	01-2119491299-23-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	270-128-1
CAS	68411-46-1
content %	0,1-<1
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Repr. 2, H361f Aquatic Chronic 3, H412

Impurities, test data and additional information may have been taken into account in classifying and labelling the product.
For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.

The substances named in this section are given with their actual, appropriate classification!
For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.
The addition of the highest concentrations listed here can result in a classification. Only when this classification is listed in Section 2 does it apply. In all other cases the total concentration is below the classification.

SECTION 4: First aid measures

4.1 Description of first aid measures
First-aiders should ensure they are protected!
Never pour anything into the mouth of an unconscious person!

Inhalation
Remove person from danger area.
Supply person with fresh air and consult doctor according to symptoms.
If the person is unconscious, place in a stable side position and consult a doctor.

Skin contact
Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.

Eye contact
Remove contact lenses.
Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

Ingestion
Typically no exposure pathway.
Rinse the mouth thoroughly with water.
Do not induce vomiting. Consult doctor immediately.
Danger of aspiration.
In case of vomiting, keep head low so that the stomach content does not reach the lungs.

4.2 Most important symptoms and effects, both acute and delayed
If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.
In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.
headaches
dizziness
mental confusion
Coordination disorders
reddening of the skin
Dermatitis (skin inflammation)
Allergic reaction
Ingestion:
nausea
vomiting
Danger of aspiration.
oedema of the lungs
Chemical pneumonitis (condition similar to pneumonia)

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

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media
Water jet spray/foam/CO2/dry extinguisher
Unsuitable extinguishing media
High volume water jet

5.2 Special hazards arising from the substance or mixture
In case of fire the following can develop:
Oxides of carbon
Oxides of sulphur
Toxic gases
Danger of bursting (explosion) when heated

Possible build up of explosive/highly flammable vapour/air mixture.

5.3 Advice for firefighters

For personal protective equipment see Section 8.
In case of fire and/or explosion do not breathe fumes.
Protective respirator with independent air supply.
According to size of fire
Full protection, if necessary.
Cool container at risk with water.
Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

In case of spillage or accidental release, wear personal protective equipment as specified in section 8 to prevent contamination.
Ensure sufficient ventilation, remove sources of ignition.
Avoid dust formation with solid or powder products.
Leave the danger zone if possible, use existing emergency plans if necessary.
Avoid inhalation, and contact with eyes or skin.

6.1.2 For emergency responders

See section 8 for suitable protective equipment and material specifications.

6.2 Environmental precautions

Prevent penetration into drains, cellars, working pits or other places in which accumulation could be hazardous.
Prevent surface and ground-water infiltration, as well as ground penetration.

6.3 Methods and material for containment and cleaning up

If spray or gas escapes, ensure ample fresh air is available.
Active substance:
Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth) and dispose of according to Section 13.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe handling

7.1.1 General recommendations

Ensure good ventilation.
Avoid breathing vapours or spray.
Avoid contact with eyes or skin.
Keep away from sources of ignition - Do not smoke.
Take measures against electrostatic charging, if appropriate.
Do not use on hot surfaces.
Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.
Observe directions on label and instructions for use.
Use working methods according to operating instructions.

7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.
Keep away from food, drink and animal feedingstuffs.
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities

Keep out of access to unauthorised individuals.
Not to be stored in gangways or stair wells.
Store product closed and only in original packing.
Observe special regulations for aerosols!
Observe special storage conditions.
Do not store with flammable or self-igniting materials.
Keep protected from direct sunlight and temperatures over 50°C.
Store in a well ventilated place.

Store cool.

7.3 Specific end use(s)

No information available at present.
Observe the instructions for good working practice and the recommendations for risk assessment.
Consult hazardous substance information systems, e.g. from the professional associations, the chemical industry or different industries, depending on the application (building materials, wood, chemistry, laboratory, leather, metal).

