

# SAFETY DATA SHEET ACCORDING TO REGULATION (EC) 1907/2006

**Product name: Steinschlag-Spray grau REZ1210**

**Creation date: 11.10.2021, Revision: 17.07.2023, version: 2.3**



## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1 Product identifier

**Product name**

Steinschlag-Spray grau REZ1210



<https://my.chemius.net/p/Gqxt3V/en/pd/en>

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

**Relevant identified uses**

An agent for protection against corrosion.

**Uses advised against**

No information.

### 1.3 Details of the supplier of the safety data sheet

**Supplier**

Peter Kwasny GmbH  
Heilbronner Str. 96  
D-74831 Gundelsheim, Germany  
049-(0)6269-95-20  
labor@kwasny.de

### 1.4 Emergency Telephone Number

**Emergency**

112

**Supplier**

+49 6269 95 20

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

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

Aerosol 1; H222 Extremely flammable aerosol.

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

Asp. Tox. 1; H304 May be fatal if swallowed and enters airways.

Skin Irrit. 2; H315 Causes skin irritation.

Eye Irrit. 2; H319 Causes serious eye irritation.

STOT SE 3; H336 May cause drowsiness or dizziness.

Aquatic Chronic 2; H411 Toxic to aquatic life with long lasting effects.

### 2.2 Label elements

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

**Signal word: DANGER**

H222 Extremely flammable aerosol.

H229 Pressurised container: May burst if heated.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

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.

P273 Avoid release to the environment.

P302 + P352 + P362 + P364 IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTRE/doctor if you feel unwell.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.

P501 Dispose of contents/container in accordance with local/national regulation.

**Contains:**

hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

**2.3 Other hazards****PBT/vPvB**

No information.

**Endocrine disrupting properties**

No information.

**Additional information**

No information.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances**

For mixtures see 3.2.

**3.2 Mixtures**

Name	CAS EC Index Reach	%	Classification according to Regulation (EC) No 1272/2008 (CLP)	Specific Concentration Limits	Notes for substances
dimethyl ether	115-10-6 204-065-8 603-019-00-8 01-2119472128-37	25-50	Flam. Gas 1; H220 Press. Gas; H280	/	U
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	64742-49-0 927-510-4 - 01-2119475515-33	10-50	Flam. Liq. 2; H225 Asp. Tox. 1; H304 Skin Irrit. 2; H315 STOT SE 3; H336 Aquatic Chronic 2; H411	/	/

ethyl methyl ketone	78-93-3 201-159-0 606-002-00-3 01-2119457290-43	<10	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 EUH066	/	/
hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics	- 920-750-0 - 01-2119473851-33	2,5-10	Flam. Liq. 2; H225 Asp. Tox. 1; H304 STOT SE 3; H336 Aquatic Chronic 2; H411 EUH066	/	/
ethyl acetate	141-78-6 205-500-4 607-022-00-5	2,5-10	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 EUH066	/	/
cyclohexane	110-82-7 203-806-2 601-017-00-1	2,5-10	Flam. Liq. 2; H225 Asp. Tox. 1; H304 Skin Irrit. 2; H315 STOT SE 3; H336 Aquatic Acute 1; H400; M = 1 Aquatic Chronic 1; H410; M = 1	/	/
hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	- 921-024-6 - 01-2119475514-35	<2,5	Flam. Liq. 2; H225 Asp. Tox. 1; H304 Skin Irrit. 2; H315 STOT SE 3; H336 Aquatic Chronic 2; H411	/	/
hydrocarbons, C9, aromatics	64742-95-6 918-668-5 - 01-2119455851-35	<2,5	Flam. Liq. 3; H226 Asp. Tox. 1; H304 STOT SE 3; H335 STOT SE 3; H336 Aquatic Chronic 2; H411 EUH066	/	P
n-hexane	110-54-3 203-777-6 601-037-00-0	<1	Flam. Liq. 2; H225 Asp. Tox. 1; H304 Skin Irrit. 2; H315 STOT SE 3; H336 Repr. 2; H361F STOT RE 2; H373 Aquatic Chronic 2; H411	STOT RE 2; H373; C ≥ 5%	/

#### Notes for substances

P	<p>The harmonised classification as a carcinogen or mutagen applies unless it can be shown that the substance contains less than 0,1 % w/w benzene (Einecs No 200-753-7), in which case a classification in accordance with Title II of this Regulation shall be performed also for those hazard classes.</p> <p>Where the substance is not classified as a carcinogen or mutagen, at least the precautionary statements (P102-)P260-P262-P301 + P310-P331 shall apply.</p>
U	<p>When put on the market gases have to be classified as 'Gases under pressure', in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case. The following codes are assigned:</p> <p>Press. Gas (Comp.) Press. Gas (Liq.) Press. Gas (Ref. Liq.) Press. Gas (Diss.)</p> <p>Aerosols shall not be classified as gases under pressure (See Annex I, Part 2, Section 2.3.2.1, Note 2).</p>

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of first aid measures

#### General notes

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Never give anything by mouth to an unconscious person. Place patient in recovery position and ensure airway patency.

