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Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

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

* 1.1. Product identifier

Trade name/designation:

RAVENOL Kettenöl Reiniger Spray

Article No.:

1360304

UFI:

DKUN-4SK2-SJIM-A90S

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

Use of the substance/mixture:

Technical Spray

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Ravensberger Schmierstoffvertrieb GmbH

Produktsicherheit

Jöllenbecker Str. 2

33824 Werther

Germany

Telephone: +49 5203 9719 0

Telefax: +49 5203 9719 40

E-mail: kontakt@ravenol.de

Website: www.ravenol.de

E-mail (competent person): sdb@ravenol.de

1.4. Emergency telephone number

24 hr. emergency phone number, 24h: +49 700 24 112 112 (Contract ID: RAV) / +1 872 5888271 (Contract ID: RAV)

SECTION 2: Hazards identification

* 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

Hazard classes and hazard categories	Hazard statements	Classification procedure
Aerosols (<i>Aerosol 1</i>)	H222; H229: Extremely flammable aerosol. Pressurised container: May burst if heated.	On basis of test data.
Aspiration hazard (<i>Asp. Tox. 1</i>)	H304: May be fatal if swallowed and enters airways.	Calculation method.
Skin corrosion/irritation (<i>Skin Irrit. 2</i>)	H315: Causes skin irritation.	Calculation method.
STOT-single exposure (<i>STOT SE 3</i>)	H336: May cause drowsiness or dizziness.	Calculation method.
Hazardous to the aquatic environment (<i>Aquatic Chronic 2</i>)	H411: Toxic to aquatic life with long lasting effects.	Calculation method.



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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms:



GHS02
Flame



GHS07
Exclamation mark



GHS09
Environment

Signal word: Danger

Hazard components for labelling:

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

Hazard statements for physical hazards	
H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.

Hazard statements for health hazards	
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.

Hazard statements for environmental hazards	
H411	Toxic to aquatic life with long lasting effects.

Supplemental hazard information: none

Precautionary statements	
P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.

Precautionary statements Prevention	
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 and spray.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves and eye/face protection.

Precautionary statements Response	
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor/Emergency telephone number if you feel unwell.
P332 + P313	If skin irritation occurs: Get medical advice/attention.

Precautionary statements Storage	
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Precautionary statements Disposal	
P501	Dispose of contents/container to an appropriate recycling or disposal facility.

2.3. Other hazards

Other adverse effects:

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Additional information:

Regulation (EC) No. 648/2004 [Detergents regulation]: Contains: > 30% Hydrocarbons, aliphatic



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Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
EC No.: 921-024-6 REACH No.: 01-2119475514-35	Hydrocarbons, C6-C7, n-alkanes, iso-alkanes, cyclics, <5% n-hexane Aquatic Chronic 2 (H411), Asp. Tox. 1 (H304), Flam. Liq. 2 (H225), STOT SE 3 (H336), Skin Irrit. 2 (H315) Danger	50 - < 100 Vol-%
CAS No.: 124-38-9 EC No.: 204-696-9	carbon dioxide Substance with a community workplace exposure limit.	3 - < 5 Vol-%

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures*** 4.1. Description of first aid measures****General information:**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove victim out of the danger area. Remove contaminated, saturated clothing. If unconscious but breathing normally, place in recovery position and seek medical advice. Do not leave affected person unattended.

Following inhalation:

Provide fresh air. Consult a doctor immediately in the case of inhaling spray mist and show him packing or label.

In case of skin contact:

Causes skin irritation. After contact with skin, wash immediately with plenty of water and soap. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

After eye contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Following ingestion:

Rinse mouth thoroughly with water. Do NOT induce vomiting. Consult a doctor immediately.

Self-protection of the first aider:

Use personal protection equipment. No direct artificial respiration to be given by first aider.

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

The following symptoms may occur: Headache, Dizziness, Nausea, fatigue, skin irritation

Causes skin irritation.

May cause drowsiness or dizziness.

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

Treat symptomatically. Call a POISON CENTER.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media:**

Co-ordinate fire-fighting measures to the fire surroundings.

Carbon dioxide (CO₂)

Extinguishing powder

alcohol resistant foam

Use water spray jet to protect personnel and to cool endangered containers.