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Workplace exposure limit (WEL) of the total hydrocarbon solvent content of the mixture (RCP method according to EH40):
1400 mg/m3

Chemical Name	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane		
WEL-TWA: 1400 mg/m3	WEL-STEL: ---	---	
Monitoring procedures:	- Compur - KITA-187 S (551 174)		
BMGV: ---	Other information: (OEL acc. to RCP-method, paragraphs 84-87, EH40)		

Chemical Name	Pentane	
WEL-TWA: 1800 mg/m3 (600 ppm) (WEL-TWA), 3000 mg/m3 (1000 ppm) (EU)	WEL-STEL: ---	---
Monitoring procedures:	- Draeger - Pentane 100/a (67 24 701) - Compur - KITA-113 SB(C) (549 368) - DFG (D) (Loesungsmittelgemische Meth. Nr. 1), DFG (E) (Solvent mixtures 1) - 1998, 2002 - NIOSH 1500 (HYDROCARBONS, BP 36°-216 °C) - 2003 - NIOSH 2549 (VOLATILE ORGANIC COMPOUNDS (SCREENING)) - 1996	
BMGV: ---	Other information: ---	

Chemical Name	Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogene dithiophosphate	
WEL-TWA: 10 mg/m3 (as Mo) (Molybdenum compounds, insoluble)	WEL-STEL: 20 mg/m3 (as Mo) (Molybdenum compounds, insoluble)	---
Monitoring procedures:	---	
BMGV: ---	Other information: ---	

Chemical Name	Butane	
WEL-TWA: 600 ppm (1450 mg/m3)	WEL-STEL: 750 ppm (1810 mg/m3)	---
Monitoring procedures:	- Compur - KITA-221 SA (549 459) - OSHA PV2010 (n-Butane) - 1993	
BMGV: ---	Other information: ---	

Chemical Name	Propane	
WEL-TWA: 1000 ppm (ACGIH)	WEL-STEL: ---	---
Monitoring procedures:	- Compur - KITA-125 SA (549 954) - OSHA PV2077 (Propane) - 1990	
BMGV: ---	Other information: ---	

Chemical Name	Isobutane	
WEL-TWA: 1000 ppm (EX) (ACGIH)	WEL-STEL: ---	---
Monitoring procedures:	- Compur - KITA-113 SB(C) (549 368)	
BMGV: ---	Other information: ---	

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Consumer	Human - oral	Long term, systemic effects	DNEL	699	mg/kg bw/day	
Consumer	Human - dermal	Long term, systemic effects	DNEL	699	mg/kg bw/day	

Consumer	Human - inhalation	Long term, systemic effects	DNEL	608	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	773	mg/kg bw/day	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	2035	mg/m3	

Pentane

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - soil		PNEC	0,55	mg/kg	
	Environment - sewage treatment plant		DNEL	3,6	mg/l	
	Environment - periodic release		PNEC	0,88	mg/l	
	Environment - freshwater		PNEC	0,23	mg/l	
	Environment - marine		PNEC	0,23	mg/l	
	Environment - sediment, freshwater		PNEC	1,2	mg/kg	
	Environment - sediment, marine		PNEC	1,2	mg/kg	
Consumer	Human - dermal	Long term, systemic effects	DNEL	214	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	643	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	214	mg/kg bw/day	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	432	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	3000	mg/m3	

Methyl salicylate

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	20	µg/l	
	Environment - marine		PNEC	2	µg/l	
	Environment - sewage treatment plant		PNEC	140	mg/l	
	Environment - soil		PNEC	0,35	mg/kg dw	
	Environment - sediment, freshwater		PNEC	0,52	mg/kg dw	
	Environment - sediment, marine		PNEC	0,052	mg/kg dw	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	4	mg/m3	
Consumer	Human - inhalation	Short term, local effects	DNEL	213	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	3	mg/kg bw/day	
Consumer	Human - oral	Long term, systemic effects	DNEL	1	mg/kg bw/day	
Consumer	Human - oral	Short term, local effects	DNEL	5	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	17,5	mg/m3	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	285	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	6	mg/kg bw/day	