**Following inhalation**

Remove patient to fresh air - move out of dangerous area. Keep at rest in a position comfortable for breathing. If symptoms develop and persist, seek medical attention. If breathing is irregular or respiratory arrest occurs provide artificial respiration. Seek medical help immediately. In case of unconsciousness bring patient into stable side position and seek medical attention.

**Following skin contact**

Take off all contaminated clothing. Areas of the body that have come into contact with the product must be rinsed with water. If symptoms develop and persist, seek medical attention. Wash contaminated clothes and shoes before reuse.

**Following eye contact**

Immediately flush eyes with running water, keeping eyelids apart. If irritation persists, seek professional medical attention.

**Following ingestion**

Not likely. Accidental ingestion: Rinse mouth thoroughly with water. Do not induce vomiting! Immediately consult a doctor. Show the physician the safety data sheet or label.

**4.2 Most important symptoms and effects, both acute and delayed****Following inhalation**

Vapours may cause drowsiness and dizziness. Excessive exposure to spray mist, fog, or vapours may cause respiratory irritation. Coughing, sneezing, nasal discharge, labored breathing.

**Following skin contact**

Irritating to the skin. Itching, redness, pain.

**Following eye contact**

Strongly irritates the eyes. Redness, tearing, pain.

**Following ingestion**

May cause abdominal discomfort. May cause nausea/vomiting and diarrhea. Irritates mucous membranes in the mouth, throat, esophagus and in gastrointestinal area. May be fatal if swallowed and enters airways.

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

Treat symptomatically.

**SECTION 5: FIREFIGHTING MEASURES****5.1 Extinguishing media****Suitable extinguishing media**

Carbon dioxide (CO<sub>2</sub>).

Sand.

Fire extinguishing powder.

Foam.

**Unsuitable extinguishing media**

Water.

**5.2 Special hazards arising from the substance or mixture****Hazardous combustion products**

In case of a fire toxic gases can be generated; do not inhale gases/smoke. In the event of fire the following can be generated: carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>). Various hydrocarbons.

Aldehydes. Soot.

**5.3 Advice for firefighters****Protective actions**

In case of fire or heating do not breathe fumes/vapours. Vapours can form explosive mixtures with air. Prolonged heating

can cause an explosion. In case of fire aerosols can explode and be propelled to considerable distances in different directions. Cool containers at risk with water spray. If possible remove containers from endangered area. No action shall be taken involving any personal risk or without suitable training.

#### Special protective equipment for fire-fighters

Firefighters should wear appropriate protective clothing for firefighters (including helmets, protective boots and gloves) (EN 469) and self-contained breathing apparatus (SCBA) with a full face-piece (EN 137).

#### Additional information

Contaminated extinguishing agents must be disposed of in accordance with the regulations; do not allow to reach the sewage system.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

##### Protective equipment

Use personal protective equipment (Section 8).

##### Precautionary measures

Ensure adequate ventilation. Keep away from sources of ignition and/or heat; No smoking!

##### Emergency procedures

Evacuate the danger zone. Prevent access to unprotected personnel. Prevent access to unauthorised personnel. Avoid contact with skin, eyes and clothing. Do not breathe vapour or mist.

#### For emergency responders

Use personal protective equipment.

### 6.2 Environmental precautions

Do not allow product to reach water/drains/sewage systems or permeable soil. If accidental large entry into water or ground occurs, inform responsible authorities.

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

#### For containment

Stem the spill if this does not pose risks.

#### For cleaning up

Prevent release into the sewer, water, basements or confined areas. Collect the spray cans and hand them over to an authorized waste disposal contractor. Release of liquid because of damaged aerosol can (release of large quantities): In case of bigger spill, dam the spillage, pump the liquid into appropriate labelled containers, absorb the residue with absorbent material and dispose of according to local regulations. Do not absorb spillage with sawdust or other combustible material. Dispose in accordance with applicable regulations (see Section 13).

#### OTHER INFORMATION

No information.

### 6.4 Reference to other sections

See also sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

#### Protective measures

##### Measures to prevent fire

Ensure adequate ventilation. Protect from open fire and other sources of ignition or heat. Pressurized container; protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Vapours and air

form explosive mixtures. Take precautionary measures against static discharges. Use spark-proof tools.