Unsuitable extinguishing media:

Full water jet

5.2. Special hazards arising from the substance or mixture

Extremely flammable aerosol. Pressurized container: May burst if heated.

Hazardous combustion products:

Nitrogen oxides (NO_x), Carbon monoxide, Carbon dioxide (CO₂), aldehydes, carbon black, Gases/vapours, toxic

*** 5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.



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5.4. Additional information

Move undamaged containers from immediate hazard area if it can be done safely. Do not inhale explosion and combustion gases. Use water spray jet to protect personnel and to cool endangered containers. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Use personal protection equipment. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Protective equipment:

Personal protection equipment: see section 8

Emergency procedures:

Remove all sources of ignition. Remove persons to safety. Provide adequate ventilation.

6.1.2. For emergency responders

Personal protection equipment:

Use appropriate respiratory protection.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

* 6.3. Methods and material for containment and cleaning up

For containment:

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up:

Clean contaminated articles and floor according to the environmental legislation.

Other information:

Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

* 7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Pressurised container: May burst if heated. Do not pierce or burn, even after use. If handled uncovered, arrangements with local exhaust ventilation should be used if possible. Do not breathe gas/vapour/aerosol.

Wear personal protection equipment (refer to section 8). When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Do not put any product-impregnated cleaning rags into your trouser pockets. Use appropriate container to avoid environmental contamination.

Fire prevent measures:

Do not spray on naked flames or any incandescent material. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Keep away from sources of ignition - No smoking.

Measures to prevent aerosol and dust generation:

Use only in well-ventilated areas.

Environmental precautions:

Shafts and sewers must be protected from entry of the product.

Advices on general occupational hygiene

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.



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7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Keep container tightly closed in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Requirements for storage rooms and vessels:

Observe legal regulations and regulations.

Hints on storage assembly:

Do not store together with:

Oxidizing agent

Pyrophoric or self-heating substances

Food and feedingstuffs

Storage class (TRGS 510, Germany): 2B - Aerosol dispensers and lighters

Further information on storage conditions:

Protect against: Frost, UV-radiation/sunlight

maximum storage temperature: 50 °C

7.3. Specific end use(s)

Recommendation:

Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

* 8.1. Control parameters

8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
CH from 1 Jan 2022	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³) ⑤ Tox: Asphyxie; Messmeth: NIOSH
BE	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,131 mg/m ³) ② 30,000 ppm (54,784 mg/m ³) ⑤ (dioxyde de) A
MAK (AT)	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³)
CZ from 1 Mar 2020	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 4,923 ppm (9,000 mg/m ³) ② 24,615 ppm (45,000 mg/m ³)
PL	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 9,000 mg/m ³ ② 27,000 mg/m ³
NO	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³) ⑤ E
IE from 17 Jan 2020	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³) ⑤ IOELV
HTP (FI) from 1 Oct 2018	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,100 mg/m ³) ⑤ Räjätys- ja louhintatyöt
LT from 15 Oct 2007	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³) ⑤ Anglies dioksidas dažnai laikomas kaip indikatorius darbo patalpose, kuriose oro teršalai susidaro dėl žmonių buvimo jose.
SE	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³) ③ 10,000 ppm (180,000 mg/m ³)



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Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
NPEL (SK)	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³)
DK	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³) ② 10,000 ppm (18,000 mg/m ³) ⑤ E
MAK (AT)	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	② 10,000 ppm (18,000 mg/m ³) ⑤ (max. 3x60 min./Schicht, Momentanwert)
VRI (FR) from 3 May 2021	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³)
BG from 6 Jan 2012	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³)
HR	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³)
ES from 1 May 2021	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,150 mg/m ³) ⑤ VLI
RO	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³)
EE from 17 Jan 2020	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³) ⑤ 8
LV	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³)
Alberta (CA)	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³) ② 30,000 ppm (54,000 mg/m ³)
BC (CA)	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm ② 15,000 ppm
IOELV (EU)	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³)
JP	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³)
WEL (GB)	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,150 mg/m ³) ② 15,000 ppm (27,400 mg/m ³)
SI from 4 Dec 2018	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³) ② 10,000 ppm (18,000 mg/m ³) ⑤ EU2
TW	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³)
KR	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³) ② 30,000 ppm (54,000 mg/m ³)
IS	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³)



