

(GB)

Page 1 of 14  
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 21.08.2015 / 0008  
Replacing version dated / version: 17.10.2014 / 0007  
Valid from: 21.08.2015  
PDF print date: 23.08.2015  
KETTENSpray 400 mL  
Art.: 3579

## Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

#### 1.1 Product identifier

**KETTENSpray 400 mL**

**Art.: 3579**

#### 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

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

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:**

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**Telephone number of the company in case of emergencies:**

+49 (0) 700 / 24 112 112 (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.
STOT SE	3	H336-May cause drowsiness or dizziness.
Aquatic Chronic	3	H412-Harmful to aquatic life with long lasting effects.
Aerosol	1	H222-Extremely flammable aerosol.
Asp. Tox.	1	H304-May be fatal if swallowed and enters airways.
Aerosol	1	H229-Pressurised container: May burst if heated.

#### 2.2 Label elements

**Labeling according to Regulation (EC) 1272/2008 (CLP)**

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 21.08.2015 / 0008  
 Replacing version dated / version: 17.10.2014 / 0007  
 Valid from: 21.08.2015  
 PDF print date: 23.08.2015  
 KETTENSpray 400 mL  
 Art.: 3579



Danger

H315-Causes skin irritation. H336-May cause drowsiness or dizziness. H412-Harmful 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. P280-Wear protective gloves.

P312-Call a POISON CENTER/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 special waste collection point.

EUH208-Contains Benzene, C9-13-alkyl derivs., distn. residues, sulfonated, calcium salts. May produce an allergic reaction.

Without adequate ventilation, formation of explosive mixtures may be possible.  
 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.

The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006.

## SECTION 3: Composition/information on ingredients

Aerosol

### 3.1 Substance

n.a.

### 3.2 Mixture

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane	
Registration number (REACH)	--
Index	---
EINECS, ELINCS, NLP	921-024-6 (REACH-IT List-No.)
CAS	---
content %	20-<25
Classification according to Regulation (EC) 1272/2008 (CLP)	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Asp. Tox. 1, H304 STOT SE 3, H336 Aquatic Chronic 2, H411

Baseoil - unspecified	
Registration number (REACH)	--
Index	649-468-00-3 / 649-467-00-8 / 649-454-00-7 / 649-474-00-6
EINECS, ELINCS, NLP	265-158-7 / 265-157-1 / 265-090-8 / 265-169-7
CAS	64742-55-8 / 64742-54-7 / 64741-88-4 / 64742-65-0
content %	1-5
Classification according to Regulation (EC) 1272/2008 (CLP)	Asp. Tox. 1, H304

GB

Page 3 of 14  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 21.08.2015 / 0008  
 Replacing version dated / version: 17.10.2014 / 0007  
 Valid from: 21.08.2015  
 PDF print date: 23.08.2015  
 KETTENSpray 400 mL  
 Art.: 3579

<b>Benzene, C9-13-alkyl derivs., distn. residues, sulfonated, calcium salts</b>	
<b>Registration number (REACH)</b>	--
<b>Index</b>	---
<b>EINECS, ELINCS, NLP</b>	307-593-8
<b>CAS</b>	97675-24-6
<b>content %</b>	0,1-<1
<b>Classification according to Regulation (EC) 1272/2008 (CLP)</b>	Skin Sens. 1, H317

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 3.1/3.2 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.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### 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.  
 Do not induce vomiting. Consult doctor immediately.  
 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.  
 Irritation of the respiratory tract

Coughing  
 Headaches  
 Dizziness  
 Effect on the central nervous system  
 Coordination disorders  
 Mental confusion  
 Unconsciousness

#### Ingestion:

Nausea  
 Vomiting  
 Danger of aspiration  
 Oedema of the lungs  
 Chemical pneumonitis (condition similar to pneumonia)

In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

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

n.c.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

CO2  
 Foam  
 Extinction powder  
 Water jet spray

#### Unsuitable extinguishing media

Page 4 of 14  
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 21.08.2015 / 0008  
Replacing version dated / version: 17.10.2014 / 0007  
Valid from: 21.08.2015  
PDF print date: 23.08.2015  
KETTENSpray 400 mL  
Art.: 3579

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  
Hydrocarbons  
Oxides of phosphorus  
Oxides of nitrogen  
Toxic pyrolysis products.  
Danger of bursting (explosion) when heated  
Explosive vapour/air mixture

## 5.3 Advice for firefighters

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

Remove possible causes of ignition - do not smoke.  
Ensure sufficient supply of air.  
Avoid inhalation, and contact with eyes or skin.  
If applicable, caution - risk of slipping.