#### Measures to prevent aerosol and dust generation

Use general or local exhaust ventilation to prevent inhaling vapours and aerosols.

#### Measures to protect the environment

Avoid release to the environment.

#### Other measures

No information.

#### Advice on general occupational hygiene

Refer to instructions on label and regulations for safety and health at work. Wear suitable protective equipment; see Section 8. Consider measures required in Section 8 of this safety data sheet. Use good personal hygiene practices – wash hands at breaks and when done working with material. Do not eat, drink or smoke while working. Avoid contact with skin, eyes and clothes. Do not breathe vapours/mist.

## 7.2 Conditions for safe storage, including any incompatibilities

#### Technical measures and storage conditions

Store in accordance with local regulations. Keep in cool and well ventilated area. Keep in a cool, dry and well ventilated place. Keep in well closed containers. Keep away from sources of ignition - no smoking. Protect against heat and direct sunlight. Keep away from oxidising substances. Keep away from food, drink and animal feeding stuffs.

#### Packaging materials

No information.

#### Requirements for storage rooms and vessels

Do not store in unlabelled containers.

#### Storage class

No information.

#### Further information on storage conditions

No information.

## 7.3 Specific end use(s)

#### Recommendations

No information.

#### Industrial sector specific solutions

No information.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Occupational Exposure limit values

Name	mg/m <sup>3</sup>	ml/m <sup>3</sup>	Short-term value mg/m <sup>3</sup>	Short-term value ml/m <sup>3</sup>	Remark	Biological Tolerance Values
ethyl acetate	734	/	1468	/	/	/
Butan-2-one (methyl ethyl ketone) (78-93-3)	600	200	899	300	Sk, BMGV	70 µmol butan-2- one/L in urine - Post shift 70 µmol butan-2- one/L in urine - Post shift
n-Hexane (110-54-3)	72	20	/	/	/	/
Cyclohexane (110- 82-7)	350	100	1050	300	/	/
Dimethyl ether (115-10-6)	766	400	958	500	/	/
Ethyl acetate (141- 78-6)	734	200	1468	400	/	/

#### Information on monitoring procedures

BS EN 14042:2003 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. BS EN 689:2018 Workplace exposure. Measurement of exposure by inhalation to chemical agents. Strategy for testing compliance with occupational exposure limit values. BS EN 482:2021 Workplace exposure. Procedures for the determination of the concentration of chemical agents. Basic performance requirements.

#### DNEL/DMEL values

##### For product

No information.

##### For components

Name	Type	Exposure route	exp. frequency	Remark	value
dimethyl ether	Worker	inhalation	long term systemic effects	/	1894 mg/m <sup>3</sup>
dimethyl ether	Consumer	inhalation	long term systemic effects	/	471 mg/m <sup>3</sup>
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Worker	inhalation	long term systemic effects	/	2085 mg/m <sup>3</sup>
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Worker	dermal	long term systemic effects	/	300 mg/kg bw/day
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Consumer	inhalation	long term systemic effects	/	447 mg/m <sup>3</sup>
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Consumer	dermal	long term systemic effects	/	149 mg/kg bw/day
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Consumer	oral	long term systemic effects	/	149 mg/kg bw/day
hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics	Worker	inhalation	long term systemic effects	/	2035 mg/m <sup>3</sup>
hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics	Worker	dermal	long term systemic effects	/	773 mg/kg bw/day
hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics	Consumer	inhalation	long term systemic effects	/	608 mg/m <sup>3</sup>
hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics	Consumer	dermal	long term systemic effects	/	699 mg/kg bw/day
hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics	Consumer	oral	long term systemic effects	/	699 mg/kg bw/day

#### PNEC values

##### For product

No information.

##### For components

Name	Exposure route	Remark	value
dimethyl ether	fresh water	/	0.155 mg/L
dimethyl ether	water, intermittent release	fresh water	1.549 mg/L
dimethyl ether	marine water	/	0.016 mg/L
dimethyl ether	water treatment plant	/	160 mg/L
dimethyl ether	fresh water sediment	dry weight	0.681 mg/kg
dimethyl ether	marine water sediment	dry weight	0.069 mg/kg
dimethyl ether	soil	dry weight	0.045 mg/kg

## 8.2 Exposure controls

Appropriate engineering control

Substance/mixture related measures to prevent exposure during identified uses

Use good personal hygiene practices – wash hands at breaks and when done working with material. Do not eat, drink or smoke while working. Avoid contact with skin, eyes and clothes. Do not breathe vapours/aerosols. If technical measures to reduce workers' exposure are not sufficient, and the limit values of hazardous substances in the air are exceeded, it is necessary to use personal protective equipment.