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Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
HU from 6 Jan 2012	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 9,000 mg/m ³ ⑤ N
CN from 1 Jan 2007	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 9,000 mg/m ³ ② 18,000 mg/m ³
MY from 1 Jan 2000	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³)
RU from 22 Aug 2006	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 9,000 mg/m ³ ③ 27,000 mg/m ³
GR from 1 Oct 2016	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³) ② 30,000 ppm (54,000 mg/m ³)
NL from 1 Jan 2023	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³)
TR	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³)
IDLH (US) from 1 Jan 1994	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 40,000 ppm
OSHA (US)	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³)
NIOSH (US)	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³) ② 30,000 ppm (54,000 mg/m ³)
ACGIH (US)	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³) ② 30,000 ppm (54,000 mg/m ³)
Québec (CA)	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,000 mg/m ³) ② 30,000 ppm (54,000 mg/m ³)
TRGS 900 (DE)	carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9	① 5,000 ppm (9,100 mg/m ³) ② 10,000 ppm (18,200 mg/m ³) ⑤ DFG, EU

8.1.2. Biological limit values

No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
Hydrocarbons, C6-C7, n-alkanes, iso-alkanes, cyclics, <5% n-hexane EC No.: 921-024-6	2,035 mg/m ³	① DNEL worker ② Long-term - inhalation, systemic effects
Hydrocarbons, C6-C7, n-alkanes, iso-alkanes, cyclics, <5% n-hexane EC No.: 921-024-6	608 mg/m ³	① DNEL Consumer ② Long-term - inhalation, systemic effects
Hydrocarbons, C6-C7, n-alkanes, iso-alkanes, cyclics, <5% n-hexane EC No.: 921-024-6	773 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
Hydrocarbons, C6-C7, n-alkanes, iso-alkanes, cyclics, <5% n-hexane EC No.: 921-024-6	699 mg/kg bw/day	① DNEL Consumer ② Long-term - dermal, systemic effects



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Substance name	DNEL value	① DNEL type ② Exposure route
Hydrocarbons, C6-C7, n-alkanes, iso-alkanes, cyclics, <5% n-hexane EC No.: 921-024-6	699 mg/kg bw/day	① DNEL Consumer ② Long-term - oral, systemic effects

* **8.2. Exposure controls**

8.2.1. Appropriate engineering controls

See section 7. No additional measures necessary.

8.2.2. Personal protection equipment



Eye/face protection:

Suitable eye protection: Eye glasses with side protection
 DIN-/EN-Norms EN 166

Skin protection:

Hand protection

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material: ≥ 0,45 mm

Breakthrough time: 480 min

Breakthrough times and swelling properties of the material must be taken into consideration.

The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Tested protective gloves must be worn: EN ISO 374

Suitable protective clothing: Protective clothing

Respiratory protection:

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Suitable respiratory protection apparatus: Combination filtering device

Filtering device with filter or ventilator filtering device of type: AX

Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

8.2.3. Environmental exposure controls

See section 7. No additional measures necessary.

SECTION 9: Physical and chemical properties

* **9.1. Information on basic physical and chemical properties**

Appearance

Physical state: Aerosol

Colour: colourless

Odour: characteristic

Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	<i>not applicable</i>		
Initial boiling point and boiling range	88 - 105 °C		
Flash point	-12 °C		
Evaporation rate	<i>No data available</i>		
Auto-ignition temperature	> 200 °C		
Upper/lower flammability or explosive limits	0.6 - 7.2 Vol-%		
Vapour pressure	<i>No data available</i>		
Density	673 kg/m ³	20 °C	
Bulk density	<i>not applicable</i>		
Water solubility	practically insoluble		
Partition coefficient: n-octanol/water	<i>not applicable</i>		



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Parameter	Value	at °C	① Method ② Remark
Kinematic viscosity	< 7 mm ² /s	40 °C	

9.2. Other information

The information relates to the active ingredient.

SECTION 10: Stability and reactivity

10.1. Reactivity

Extremely flammable aerosol.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Extremely flammable aerosol. Pressurized container: May burst if heated. Do not expose to temperatures above 50 °C. Heating causes rise in pressure with risk of bursting.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air. Take precautionary measures against static discharge.