O,O,O-triphenyl phosphorothioate						
Area of application	**Exposure route / Environmental compartment**	**Effect on health**	**Descriptor**	**Value**	**Unit**	**Note**
	Environment - freshwater		PNEC	0,17	µg/l	
	Environment - marine		PNEC	0,017	µg/l	
	Environment - sediment, freshwater		PNEC	3,47	mg/kg dw	
	Environment - sediment, marine		PNEC	0,347	mg/kg dw	
	Environment - soil		PNEC	2,46	mg/kg dw	
	Environment - sewage treatment plant		PNEC	10	mg/l	
Consumer	Human - dermal	Long term, systemic effects	DNEL	0,2	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,34	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,2	mg/kg bw/day	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	0,4	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	1,39	mg/m3	

Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogene dithiophosphate						
Area of application	**Exposure route / Environmental compartment**	**Effect on health**	**Descriptor**	**Value**	**Unit**	**Note**
Consumer	Human - oral	Long term, systemic effects	DNEL	0,5	mg/kg bw/day	
Consumer	Human - dermal	Long term, systemic effects	DNEL	0,5	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,87	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	1,4	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	4,93	mg/m3	

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene						
Area of application	**Exposure route / Environmental compartment**	**Effect on health**	**Descriptor**	**Value**	**Unit**	**Note**
	Environment - freshwater		PNEC	0,034	mg/l	
	Environment - marine		PNEC	0,003	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	0,51	mg/l	
	Environment - sediment, freshwater		PNEC	0,446	mg/kg dw	
	Environment - sediment, marine		PNEC	0,045	mg/kg dw	
	Environment - soil		PNEC	1,76	mg/kg	
	Environment - sewage treatment plant		PNEC	10	mg/l	
Consumer	Human - dermal	Long term, systemic effects	DNEL	0,04	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,08	mg/m3	

Consumer	Human - oral	Long term, systemic effects	DNEL	0,04	mg/kg bw/day	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	0,08	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	0,31	mg/m3	

Propene						
Area of application	**Exposure route / Environmental compartment**	**Effect on health**	**Descriptor**	**Value**	**Unit**	**Note**
	Environment - freshwater		PNEC	1,38	mg/l	
	Environment - marine		PNEC	1,38	mg/l	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	860	mg/m3	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	860	mg/m3	

GB - United Kingdom | WEL-TWA = Workplace Exposure Limit - Long-term exposure limit - 8-hour TWA (= time weighted average) reference period (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
(8) = Inhalable fraction (2004/37/CE, 2017/164/EU). (9) = Respirable fraction (2004/37/CE, 2017/164/EU). (11) = Inhalable fraction (2004/37/CE). (12) = Inhalable fraction. Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0,002 mg Cd/g creatinine in urine (2004/37/CE). |
| WEL-STEL = Workplace Exposure Limit - Short-term exposure limit - 15-minute reference period (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
(8) = Inhalable fraction (2004/37/EC, 2017/164/EU). (9) = Respirable fraction (2004/37/EC, 2017/164/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). |
| BMGV = Biological monitoring guidance value (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
(EU) = Directive 98/24/EC or 2004/37/EC or SCOEL (Biological Limit Value - BLV, Recommendation from the Scientific Committee on Occupational Exposure Limits (SCOEL)) |
| Other information (EH40/2005 Workplace exposure limits (Fourth Edition 2020)): Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.
(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, 2019/1831/EU or 2024/869/EU:
(13) = The substance can cause sensitisation of the skin and of the respiratory tract (98/24/EC, 2004/37/CE), (14) = The substance can cause sensitisation of the skin (2004/37/CE), (15) = Substantial contribution to the total body burden via dermal exposure possible. |

8.2 Exposure controls
8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.
If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.
Applies only if maximum permissible exposure values are listed here.
Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.
These are specified by e.g. EN 14042.
EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.
Keep away from food, drink and animal feedingstuffs.
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:
Tight fitting protective goggles with side protection (EN ISO 16321-1).

Skin protection - Hand protection:
Solvent resistant protective gloves (EN ISO 374).
If applicable
Protective nitrile gloves (EN ISO 374).

Minimum layer thickness in mm:
>= 0,3
Permeation time (penetration time) in minutes:
< 480
The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.
The recommended maximum wearing time is 50% of breakthrough time.
Protective hand cream recommended.