#### Structural measures to prevent exposure

No information.

#### Organisational measures to prevent exposure

Remove all contaminated clothes immediately and wash them before reuse.

#### Technical measures to prevent exposure

Provide good ventilation and local exhaust in areas with increased concentration. Keep away from food, drink and animal feeding stuffs.

#### Personal protective equipment

##### Eye and face protection

Safety glasses with side protection (EN ISO 16321-1:2022).

##### Hand protection

Protective gloves (BS EN ISO 374). The product consists of various substances, therefore the resistance of gloves can not be calculated and has to be tested before use.

#### Appropriate materials

##### Skin protection

Cotton protective clothing and shoes that cover the entire foot (EN ISO 20345:2022). Protective antistatic clothing BS EN 1149 (1:2006, 2:1997 and 3:2004, 5:2018), protective antistatic shoes (BS EN ISO 20345:2022). Choose body protection according to the activity and possible exposure.

##### Respiratory protection

In case of insufficient ventilation wear suitable respiratory protection. If the concentration limit values are exceeded, it is necessary to wear appropriate respiratory protection. Wear suitable protective breathing mask (BS EN 136) with filter A2-P2 (BS EN 14387). For dust/gas/ vapor concentrations above the applicable filter limit, in case of oxygen concentrations below 17% or in vague conditions, autonomous self-contained breathing apparatus should be used, according to standard BS EN 137, BS EN 138.

##### Thermal hazards

No information.

#### Environmental exposure controls

##### Substance/mixture related measures to prevent exposure

No information.

##### Instruction measures to prevent exposure

No information.

##### Organisational measures to prevent exposure

No information.

##### Technical measures to prevent exposure

Prevent release into the environment.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

#### Physical state

liquid - aerosol

#### Colour

gray

#### Odour

No information.

#### Important health, safety and environmental information

Odour threshold	No information.
Melting point/Freezing point	No information.
Boiling point or initial boiling point and boiling range	No information.
Flammability	No information.



Lower and upper explosion limit	3.3 — 26.2 vol % (propellant)
Flash point	No information.
Auto-ignition temperature	No information.
Decomposition temperature	No information.
pH	No information.
Viscosity	No information.
Solubility	No information.
Partition coefficient	No information.
Vapour pressure	60 hPa at 20 °C 306 hPa at 50 °C
Density and/or relative density	Density: 0.958 kg/L at 20 °C (data refers to the liquid portion of the product)
Relative vapour density	No information.
Particle characteristics	No information.

## 9.2 OTHER INFORMATION

Weight organic solvents	632 g/l (VOC) 76 % (VOC)
Explosive properties	No information.

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity

Stable under recommended transport or storage conditions.

### 10.2 Chemical stability

Product is stable under normal conditions of use, recommended handling and storage conditions.

### 10.3 Possibility of hazardous reactions

The product is stable under recommended storage and handling conditions.

### 10.4 Conditions to avoid

Avoid all possible sources of ignition (spark or flame). Do not expose to heat and direct sunlight. Do not store above 50°C.

### 10.5 Incompatible materials

Oxidants.

### 10.6 Hazardous decomposition products

In case of fire/explosion vapours/gases that pose a health hazard are released.

## SECTION 11: TOXICOLOGICAL INFORMATION

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

(a) Acute toxicity  
For components

Name	Exposure route	Type	Species	Time	value	Method	Remark
dimethyl ether	Inhalation (gases)	LC <sub>50</sub>	rat	4 h	309 mg/l	/	/
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	dermal	LD <sub>50</sub>	rat	24 h	> 2920 mg/kg bw	/	/
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	oral	LD <sub>50</sub>	rat	/	> 5840 mg/kg bw	/	/
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	inhalation (vapours)	LC <sub>50</sub>	rat	4 h	> 23300 mg/m <sup>3</sup>	OECD 403	/
ethyl methyl ketone	oral	LD <sub>50</sub>	rat	/	> 2193 mg/kg	OECD 423	/
ethyl methyl ketone	inhalation	LC <sub>50</sub>	rat	4 h	34 mg/l	/	/
ethyl methyl ketone	dermal	LD <sub>50</sub>	rabbit	/	> 5000 mg/kg	/	OECD 402
hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics	oral	LD <sub>50</sub>	rat	/	> 5000 mg/kg	/	/
hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics	inhalation	LC <sub>50</sub>	rat	/	> 23.3 mg/l	/	/
hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics	dermal	LD <sub>50</sub>	rabbit	/	> 2800 mg/kg	/	/
ethyl acetate	oral	LD <sub>50</sub>	rabbit	/	4935 mg/kg	/	/
ethyl acetate	inhalation	LC <sub>50</sub>	rat	4 h	1600 mg/l	/	/
cyclohexane	oral	LD <sub>50</sub>	rat	/	12705 mg/kg	/	/
cyclohexane	inhalation	LC <sub>50</sub>	rabbit	/	89600 mg/l	/	/
hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	oral	LD <sub>50</sub>	rabbit	/	> 5840 mg/kg	/	/
hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	dermal	LD <sub>50</sub>	rabbit	/	> 2920 mg/kg	/	/
hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	inhalation	LC <sub>50</sub>	rat	4 h	> 25.2 mg/l	/	/
hydrocarbons, C9, aromatics	oral	LD <sub>50</sub>	rat	/	3592 mg/kg	/	/
hydrocarbons, C9, aromatics	dermal	LD <sub>50</sub>	rabbit	/	> 3160 mg/kg	/	/
hydrocarbons, C9, aromatics	inhalation	LC <sub>50</sub>	rat	4 h	> 6193 mg/l	/	/