10.5. Incompatible materials

Oxidizing agent
Pyrophoric or self-heating substances

10.6. Hazardous decomposition products

Nitrogen oxides (NO_x), Carbon monoxide, Carbon dioxide (CO₂), carbon black, aldehydes
Gases/vapours, toxic

Further information

Do not mix with other chemicals.

SECTION 11: Toxicological information

* 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Hydrocarbons, C6-C7, n-alkanes, iso-alkanes, cyclics, <5% n-hexane	EC No.: 921-024-6
LD₅₀ oral: >5,000 mg/kg (Rat)	
LD₅₀ dermal: >2,800 - 3,100 mg/kg (Rabbit)	
LC₅₀ Acute inhalation toxicity (vapour): >25.2 mg/L 4 h (Rat)	

Acute oral toxicity:

Based on available data, the classification criteria are not met.

Acute dermal toxicity:

Based on available data, the classification criteria are not met.

Acute inhalation toxicity:

Based on available data, the classification criteria are not met.

Skin corrosion/irritation:

Causes skin irritation.

Serious eye damage/irritation:

Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation:

Based on available data, the classification criteria are not met.

Germ cell mutagenicity:

Based on available data, the classification criteria are not met.

Carcinogenicity:

Based on available data, the classification criteria are not met.

Reproductive toxicity:

Based on available data, the classification criteria are not met.

STOT-single exposure:

May cause drowsiness or dizziness.

STOT-repeated exposure:

Based on available data, the classification criteria are not met.



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Aspiration hazard:

Observe risk of aspiration if vomiting occurs.
For viscosity data, see section 9.

Additional information:

No information available.

* **11.2. Information on other hazards****Endocrine disrupting properties:**

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Other information:

No information available.

SECTION 12: Ecological information* **12.1. Toxicity**

Hydrocarbons, C6-C7, n-alkanes, iso-alkanes, cyclics, <5% n-hexane	EC No.: 921-024-6
LC ₅₀ : 1 - 10 mg/L 4 d (fish, Pimephales promelas (fathead minnow))	
LC ₅₀ : >1 - 10 mg/L 4 d (fish, Pimephales promelas (fathead minnow))	
LC ₅₀ : 8.2 mg/L	
LC ₅₀ : >1 - 10 mg/L 4 d (fish, Pimephales promelas)	
EC ₅₀ : >1 - 10 mg/L 2 d (crustaceans, Daphnia magna (Big water flea))	
EC ₅₀ : 4.5 mg/L 2 d (crustaceans, Daphnia magna (Big water flea)) OECD- Prüfrichtlinie 202	
EC ₅₀ : >1 - 10 mg/L 2 d (crustaceans, Daphnia magna)	
NOEC: 2.045 mg/L 28 d (fish, Oncorhynchus mykiss (Rainbow trout)) CONCAWE Brussel, Belgium (2010)	
NOEC: 1 mg/L 21 d (crustaceans, Daphnia magna (Big water flea)) SIDS Initial Assessment Report For SIAM	
NOEC: 1 mg/L 21 d (crustaceans, Daphnia magna)	
ErC ₅₀ : >10 - 30 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata)	
ErC ₅₀ : 10 - 30 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata) Result of epidemiological study. (1995)	
ErC ₅₀ : 10 - 30 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata)	

Aquatic toxicity:

Toxic to aquatic life with long lasting effects.

Additional ecotoxicological information:

Do not allow uncontrolled discharge of product into the environment.

* **12.2. Persistence and degradability**

Hydrocarbons, C6-C7, n-alkanes, iso-alkanes, cyclics, <5% n-hexane	EC No.: 921-024-6
Biodegradation: Yes, rapidly	

Additional information:

The product has not been tested.

* **12.3. Bioaccumulative potential**

Hydrocarbons, C6-C7, n-alkanes, iso-alkanes, cyclics, <5% n-hexane	EC No.: 921-024-6
Log K _{ow} : 5.2	
carbon dioxide	CAS No.: 124-38-9 EC No.: 204-696-9
Log K _{ow} : 0.83	

Partition coefficient: n-octanol/water:

not applicable

Accumulation / Evaluation:

The product has not been tested.

12.4. Mobility in soil

The product has not been tested.

* **12.5. Results of PBT and vPvB assessment**

Hydrocarbons, C6-C7, n-alkanes, iso-alkanes, cyclics, <5% n-hexane	EC No.: 921-024-6
Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.	