Skin protection - Other:
Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:
If the workplace limit value is exceeded.
Filter A P2 (EN 14387), code colour brown, white
Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:
Not applicable

Additional information on hand protection - No tests have been performed.
In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.
Selection of materials derived from glove manufacturer's indications.
Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.
Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.
In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.
The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls
No information available at present.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	Aerosol. Active substance: liquid.
Colour:	Green
Odour:	Characteristic
Melting point/freezing point:	There is no information available on this parameter.
Boiling point or initial boiling point and boiling range:	There is no information available on this parameter.
Flammability:	Does not apply to aerosols.
Lower explosion limit:	There is no information available on this parameter.
Upper explosion limit:	There is no information available on this parameter.
Flash point:	-60 °C (The flash-point of the mixture was not tested, but complies with the ingredient with the lowest value.)
Auto-ignition temperature:	Does not apply to aerosols.
Decomposition temperature:	There is no information available on this parameter.
pH:	Mixture is non-soluble (in water).
Kinematic viscosity:	Does not apply to aerosols.
Solubility:	Insoluble
Partition coefficient n-octanol/water (log value):	Does not apply to mixtures.
Vapour pressure:	There is no information available on this parameter.
Density and/or relative density:	0,7851 g/ml (Active substance)
Density and/or relative density:	~0,69 g/cm3 (estimated)
Relative vapour density:	Does not apply to aerosols.
Particle characteristics:	Does not apply to aerosols.

9.2 Other information
No information available at present.

SECTION 10: Stability and reactivity

10.1 Reactivity
The product has not been tested.

10.2 Chemical stability
Stable with proper storage and handling.

10.3 Possibility of hazardous reactions
No dangerous reactions are known.

10.4 Conditions to avoid
Heating, open flame, ignition sources
Pressure increase will result in danger of bursting.

10.5 Incompatible materials
Avoid contact with strong oxidizing agents.

10.6 Hazardous decomposition products
No decomposition when used as directed.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008
Possibly more information on health effects, see Section 2.1 (classification).

Motorbike Kettenspray						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:						n.d.a.
Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:						n.d.a.
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:	LD50	>5840	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	Analogous conclusion
Acute toxicity, by dermal route:	LD50	>2920	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	Analogous conclusion
Acute toxicity, by inhalation:	LC50	>25,2	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Vapours
Skin corrosion/irritation:						Irritant
Serious eye damage/irritation:						Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Respiratory or skin sensitisation:						No (inhalation and skin contact)
Germ cell mutagenicity:						Negative
Aspiration hazard:						Asp. Tox. 1

Symptoms:						drowsiness, unconsciousness, heart/circulatory disorders, headaches, cramps, drowsiness, mucous membrane irritation, dizziness, nausea and vomiting.

Pentane

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat		
Symptoms:						drying of the skin., respiratory distress, coughing, fever, drowsiness, dizziness, nausea, headaches, unconsciousness, burning of the membranes of the nose and throat

Methyl salicylate

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	890	mg/kg			
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 491 (Short-time Exposure ... Chemicals Causing Eye Dam., Chem. Not Requir. Eye Dam. or Irrit.)	Eye Dam. 1
Symptoms:						acidosis, respiratory distress, annoyance, blisters, heart/circulatory disorders, coughing, cramps, stomach pain, intoxication, mucous membrane irritation, pain in chest, sweats, dizziness, visual disturbances, nausea and vomiting.

O,O,O-triphenyl phosphorothioate

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	> 2000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant

Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogene dithiophosphate

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	6810	ml/kg	Rat		
Acute toxicity, by dermal route:	LD50	10000	ml/kg	Rabbit		
Skin corrosion/irritation:				Human being	OECD 439 (In Vitro Skin Irritation - Reconstructed Human Epidermis Test Method)	Skin Irrit. 2
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Skin Sens. 1B
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:				Human being	OECD 487 (In Vitro Mammalian Cell Micronucleus Test)	Negative
Germ cell mutagenicity:				Mouse	OECD 490 (In vitro Thymidine Kinase Mutation Test)	Negative