## Additional information

The product is not classified as acutely toxic.

(b) Skin corrosion/irritation  
For components

Name	Species	Time	result	Method	Remark
dimethyl ether	/	/	May cause frostbite.	/	/

hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	/	/	Irritating.	/	/
ethyl methyl ketone	rabbit	4 h	Non-irritant.	OECD 404	/
ethyl methyl ketone	/	/	/	/	Repeated exposure may cause skin dryness or cracking.

**Additional information**

Causes skin irritation.

**(c) Serious eye damage/irritation****For components**

Name	Exposure route	Species	Time	result	Method	Remark
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	/	/	/	Not classified.	/	/
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	/	/	/	Contact with eyes may cause irritation.	/	/
ethyl methyl ketone	/	rabbit	/	Irritating.	OECD 405	/

**Additional information**

Causes serious eye irritation.

**(d) Respiratory or skin sensitisation****For components**

Name	Exposure route	Species	Time	result	Method	Remark
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	-	/	/	Not classified.	/	/
ethyl methyl ketone	-	guinea pig	/	Non sensitising.	OECD 406	Buehler test

**Additional information**

The product is not classified as sensitising.

**(e) (Germ cell) mutagenicity****For components**

Name	Type	Species	Time	result	Method	Remark
dimethyl ether	/	/	/	The chemical is not classified as mutagenic.	/	/
dimethyl ether	in-vitro mutagenicity	/	/	Negative.	Ames test, OECD 471	/
dimethyl ether	in-vitro mutagenicity	Human (lymphocytes)	/	Negative.	OECD 473	/
dimethyl ether	in-vivo mutagenicity	<i>Drosophila melanogaster</i>	/	Negative.	OECD 477	/
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Genotoxicity	/	/	Negative.	/	/
ethyl methyl ketone	in-vitro mutagenicity	/	/	Negative.	/	/
ethyl methyl ketone	in-vivo mutagenicity	/	/	Negative.	/	/
ethyl methyl ketone	in-vitro mutagenicity	rat (hepatocytes)	/	Negative.	OECD 473	/
ethyl methyl ketone	in-vitro mutagenicity	mouse (lymphocytes)	/	Negative.	OECD 476	/
ethyl methyl ketone	in-vitro mutagenicity	Salmonella typhimurium	/	Negative.	OECD 471	/
ethyl methyl ketone	in-vivo mutagenicity	mouse	/	Negative.	OECD 474	/

**(f) Carcinogenicity****For components**

Name	Exposure route	Type	Species	Time	value	result	Method	Remark
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dimethyl ether	inhalation (vapours)	NOAEL	rat	2 years	mg/l	Animal testing did not show any carcinogenic effects.	OECD 453	/
dimethyl ether	/	/	/	/	/	The chemical is not classified as carcinogenic.	/	/
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	/	/	/	/	/	Substance is not classified as carcinogenic.	/	/
ethyl methyl ketone	/	/	/	/	/	Not expected to be carcinogenic.	/	/