### 6.2 Environmental precautions

Prevent surface and ground-water infiltration, as well as ground penetration.  
Prevent penetration into drains, cellars, working pits or other places in which accumulation could be hazardous.  
If accidental entry into drainage system occurs, inform responsible authorities.

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

If spray or gas escapes, ensure ample fresh air is available.  
Without adequate ventilation, formation of explosive mixtures may be possible.  
Active substance:  
Soak up with absorbent material (e.g. universal binding agent) and dispose of according to Section 13.  
Do not wash away with water or watery cleaning agents.

### 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.  
Keep away from sources of ignition - Do not smoke.  
Take measures against electrostatic charging, if appropriate.  
Do not use on hot surfaces.  
Avoid contact with eyes or skin.  
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.

GB

Page 5 of 14  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 21.08.2015 / 0008  
 Replacing version dated / version: 17.10.2014 / 0007  
 Valid from: 21.08.2015  
 PDF print date: 23.08.2015  
 KETTENSpray 400 mL  
 Art.: 3579

Store product closed and only in original packing.  
 Solvent resistant floor  
 Observe special regulations for aerosols!  
 Observe special storage conditions (in Germany, e.g., in accordance with the regulations in the "Betriebssicherheitsverordnung").  
 Keep protected from direct sunlight and temperatures over 50°C.  
 Store in a well ventilated place.

### 7.3 Specific end use(s)

No information available at present.

## 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):  
 600 mg/m<sup>3</sup>

Chemical Name	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane	Content %:
WEL-TWA: 600 mg/m <sup>3</sup>	WEL-STEL: ---	---
Monitoring procedures:	<ul style="list-style-type: none"> <li>- Draeger - Hydrocarbons 2/a (81 03 581)</li> <li>- Draeger - Hydrocarbons 0,1%/c (81 03 571)</li> <li>- Compur - KITA-187 S (551 174)</li> </ul>	
BMGV: ---	Other information: ---	

Chemical Name	Oil mist, mineral	Content %:
WEL-TWA: 5 mg/m <sup>3</sup> (ACGIH)	WEL-STEL: 10 mg/m <sup>3</sup> (ACGIH)	---
Monitoring procedures:	<ul style="list-style-type: none"> <li>- Draeger - Oil 10/a-P (67 28 371)</li> <li>- Draeger - Oil Mist 1/a (67 33 031)</li> </ul>	
BMGV: ---	Other information: ---	

Chemical Name	Hydrocarbons, C3-4	Content %:
WEL-TWA: 1000 ppm (ACGIH)	WEL-STEL: 1250 ppm (2180 mg/m <sup>3</sup> ) (Liquefied petroleum gas (LPG))	---
Monitoring procedures:	---	
BMGV: ---	Other information: ---	

Chemical Name	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane	Content %:
WEL-TWA: 800 mg/m <sup>3</sup>	WEL-STEL: ---	---
Monitoring procedures:	<ul style="list-style-type: none"> <li>- Draeger - Hydrocarbons 2/a (81 03 581)</li> <li>- Draeger - Hydrocarbons 0,1%/c (81 03 571)</li> <li>- Compur - KITA-187 S (551 174)</li> </ul>	
BMGV: ---	Other information: ---	

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.