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LD50	>5	mg/l/4h	Rat		
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Mild irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:					OECD 487 (In Vitro Mammalian Cell Micronucleus Test)	Negative
Reproductive toxicity:				Rat	OECD 443 (Extended One-Generation Reproductive Toxicity Study)	Possible risk of impaired fertility.
Specific target organ toxicity - single exposure (STOT-SE):						Negative
Specific target organ toxicity - repeated exposure (STOT-RE):				Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Developm. Tox. Screening Test)	Target organ(s): Thyroid, Target organ(s): liver

Butane

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by inhalation:	LC50	658	mg/l/4h	Rat		
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative

Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:				Human being	OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:				Rat	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEC	21,394	mg/l	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Developm. Tox. Screening Test)	
Aspiration hazard:						No
Symptoms:						ataxia, breathing difficulties, drowsiness, unconsciousness, frostbite, disturbed heart rhythm, headaches, cramps, intoxication, dizziness, nausea and vomiting.

Propane

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by inhalation:	LC50	658	mg/l/4h	Rat		
Acute toxicity, by inhalation:	LC50	260000	ppmV/4h	Rat		Gasses, Male, Analogous conclusion
Skin corrosion/irritation:						Not irritant
Serious eye damage/irritation:						Not irritant
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Reproductive toxicity (Developmental toxicity):	NOAEC	21,641	mg/l		OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Developm. Tox. Screening Test)	
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEL	7,214	mg/l	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Developm. Tox. Screening Test)	
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	LOAEL	21,641	mg/l	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Developm. Tox. Screening Test)	
Aspiration hazard:						No

Symptoms:						breathing difficulties, unconsciousness, frostbite, headaches, cramps, mucous membrane irritation, dizziness, nausea and vomiting.

Isobutane						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by inhalation:	LC50	658	mg/l/4h	Rat		
Acute toxicity, by inhalation:	LC50	260000	ppmV/4h	Rat		Gasses, Male
Serious eye damage/irritation:				Rabbit		Not irritant
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:				Mammalian	OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEL	21,394	mg/l	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Developm. Tox. Screening Test)	
Aspiration hazard:						No
Symptoms:						unconsciousness, frostbite, headaches, cramps, dizziness, nausea and vomiting.

11.2. Information on other hazards

Motorbike Kettenspray						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Endocrine disrupting properties:						Does not apply to mixtures.
Other information:						No other relevant information available on adverse effects on health.

SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

Motorbike Kettenspray							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:							n.d.a.
12.1. Toxicity to daphnia:							n.d.a.
12.1. Toxicity to algae:							n.d.a.
12.2. Persistence and degradability:							n.d.a.
12.3. Bioaccumulative potential:							n.d.a.

12.4. Mobility in soil:							n.d.a.
12.5. Results of PBT and vPvB assessment							n.d.a.
12.6. Endocrine disrupting properties:							Does not apply to mixtures.
12.7. Other adverse effects:							No information available on other adverse effects on the environment.
Other information:							DOC-elimination degree(complexing organic substance)>= 80%/28d: n.a.
Other information:	AOX			%			According to the recipe, contains no AOX.

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LL50	96h	11,4	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	Analogous conclusion
12.1. Toxicity to fish:	NOEC/NOEL	28d	2045	mg/l	Oncorhynchus mykiss		
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	1	mg/l	Daphnia magna		
12.1. Toxicity to daphnia:	EL50	48h	3	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	Analogous conclusion
12.1. Toxicity to algae:	EL50	72h	30-100	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	Analogous conclusion
12.2. Persistence and degradability:		28d	98	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Analogous conclusion
12.3. Bioaccumulative potential:	Log Kow		4-5,1				
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

Pentane

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	4,26	mg/l	Oncorhynchus mykiss		
12.1. Toxicity to daphnia:	EC50	48h	2,7	mg/l	Daphnia magna		
12.1. Toxicity to algae:	EC50	72h	10,7	mg/l	Pseudokirchneriella subcapitata		
12.1. Toxicity to algae:	NOEC/NOEL	72h	7,51	mg/l	Pseudokirchneriella subcapitata		
12.2. Persistence and degradability:							Readily biodegradable, Photochemical decomposition in the atmosphere.
12.3. Bioaccumulative potential:	Log Pow		3,39				