**(g) Reproductive toxicity**

For components

Name	Reproductive toxicity type	Type	Species	Time	value	result	Method	Remark
dimethyl ether	Reproductive toxicity	inhalation	/	/	47 mg/L	Animal testing did not show any effects on fertility.	OECD 452	/
dimethyl ether	Maternal toxicity	NOAEL	rat	/	5000 ppm	/	OECD 414	Inhalation
dimethyl ether	Teratogenicity	NOAEL	rat	/	40000 ppm	/	OECD 414	Inhalation
dimethyl ether	Developmental toxicity	NOAEL	rat	/	40000 ppm	/	OECD 414	Inhalation
dimethyl ether	inhalation	NOAEL	rat	/	20000 ppm	/	OECD 414	Embryo-fetal development
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Reproductive toxicity	/	rat	/	/	The results of animal studies gave no indication of a fertility impairing effect.	/	/
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Developmental toxicity	/	rat	/	/	Did not show teratogenic effects in animal experiments.	/	/
ethyl methyl ketone	Teratogenicity	/	/	/	/	Did not show teratogenic effects in animal experiments.	/	/
ethyl methyl ketone	Reproductive toxicity	/	/	/	/	Adverse effects on fertility are not expected.	/	Read-across
ethyl methyl ketone	Teratogenicity	NOAEC	rat	18 days	1002 ppm	Based on available data, the classification criteria are not met.	OECD 414	7 h per day
ethyl methyl ketone	Teratogenicity	LOAEC	rat	18 days	3000 ppm	Decrease in body weight	OECD 414	7 h per day
n-hexane	Reproductive toxicity	/	/	/	/	Suspected of damaging fertility.	/	/

**Summary of evaluation of the CMR properties**

The product is not classified as carcinogenic, mutagenic or toxic for reproduction.

**(h) STOT-single exposure**

For components

Name	Exposure route	Type	Species	Time	Exposure	organ	value	result	Method	Remark
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	inhalation	-	/	/	/	/	/	May cause effects on the central nervous system.	/	high vapours concentrations
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	inhalation	-	/	/	/	/	/	Symptoms: nausea, unconsciousness.	/	high vapours concentrations
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	inhalation	-	/	/	/	/	/	Symptoms: mucous membrane irritation.	/	high vapours concentrations
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	inhalation	-	/	/	/	/	/	May cause respiratory irritation.	/	high vapours concentrations
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	oral	-	/	/	/	/	/	May cause irritation of the digestive tract.	/	/
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	-	-	/	/	/	/	/	May cause drowsiness or dizziness.	/	/
ethyl methyl ketone	-	-	/	/	/	central nervous system	/	May cause drowsiness or dizziness.	/	/
ethyl methyl ketone	inhalation	-	/	/	/	/	/	Headache, dizziness, fatigue, nausea and vomiting.	/	high vapours concentrations

**Additional information**

May cause drowsiness or dizziness.

**(i) STOT-repeated exposure****For components**

Name	Exposure route	Type	Species	Time	Exposure	organ	value	result	Method	Remark
dimethyl ether	Repeated dose toxicity	NOEL	rat	2 years	/	/	47 mg/L	/	OECD 452	inhalation
ethyl methyl ketone	Repeated dose toxicity	NOAEC	rat	4 months	/	/	5041 ppm	Tests showed no adverse effects.	OECD 413	inhalation (vapours); 6 h per day
ethyl methyl ketone	inhalation	-	/	/	/	/	/	Repeated or prolonged exposure may cause dermatitis.	/	high vapours concentrations

**Additional information**

STOT RE (repeated exposure): Not classified.

**(j) Aspiration hazard****For components**

Name	result	Method	Remark
dimethyl ether	Aspiration hazard: Not Classified.	/	/
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Aspiration into the lungs can cause lung damage.	/	The exposed person should be kept under medical surveillance for 48 hours.
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	May be fatal if swallowed and enters airways.	/	/

ethyl methyl ketone	Aspiration hazard: Not Classified.	/	/
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**Additional information**

May be fatal if swallowed and enters airways.

**Symptoms related to the physical, chemical and toxicological characteristics**

No information.

**Interactive effects**

No information.

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

No information.

**Other information**

No information.