\*\* = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	300	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	2035	mg/m <sup>3</sup>	
Consumer	Human - dermal	Long term, systemic effects	DNEL	149	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	608	mg/m <sup>3</sup>	

GB

Page 6 of 14  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 21.08.2015 / 0008  
 Replacing version dated / version: 17.10.2014 / 0007  
 Valid from: 21.08.2015  
 PDF print date: 23.08.2015  
 KETTENSpray 400 mL  
 Art.: 3579

Consumer	Human - oral	Long term, systemic effects	DNEL	699	mg/kg bw/day	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	773	mg/kg bw/day	

## 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.

### 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 166).

Skin protection - Hand protection:  
 Chemical resistant protective gloves (EN 374).  
 If applicable  
 Protective nitrile gloves (EN 374)  
 Protective gloves made of polyvinyl alcohol (EN 374)  
 Protective Viton® / fluoroelastomer gloves (EN 374)  
 Minimum layer thickness in mm:  
 0,5  
 Permeation time (penetration time) in minutes:  
 480  
 The breakthrough times determined in accordance with EN 374 Part 3 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:  
 Normally not necessary.  
 If OES or MEL is exceeded.  
 Filter A2 P2 (EN 14387), code colour brown, white  
 At high concentrations:  
 Respiratory protection appliance (insulation device) (e.g. EN 137 or EN 138)  
 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 a 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

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 21.08.2015 / 0008

Replacing version dated / version: 17.10.2014 / 0007

Valid from: 21.08.2015

PDF print date: 23.08.2015

KETTENSpray 400 mL

Art.: 3579

## 9.1 Information on basic physical and chemical properties

Physical state:	Aerosol, Substance: Liquid
Colour:	Light brown
Odour:	Characteristic
Odour threshold:	Not determined
pH-value:	Not determined
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	n.a.
Flash point:	n.a.
Evaporation rate:	Not determined
Flammability (solid, gas):	Not determined
Lower explosive limit:	Not determined
Upper explosive limit:	Not determined
Vapour pressure:	Not determined
Vapour density (air = 1):	Not determined
Density:	~0,718 g/ml
Bulk density:	Not determined
Solubility(ies):	Not determined
Water solubility:	Insoluble
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	n.a.
Explosive properties:	Not determined
Oxidising properties:	No

## 9.2 Other information

Miscibility:	Not determined
Fat solubility / solvent:	Not determined
Conductivity:	Not determined
Surface tension:	Not determined
Solvents content:	Not determined

## 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

See also section 7.

Heating, open flame, ignition sources

Pressure increase will result in danger of bursting.

### 10.5 Incompatible materials

See also section 7.

Avoid contact with oxidizing agents.

### 10.6 Hazardous decomposition products

See also section 5.2

No decomposition when used as directed.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

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

KETTENSpray 400 mL

Art.: 3579

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
	t					

GB

Page 8 of 14  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 21.08.2015 / 0008  
 Replacing version dated / version: 17.10.2014 / 0007  
 Valid from: 21.08.2015  
 PDF print date: 23.08.2015  
 KETTENSpray 400 mL  
 Art.: 3579

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.
Other information:						Classification according to calculation procedure.

**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		
Acute toxicity, by dermal route:	LD50	>2920	mg/kg	Rat		
Acute toxicity, by inhalation:	LC50	25,2	mg/l/4h	Rat		
Skin corrosion/irritation:						Irritant
Serious eye damage/irritation:						Slightly irritant
Respiratory or skin sensitisation:						Not sensitizing
Aspiration hazard:						Yes
Symptoms:						may cause headaches and vertigo.

**Benzene, C9-13-alkyl derivs., distn. residues, sulfonated, calcium salts**

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rat		
Skin corrosion/irritation:				Rabbit		Not irritant
Serious eye damage/irritation:				Rabbit		Not irritant
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative

**Hydrocarbons, C3-4**

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Germ cell mutagenicity:				Rat	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAEC	10000	ppm	Rat	OECD 413 (Subchronic Inhalation Toxicity - 90-Day Study)	

**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	>5000	mg/kg	Rat		
Acute toxicity, by oral route:	LD50	>5840	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>=2000	mg/kg	Rabbit		
Acute toxicity, by dermal route:	LD50	>2920	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	>23,3	mg/l/4h	Rat		





GB

Page 10 of 14  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 21.08.2015 / 0008  
 Replacing version dated / version: 17.10.2014 / 0007  
 Valid from: 21.08.2015  
 PDF print date: 23.08.2015  
 KETTENSpray 400 mL  
 Art.: 3579

Results of PBT and vPvB assessment							n.d.a.
Other adverse effects:							n.d.a.
Other information:							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
Toxicity to fish:	LL50	96h	11,4	mg/l			Goldforelle (Oncorhynchus aguabonita)
Toxicity to daphnia:	EL50	48h	3	mg/l	Daphnia magna		
Toxicity to algae:	EL50	72h	30	mg/l	Pseudokirchneriella subcapitata		