Methyl salicylate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	19,8	mg/l	Pimephales promelas	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	28	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	Analogous conclusion
12.1. Toxicity to algae:	EC50	72h	27	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	0,79	mg/l	Desmodesmus subspicatus	Regulation (EC) 440/2008 C.3 (FRESHWATER ALGAE AND CYANOBACTERIA, GROWTH INHIBITION TEST)	
12.2. Persistence and degradability:	DOC	28d	98,4	%			Readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		2,5				
12.4. Mobility in soil:	Log Koc		2,346				
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50	16h	380	mg/l	Pseudomonas putida		

O,O,O-triphenyl phosphorothioate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>100	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	NOEC/NOEL	>60d	1,7	µg/l	Oncorhynchus mykiss	OECD 210 (Fish, Early-Life Stage Toxicity Test)	Aquatic Chronic 1
12.1. Toxicity to daphnia:	EC50	48h	>100	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	0,00724	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.2. Persistence and degradability:	DT50	>60d				OECD 309 (Aerobic Mineralisation in Surface Water - Simulation Biodegradation Test)	Not biodegradable
12.3. Bioaccumulative potential:	Log Pow		5,1				To be expected
12.3. Bioaccumulative potential:	BCF		2551				
12.5. Results of PBT and vPvB assessment							PBT-substance

Toxicity to bacteria:	IC50	3h	>100	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	

Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogene dithiophosphate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>100	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	>100	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	>100	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	11	%	activated sludge	OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Not readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		>4				
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50	3h	>1000	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>100	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	51	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	EC10	21d	1,69	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to algae:	EC50	72h	>100	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	1	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Not readily biodegradable
12.3. Bioaccumulative potential:	BCF	72h	1730		Cyprinus caprio		Analogous conclusion
12.3. Bioaccumulative potential:	Log Pow		>6				

12.4. Mobility in soil:	Log Koc		3,8				
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
12.6. Endocrine disrupting properties:							No
Toxicity to bacteria:	EC20	3h	~100	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Toxicity to annelids:	EC10	56d	259	mg/kg	Eisenia foetida	OECD 222 (Earthworm Reproduction Test (Eisenia fetida/Eisenia andrei))	

Butane							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:	LC50	96h	24,11	mg/l		QSAR	
12.1. Toxicity to daphnia:	LC50	48h	14,22	mg/l		QSAR	
12.3. Bioaccumulative potential:	Log Pow		2,89				A notable biological accumulation potential is not to be expected (LogPow 1-3).
12.4. Mobility in soil:							Not to be expected
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

Propane							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:	LC50	96h	49,9	mg/l			
12.1. Toxicity to algae:	EC50	96h	19,37	mg/l			
12.3. Bioaccumulative potential:	Log Pow		2,28				A notable biological accumulation potential is not to be expected (LogPow 1-3).
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

Isobutane							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:	LC50	96h	27,98	mg/l			
12.1. Toxicity to algae:	EC50	96h	7,71	mg/l			
12.2. Persistence and degradability:							Readily biodegradable
12.3. Bioaccumulative potential:							A notable biological accumulation potential is not to be expected (LogPow 1-3).

12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

SECTION 13: Disposal considerations

13.1 Waste treatment methods

For the substance / mixture / residual amounts

EC disposal code no.:
The waste codes are recommendations based on the scheduled use of this product.
Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)
16 05 04 gases in pressure containers (including halons) containing hazardous substances
Recommendation:
Sewage disposal shall be discouraged.
Pay attention to local and national official regulations.
Take full aerosol cans to problem waste collection.
Take emptied aerosol cans to valuable material collection.