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carbon dioxide CAS No.: 124-38-9 EC No.: 204-696-9

Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

* **13.1. Waste treatment methods**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV Directive 2008/98/EC (Waste Framework Directive)

HP 3	Flammable
HP 4	Irritant — skin irritation and eye damage
HP 14	Ecotoxic

Waste code packaging

15 01 04	metallic packaging
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Waste treatment options

Appropriate disposal / Product:

Dispose of waste according to applicable legislation.

Appropriate disposal / Package:

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

13.2. Additional information

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1. UN number or ID number			
UN 1950	UN 1950	UN 1950	UN 1950
14.2. UN proper shipping name			
AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS
14.3. Transport hazard class(es)			
2.1	2.1	2.1	2.1
14.4. Packing group			
		-	
14.5. Environmental hazards			
		MARINE POLLUTANT	No data available
14.6. Special precautions for user			
Limited quantity (LQ): 1L Classification code: 5F Tunnel restriction code: (D)	Limited quantity (LQ): 1L Classification code: 5F	Limited quantity (LQ): 1L EmS-No.: F-D; S-U	No data available



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14.7. Maritime transport in bulk according to IMO instruments

No transport as bulk according to IBC Code.

SECTION 15: Regulatory information

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

15.1.1. EU legislation

Other regulations (EU):

Hazard categories:

- P3b 'Flammable' aerosols Category 1 or 2, not containing flammable gases Category 1 or 2 nor flammable liquids Category 1
- E2 Hazardous to the Aquatic Environment in Category Chronic 2

Use restriction according to REACH annex XVII, no.: 3, 40

Aerosol Directive (75/324/)

Maximum VOC content of the product in a ready to use condition: 652,81 g/L

Directive 2004/42/EC on the limitation of emissions of volatile organic compounds:

Volatile organic compounds (VOC) content in percent by weight: 97 weight-%

15.1.2. National regulations

[DE] National regulations

Restrictions of occupation

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Störfallverordnung (12. BImSchV)

for substances contained in the product:

Hazard categories:

- P3b 'Flammable' aerosols Category 1 or 2, not containing flammable gases Category 1 or 2 nor flammable liquids Category 1
- E2 Hazardous to the Aquatic Environment in Category Chronic 2

Technische Anleitung zur Reinhaltung der Luft (TA-Luft)

Remark:

To follow: 5.2.5

Water hazard class

WGK:

2 - obviously hazardous to water

Source:

Self-classification (mixture; calculation rule).

Technische Regeln für Gefahrstoffe

TRGS 500

TRGS 510

Berufsgenossenschaftliche Vorschriften (DGUV-Vorschriften)

Berufsgenossenschaftliche Informationen (DGUV-Informationen) 868

Berufsgenossenschaftliche Regeln (DGUV-Regeln) 189, 190, 192, 195

[SK] National regulations

Other regulations, restrictions and prohibition regulations

Zákon č. 67/2010 Z.z., o podmienkach uvedenia chemických látok a chemických zmesí na trh a o zmene a

doplnení niektorých zákonov (chemický zákon).

Zákon č. 124/2006 Z. z. o bezpečnosti a ochrane zdravia pri práci a o zmene a doplnení niektorých zákonov.

Zákon NR SR č. 355/2007 Z.z., o ochrane, podpore a rozvoji verejného zdravia a o zmene a doplnení niektorých

zákonov, v znení neskorších predpisov.

Nariadenie vlády SR 471/2011 Z.z., ktorým sa mení nariadenie vlády Slovenskej republiky č. 355/2006 Z. z.

o ochrane zamestnancov pred rizikami súvisiacimi s expozíciou chemickým faktorom pri práci, Príloha č.1.

Zákon č. 79/2015 Z.z. o odpadoch v znení neskorších predpisov.



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Vyhláška MV SR č. 96/2004 Z.z., ktorou sa ustanovujú zásady protipožiarnej bezpečnosti pri manipulácii a skladovaní horľavých kvapalín, ťažkých vykurovacích olejov a rastlinných a živočíšnych tukov a olejov. Zákon NR SR č. 137/2010 Z.z. o ovzduší v znení neskorších predpisov. Zákon č. 319/2013 Z.z. o pôsobnosti orgánov štátnej správy pre sprístupňovanie biocídnych výrobkov na trh a ich používanie a o zmene a doplnení niektorých zákonov (biocídny zákon).