**SECTION 12: ECOLOGICAL INFORMATION****12.1 Toxicity****Acute (short-term) toxicity****For components**

Name	Type	value	Exposure time	Species	organism	Method	Remark
dimethyl ether	LC <sub>50</sub>	> 4.1 mg/L	96 h	fish	<i>Poecilia reticulata</i>	/	Semi-static system
dimethyl ether	EC <sub>50</sub>	> 4.4 mg/L	48 h	crustacea	<i>Daphnia magna</i>	/	static system
dimethyl ether	LC <sub>50</sub>	755.5 mg/L	48 h	<i>Daphnia</i>	/	ECOSAR ECOSAR	/
dimethyl ether	EC <sub>50</sub>	154.9 mg/L	96 h	algae	/	ECOSAR ECOSAR	/
dimethyl ether	EC <sub>10</sub>	> 1600 mg/L	/	bacteria	<i>Pseudomonas putida</i>	/	static system
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	ErL <sub>50</sub>	10 - 30 mg/L	72 h	algae	<i>Pseudokirchneriella subcapitata</i>	OECD 201	/
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	EbL <sub>50</sub>	10 - 30 mg/L	72 h	algae	<i>Pseudokirchneriella subcapitata</i>	OECD 201	/
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	EL <sub>50</sub>	3 mg/L	48 h	crustacea	<i>Daphnia magna</i>	OECD 202	/
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	LL <sub>50</sub>	> 13.4 mg/L	96 h	fish	<i>Oncorhynchus mykiss</i>	OECD 203	/
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	NOELR	6.3 mg/L	72 h	algae	<i>Pseudokirchneriella subcapitata</i>	OECD 201 OECD 201	/
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	EL <sub>50</sub>	10 - 30 mg/L	72 h	algae	<i>Selenastrum capricornutum</i>	/	/
ethyl methyl ketone	LC <sub>50</sub>	2993 mg/L	96 h	fish	<i>Pimephales promelas</i>	OECD 203	static system
ethyl methyl ketone	EC <sub>50</sub>	308 mg/L	48 h	crustacea	<i>Daphnia magna</i>	OECD 202	/

ethyl methyl ketone	EC <sub>50</sub>	1972 mg/L	72 h	algae	<i>Pseudokirchneriella subcapitata</i>	OECD 201	growth rate; static system
ethyl methyl ketone	EC0	1150 mg/L	16 h	bacteria	<i>Pseudomonas putida</i>	DIN 38412	static system
hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics	EL <sub>50</sub>	3 mg/L	48 h	crustacea	<i>Daphnia magna</i>	/	/
hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics	EL <sub>50</sub>	10 - 30 mg/L	72 h	algae	<i>Selenastrum capricornutum</i>	/	/
hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics	LL <sub>50</sub>	> 13.4 mg/L	96 h	fish	<i>Oncorhynchus mykiss</i>	/	/
hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	EC <sub>50</sub>	10 mg/L	48 h	crustacea	Phaeophyta	/	/
hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	EL <sub>50</sub>	3 mg/L	48 h	crustacea	<i>Daphnia magna</i>	/	/
hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	EL <sub>50</sub>	30 - 100 mg/L	72 h	algae	<i>Selenastrum capricornutum</i>	/	/
hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	LL <sub>50</sub>	11.4 mg/L	96 h	fish	<i>Oncorhynchus mykiss</i>	/	/
hydrocarbons, C9, aromatics	EC <sub>50</sub>	7.4 mg/L	48 h	crustacea	<i>Daphnia magna</i>	/	/
hydrocarbons, C9, aromatics	EL <sub>50</sub>	3.2 mg/L	48 h	crustacea	<i>Daphnia magna</i>	/	/
hydrocarbons, C9, aromatics	EL <sub>50</sub>	2.9 mg/L	72 h	algae	<i>Selenastrum capricornutum</i>	/	/
hydrocarbons, C9, aromatics	LL <sub>50</sub>	9.2 mg/L	96 h	fish	<i>Oncorhynchus mykiss</i>	/	/

### Chronic (long-term) toxicity

#### For components

Name	Type	value	Exposure time	Species	organism	Method	Remark
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	NOELR	1 mg/l	21 days	crustacea	<i>Daphnia magna</i>	OECD 211	/
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	NOELR	1.53 mg/l	28 days	fish	<i>Oncorhynchus mykiss</i>	QSAR Petrotox QSAR Petrotox	/

## 12.2 Persistence and degradability

### Abiotic degradation, physical- and photo-chemical elimination

#### For components

Name	Environment	Type / Method	Half Time	Evaluation	Method	Remark
ethyl methyl ketone	Air	photodegradation	/	not expected	/	/
ethyl methyl ketone	water	hydrolysis	/	not expected	/	/

### Biodegradation

#### For components

Name	Type	Rate	Time	Evaluation	Method	Remark
dimethyl ether	biodegradability	5 %	28 days	not readily biodegradable	OECD 301 D	aerobic, activated sludge
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	biodegradability	98 %	28 days	readily biodegradable	OECD 301 F	/
ethyl methyl ketone	biodegradability	98 %	28 days	readily biodegradable	OECD 301 D	/

### 12.3 Bioaccumulative potential

#### Partition coefficient

##### For components

Name	Media	value	Temperature °C	pH	Concentration	Method
ethyl methyl ketone	Log Pow	0.3	40	/	/	/

#### Bioconcentration factor (BCF)

No information.

### 12.4 Mobility in soil

#### Known or predicted distribution to environmental compartments

No information.