For contaminated packing material

Pay attention to local and national official regulations.
Recommendation:
Do not perforate, cut up or weld uncleaned container.
15 01 04 metallic packaging

SECTION 14: Transport information

General statements

Transport by road/by rail (ADR/RID)

14.1. UN number or ID number:	1950
14.2. UN proper shipping name:	
UN 1950 AEROSOLS	
14.3. Transport hazard class(es):	2.1
14.4. Packing group:	-
14.5. Environmental hazards:	environmentally hazardous
Tunnel restriction code:	D
Classification code:	5F
LQ:	1 L
Transport category:	2




Transport by sea (IMDG-code)

14.1. UN number or ID number:	1950
14.2. UN proper shipping name:	
UN 1950 AEROSOLS	
14.3. Transport hazard class(es):	2.1
14.4. Packing group:	-
14.5. Environmental hazards:	environmentally hazardous
Marine Pollutant:	Yes
EmS:	F-D, S-U




Transport by air (IATA)

14.1. UN number or ID number:	1950
14.2. UN proper shipping name:	
UN 1950 Aerosols, flammable	
14.3. Transport hazard class(es):	2.1
14.4. Packing group:	-
14.5. Environmental hazards:	Not applicable



14.6. Special precautions for user

Persons employed in transporting dangerous goods must be trained.
All persons involved in transporting must observe safety regulations.
Precautions must be taken to prevent damage.

14.7. Maritime transport in bulk according to IMO instruments

Freighted as packaged goods rather than in bulk, therefore not applicable.
Minimum amount regulations have not been taken into account.
Danger code and packing code on request.
Comply with special provisions.

SECTION 15: Regulatory information

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

Observe restrictions:
Comply with national regulations/laws governing the protection of young people at work (national implementation of the Directive 94/33/EC)!
Comply with trade association/occupational health regulations.
Regulation (EU) No 649/2012 'concerning the export and import of hazardous chemicals' must be adhered to, as the product contains a substance that falls within the scope of this Regulation.

Directive 2012/18/EU ("Seveso III"), Annex I, Part 1 - The following categories apply to this product (others may also need to be considered according to storage, handling etc.):

Hazard categories	Notes to Annex I	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Lower-tier requirements	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Upper-tier requirements
E2		200	500
P3a	11.1	150 (netto)	500 (netto)

The Notes to Annex 1 of Directive 2012/18/EU, in particular those named in the tables here and notes 1-6, must be taken into account when assigning categories and qualifying quantities.

Directive 2012/18/EU ("Seveso III"), Annex I, Part 2 - This product contains the substances listed below:

Entry Nr	Dangerous substances	Notes to Annex I	Qualifying quantity (tonnes) for the application of - Lower-tier requirements	Qualifying quantity (tonnes) for the application of - Upper-tier requirements
18	Liquefied flammable gases, Category 1 or 2 (including LPG) and natural gas	19	50	200

The Notes to Annex 1 of Directive 2012/18/EU, in particular those named in the tables here and notes 1-6, must be taken into account when assigning categories and qualifying quantities.

Directive 2010/75/EU (VOC): 80,71 %

Observe incident regulations.

National requirements/regulations on safety and health protection must be applied when using work equipment.

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 3, 8
Employee training in handling dangerous goods is required.
These details refer to the product as it is delivered.
Employee instruction/training in handling hazardous materials is required.

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used

Skin Irrit. 2, H315	Classification according to calculation procedure.
Asp. Tox. 1, H304	Classification according to calculation procedure.
STOT SE 3, H336	Classification according to calculation procedure.
Aquatic Chronic 2, H411	Classification according to calculation procedure.
Aerosol 1, H222	Classification according to calculation procedure.
Aerosol 1, H229	Classification based on the form or physical state.

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents.
H224 Extremely flammable liquid and vapour.
H361d Suspected of damaging the unborn child.
H361f Suspected of damaging fertility.
H225 Highly flammable liquid and vapour.
H317 May cause an allergic skin reaction.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H336 May cause drowsiness or dizziness.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
H413 May cause long lasting harmful effects to aquatic life.
EUH066 Repeated exposure may cause skin dryness or cracking.