Benzene, C9-13-alkyl derivs., distn. residues, sulfonated, calcium salts							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	>1000	mg/l	Pimephales promelas		Analogous conclusion
Toxicity to fish:	LC50	96h	10000	mg/l	Cyprinodon variegatus	OECD 203 (Fish, Acute Toxicity Test)	Analogous conclusion
Toxicity to daphnia:	EC50	48h	>1000	mg/l	Daphnia magna		Analogous conclusion
Toxicity to algae:	EC50	96h	>1000	mg/l	Selenastrum capricornutum		Analogous conclusion
Persistence and degradability:		28d	16	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	
Bioaccumulative potential:	Log Pow		>6,7				

Hydrocarbons, C3-4							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to daphnia:	LC50	48h	14,22	mg/l	Daphnia magna		calculated value
Bioaccumulative potential:	Log Pow		1,1-2,8				

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	1 -10	mg/l			
Toxicity to fish:	LC50	96h	11,4	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
Toxicity to fish:	NOEC/NOEL		>1-<10	mg/l			
Toxicity to daphnia:	EC50		1 -<10	mg/l			
Toxicity to daphnia:	EC50	48h	3	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
Toxicity to daphnia:	NOEC/NOEL		<0,1-<1	mg/l			
Toxicity to daphnia:	NOEC/NOEL	21d	1	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
Toxicity to algae:	EC50	72h	30	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
Toxicity to algae:	IC50		10-<100	mg/l			

GB

Page 11 of 14  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 21.08.2015 / 0008  
 Replacing version dated / version: 17.10.2014 / 0007  
 Valid from: 21.08.2015  
 PDF print date: 23.08.2015  
 KETTENSpray 400 mL  
 Art.: 3579

Persistence and degradability:						Readily biodegradable
Bioaccumulative potential:	BCF		242-253			
Results of PBT and vPvB assessment						No PBT substance, No vPvB substance
Other information:	DOC					DOC-elimination degree(complexing organic substance)>= 80%/28d:

## 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)

07 06 04 other organic solvents, washing liquids and mother liquors

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.

## SECTION 14: Transport information

### General statements

UN number: 1950

#### Transport by road/by rail (ADR/RID)

UN proper shipping name:

UN 1950 AEROSOLS

Transport hazard class(es):

2.1

Packing group:

-

Classification code:

5F

LQ (ADR 2015):

1 L

Environmental hazards:

Not applicable

Tunnel restriction code:

D

#### Transport by sea (IMDG-code)

UN proper shipping name:

AEROSOLS

Transport hazard class(es):

2.1

Packing group:

-

EmS:

F-D, S-U

Marine Pollutant:

n.a

Environmental hazards:

Not applicable

#### Transport by air (IATA)

UN proper shipping name:

Aerosols, flammable

Transport hazard class(es):

2.1

Packing group:

-

Environmental hazards:

Not applicable

### Special precautions for user



GB

Page 12 of 14  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 21.08.2015 / 0008  
 Replacing version dated / version: 17.10.2014 / 0007  
 Valid from: 21.08.2015  
 PDF print date: 23.08.2015  
 KETTENSpray 400 mL  
 Art.: 3579

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.

**Transport in bulk according to Annex II of MARPOL and the IBC Code**

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**

For classification and labelling see Section 2.

Observe restrictions:

Comply with trade association/occupational health regulations.

Observe youth employment law (German regulation).

Directive 2010/75/EU (VOC):

~ 60,5 %

Directive 2010/75/EU (VOC):

434,4 g/l

**15.2 Chemical safety assessment**

A chemical safety assessment is not provided for mixtures.

**SECTION 16: Other information**

Revised sections:

1 - 16

These details refer to the product as it is delivered.

Employee instruction/training in handling hazardous materials is required.

Employee training in handling dangerous goods 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.
STOT SE 3, H336	Classification according to calculation procedure.
Aquatic Chronic 3, H412	Classification according to calculation procedure.
Aerosol 1, H222	Classification based on test data.
Asp. Tox. 1, H304	Classification according to calculation procedure.
Aerosol 1, H229	Classification based on test data.