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

* 16.1. Indication of changes

1.1.	Product identifier
2.1.	Classification of the substance or mixture
2.2.	Label elements
3.2.	Mixtures
4.1.	Description of first aid measures
4.2.	Most important symptoms and effects, both acute and delayed
4.3.	Indication of any immediate medical attention and special treatment needed
5.3.	Advice for firefighters
6.3.	Methods and material for containment and cleaning up
7.1.	Precautions for safe handling
8.1.	Control parameters
8.2.	Exposure controls
9.1.	Information on basic physical and chemical properties
11.1.	Information on hazard classes as defined in Regulation (EC) No 1272/2008
11.2.	Information on other hazards
12.1.	Toxicity
12.2.	Persistence and degradability
12.3.	Bioaccumulative potential
12.5.	Results of PBT and vPvB assessment
13.1.	Waste treatment methods
14.2.	UN proper shipping name
14.5.	Environmental hazards
15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture
16.1.	Indication of changes
16.2.	Abbreviations and acronyms
16.3.	Key literature references and sources for data
16.4.	Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]
16.5.	List of relevant hazard statements and/or precautionary statements from sections 2 to 15

* 16.2. Abbreviations and acronyms

ACGIH	American Conference of Governmental Industrial Hygienists
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
DIN	German Institute for Standardization / German Industrial Standard
DNEL	derived no-effect level
EC ₅₀	Effective Concentration 50%
ES	Exposure scenario
EWC	European Waste Catalogue
IBC	Intermediate Bulk Container
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
KG	body weight
LC ₅₀	Lethal (fatal) Concentration 50%



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LD₅₀ Lethal (fatal) Dose 50%
 MAK Maximum concentration in the workplace air (CH)
 NFPA National Fire Protection Association
 NIOSH National Institute for Occupational Safety & Health
 NOEC No Observed Effect Concentration
 OECD Organisation for Economic Cooperation and Development
 OSHA Occupational Safety & Health Administration
 PBT persistent and bioaccumulative and toxic
 PNEC Predicted No Effect Concentration
 REACH Registration, Evaluation and Authorization of Chemicals
 RID Dangerous goods regulations for transport by rail
 TRGS Technische Regeln für Gefahrstoffe
 UN United Nations
 VOC Volatile organic compounds

See overview table at www.euphrac.eu

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

* **16.3. Key literature references and sources for data**

EC 1907/2006 - REACH Regulation
 1272/2008 EC - Regulation on classification, labeling and packaging of substances and mixtures, and amending Directives 67/548/EEC and 1999/45/EC and Regulation (EC) No 1907/2006
 Regulation (EC) No 1907/2006 (REACH), Annex II
 European Chemicals Agency (ECHA), C & L classification and labeling inventory
 European Chemicals Agency (ECHA), ECHA CHEM Registered substances
 OECD The Global Portal to Information on Chemical Substances (ChemPortal)
 Institute for Occupational Safety and Health of the German Social Accident Insurance (IFA): GESTIS substance database and International limit values for chemical substances
 Federal Environment Agency, Section IV 2.4: Documentation and Information Centre substances hazardous to water Rigoletto (catalog substances hazardous to water)

* **16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]**

Hazard classes and hazard categories	Hazard statements	Classification procedure
Aerosols (<i>Aerosol 1</i>)	H222; H229: Extremely flammable aerosol. Pressurised container: May burst if heated.	On basis of test data.
Aspiration hazard (<i>Asp. Tox. 1</i>)	H304: May be fatal if swallowed and enters airways.	Calculation method.
Skin corrosion/irritation (<i>Skin Irrit. 2</i>)	H315: Causes skin irritation.	Calculation method.
STOT-single exposure (<i>STOT SE 3</i>)	H336: May cause drowsiness or dizziness.	Calculation method.
Hazardous to the aquatic environment (<i>Aquatic Chronic 2</i>)	H411: Toxic to aquatic life with long lasting effects.	Calculation method.

* **16.5. List of relevant hazard statements and/or precautionary statements from sections 2 to 15**

Hazard statements	
H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

16.6. Training advice

No data available

16.7. Additional information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.



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* Data changed compared with the previous version.