Skin Irrit. — Skin irritation
Asp. Tox. — Aspiration hazard
STOT SE — Specific target organ toxicity - single exposure - narcotic effects
Aquatic Chronic — Hazardous to the aquatic environment - chronic
Aerosol — Aerosols
Flam. Liq. — Flammable liquid
Acute Tox. — Acute toxicity - oral
Eye Dam. — Serious eye damage
Skin Sens. — Skin sensitization
Repr. — Reproductive toxicity

Key literature references and sources for data:

Regulation (EC) No 1907/2006 (REACH) and Regulation (EC) No 1272/2008 (CLP) as amended.
Guidelines for the preparation of safety data sheets as amended (ECHA).
Guidelines on labelling and packaging according to the Regulation (EG) Nr. 1272/2008 (CLP) as amended (ECHA).
Safety data sheets for the constituent substances.
ECHA Homepage - Information about chemicals.
GESTIS Substance Database (Germany).
German Environment Agency "Rigoletto" information site on substances that are hazardous to water (Germany).
EU Occupation Exposure Limits Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164, (EU) 2019/1831, each as amended.
National Lists of Occupational Exposure Limits for each country as amended.
Regulations on the transport of hazardous goods by road, rail, sea and air (ADR, RID, IMDG, IATA) as amended.

Any abbreviations and acronyms used in this document:

acc., acc. to according, according to
ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
AOX Adsorbable organic halogen compounds
approx. approximately
Art., Art. no. Article number
ASTM ASTM International (American Society for Testing and Materials)
ATE Acute Toxicity Estimate
BAM Bundesanstalt für Materialforschung und -prüfung (= Federal Institute for Materials Research and Testing, Germany)

BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)
BCF Bioconcentration factor
BSEF The International Bromine Council
CAS Chemical Abstracts Service
CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
CMR carcinogenic, mutagenic, reproductive toxic
DMEL Derived Minimum Effect Level
DNEL Derived No Effect Level
DOC Dissolved organic carbon
e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
EbCx, EyCx, EbLx (x = 10, 50) Effect Concentration/Level of x % on reduction of the biomass (algae, plants)
EC European Community
ECHA European Chemicals Agency
ECx, ELx (x = 0, 3, 5, 10, 20, 50, 80, 100) Effect Concentration/Level for x % effect
EEC European Economic Community
EINECS European Inventory of Existing Commercial Chemical Substances
ELINCS European List of Notified Chemical Substances
EN European Norms
EPA United States Environmental Protection Agency (United States of America)
ErCx, EμCx, ErLx (x = 10, 50) Effect Concentration/Level of x % on inhibition of the growth rate (algae, plants)
etc. et cetera
EU European Union
EVAL Ethylene-vinyl alcohol copolymer
Fax. Fax number
gen. general
GHS Globally Harmonized System of Classification and Labelling of Chemicals
GWP Global warming potential
Koc Adsorption coefficient of organic carbon in the soil
Kow octanol-water partition coefficient
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IBC (Code) International Bulk Chemical (Code)
IMDG-code International Maritime Code for Dangerous Goods
incl. including, inclusive
IUCLID International Uniform Chemical Information Database
IUPAC International Union for Pure Applied Chemistry
LC50 Lethal Concentration to 50 % of a test population
LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)
Log Koc Logarithm of adsorption coefficient of organic carbon in the soil
Log Kow, Log Pow Logarithm of octanol-water partition coefficient
LQ Limited Quantities
MARPOL International Convention for the Prevention of Marine Pollution from Ships
mg/kg bw mg/kg body weight
mg/kg bw/d, mg/kg bw/day mg/kg body weight/day
mg/kg dw mg/kg dry weight
mg/kg wwt mg/kg wet weight
n.a. not applicable
n.av. not available
n.c. not checked
n.d.a. no data available
NIOSH National Institute for Occupational Safety and Health (USA)
NLP No-longer-Polymer
NOEC, NOEL No Observed Effect Concentration/Level
OECD Organisation for Economic Co-operation and Development
org. organic
OSHA Occupational Safety and Health Administration (USA)
PBT Persistent, bioaccumulative and toxic
PE Polyethylene
PMT Persistent, mobile and toxic
PNEC Predicted No Effect Concentration
ppm parts per million
PVC Polyvinylchloride

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RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)
SVHC Substances of Very High Concern
Tel. Telephone
TOC Total organic carbon
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods
VOC Volatile organic compounds
vPvB Very persistent and very bioaccumulative
vPvM Very persistent and very mobile

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.
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