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).

H225 Highly flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

Skin Irrit. — Skin irritation

STOT SE — Specific target organ toxicity - single exposure - narcotic effects

Aquatic Chronic — Hazardous to the aquatic environment - chronic

Aerosol — Aerosols

Asp. Tox. — Aspiration hazard

Flam. Liq. — Flammable liquid

Skin Sens. — Skin sensitization

**Any abbreviations and acronyms used in this document:**

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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AC Article Categories

acc., acc. to according, according to

ACGIH American Conference of Governmental Industrial Hygienists

ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)

AOEL Acceptable Operator Exposure Level

AOX Adsorbable organic halogen compounds

approx. approximately

Art., Art. no. Article number

ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)

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

BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)

BHT Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)

BMGV Biological monitoring guidance value (EH40, UK)

BOD Biochemical oxygen demand

BSEF Bromine Science and Environmental Forum

bw body weight

CAS Chemical Abstracts Service

CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids

CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques

CIPAC Collaborative International Pesticides Analytical Council

CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)

CMR carcinogenic, mutagenic, reproductive toxic

COD Chemical oxygen demand

CTFA Cosmetic, Toiletry, and Fragrance Association

DMEL Derived Minimum Effect Level

DNEL Derived No Effect Level

DOC Dissolved organic carbon

DT50 Dwell Time - 50% reduction of start concentration

DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)

dw dry weight

e.g. for example (abbreviation of Latin 'exempli gratia'), for instance

EC European Community

ECHA European Chemicals Agency

EEA European Economic Area

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)

ERC Environmental Release Categories

ES Exposure scenario

etc. et cetera

EU European Union

EWC European Waste Catalogue

Fax. Fax number

gen. general

GHS Globally Harmonized System of Classification and Labelling of Chemicals

GWP Global warming potential

HET-CAM Hen's Egg Test - Chorionallantoic Membrane

HGWP Halocarbon Global Warming Potential

IARC International Agency for Research on Cancer

IATA International Air Transport Association

IBC Intermediate Bulk Container

IBC (Code) International Bulk Chemical (Code)

IC Inhibitory concentration

IMDG-code International Maritime Code for Dangerous Goods

incl. including, inclusive

Page 14 of 14  
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 21.08.2015 / 0008  
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IUCLID International Uniform Chemical Information Database  
LC lethal concentration  
LC50 lethal concentration 50 percent kill  
LCLo lowest published lethal concentration  
LD Lethal Dose of a chemical  
LD50 Lethal Dose, 50% kill  
LDLo Lethal Dose Low  
LOAEL Lowest Observed Adverse Effect Level  
LOEC Lowest Observed Effect Concentration  
LOEL Lowest Observed Effect Level  
LQ Limited Quantities  
MARPOL International Convention for the Prevention of Marine Pollution from Ships  
n.a. not applicable  
n.av. not available  
n.c. not checked  
n.d.a. no data available  
NIOSH National Institute of Occupational Safety and Health (United States of America)  
NOAEC No Observed Adverse Effective Concentration  
NOAEL No Observed Adverse Effect Level  
NOEC No Observed Effect Concentration  
NOEL No Observed Effect Level  
ODP Ozone Depletion Potential  
OECD Organisation for Economic Co-operation and Development  
org. organic  
PAH polycyclic aromatic hydrocarbon  
PBT persistent, bioaccumulative and toxic  
PC Chemical product category  
PE Polyethylene  
PNEC Predicted No Effect Concentration  
POCP Photochemical ozone creation potential  
ppm parts per million  
PROC Process category  
PTFE Polytetrafluorethylene  
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)  
REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.  
RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)  
SADT Self-Accelerating Decomposition Temperature  
SAR Structure Activity Relationship  
SU Sector of use  
SVHC Substances of Very High Concern  
Tel. Telephone  
ThOD Theoretical oxygen demand  
TOC Total organic carbon  
TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)  
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods  
VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))  
VOC Volatile organic compounds  
vPvB very persistent and very bioaccumulative  
WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).  
WHO World Health Organization  
wwt wet weight

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.  
No responsibility.

These statements were made by:

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