#### Surface tension

##### For components

Name	value	Temperature °C	Concentration	Method	Remark
ethyl methyl ketone	24.8 mN/m	/	/	/	/

#### Adsorption/Desorption

##### For components

Name	Type	Criterion	value	Evaluation	Method	Remark
dimethyl ether	Soil	/	/	Moderate mobility in soil.	/	/
ethyl methyl ketone	Soil	/	/	Mobile in soil.	/	/

### 12.5 Results of PBT and vPvB assessment

No evaluation.

### 12.6 Endocrine disrupting properties

No information.

### 12.7 Other adverse effects

No information.

### 12.8 Additional information

#### For product

Toxic to aquatic life with long lasting effects. Water hazard class (WGK): 3 (Self-assessment), very hazardous for water. Do not allow to reach ground water, water courses or sewage system.

#### For components

##### **dimethyl ether**

Bioaccumulation is not expected. This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).



**hydrocarbons, C7, n-alkanes, isoalkanes, cyclics**

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

**ethyl methyl ketone**

Bioaccumulation is not expected. Partly soluble in water. This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

**SECTION 13: DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Product / Packaging disposal****Waste chemical**

Avoid release to the environment. Product and container must be disposed of safely. Dispose of in accordance with applicable waste disposal regulation. Disposal must be made according to official regulations: deliver it to authorised collector/remover/transformer of hazardous waste.

**Waste codes / waste designations according to LoW**

16 05 04\* - gases in pressure containers (including halons) containing dangerous substances

**Packaging**

Uncleaned containers should not be perforated, cut or welded. Pressurized container. Do not pierce or burn, even after use. Dispose of in accordance with applicable waste disposal regulation. Deliver completely emptied containers to approved waste disposal authorities.

**Waste codes / waste designations according to LoW**

15 01 11\* - metallic packaging containing a dangerous solid porous matrix (for example asbestos), including empty pressure containers

**Waste treatment-relevant information**

No information.

**Sewage disposal-relevant information**








No information.

**Other disposal recommendations**

No information.

**SECTION 14: TRANSPORT INFORMATION**

ADR/RID	IMDG	IATA	ADN
14.1 UN number or ID number			
UN 1950	UN 1950	UN 1950	UN 1950
14.2 UN proper shipping name			
AEROSOLS	AEROSOLS (cyclohexane)	AEROSOLS	AEROSOLS
14.3 Transport hazard class(es)			
2	2	2	2

	 	 	 
<b>14.4 Packing group</b>			
Not given/not applicable	Not given/not applicable	Not given/not applicable	Not given/not applicable
<b>14.5 Environmental hazards</b>			
YES	Marine pollutant	YES	YES
<b>14.6 Special precautions for user</b>			
Limited quantities 1 L Special provisions 190, 327, 344, 625 Packing Instructions P207, LP200 Special packing provisions PP87, RR6, L2 Transport category 2 Tunnel restriction code (D) Classification code 5F	Limited quantities 1 L EmS F-D, S-U	Limited Quantity, Packing Instructions (Ltd Qty, Pkg Inst) Y203 Limited Quantity, Maximum Net Quantity/Package (Ltd Qty, Max Net Qty/Pkg) 30 kg G Packing Instructions (Pkg Inst) 203 Maximum Net Quantity/Package (Max Net Qty/Pkg) 25 kg Special provisions A145, A167, A802	Limited quantities 1 L
<b>14.7 Maritime transport in bulk according to IMO instruments</b>			
	Goods may not be carried in bulk in bulk containers, containers or vehicles.		

## SECTION 15: REGULATORY INFORMATION

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

- Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (including last amendment Commission Regulation (EU) 2020/878)
- Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

Information according 2004/42/EC about limitation of emissions of volatile organic compounds (VOC-guideline)  
not applicable

Ingredients according to Regulation (EC) No 648/2004 on detergents  
No information.

Special instructions  
No information.

## 15.2 Chemical Safety Assessment

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

## SECTION 16: OTHER INFORMATION

### Indication of changes

7.2 Conditions for safe storage, including any incompatibilities 9.1 Information on basic physical and chemical properties  
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

### Key literature references and sources for data

No information.

### Abbreviations and acronyms

ATE - Acute Toxicity Estimate  
 ADR - Agreement concerning the International Carriage of Dangerous Goods by Road  
 ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
 CEN - European Committee for Standardisation  
 C&L - Classification and Labelling  
 CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008  
 CAS# - Chemical Abstracts Service number  
 CMR - Carcinogen, Mutagen, or Reproductive Toxicant  
 CSA - Chemical Safety Assessment  
 CSR - Chemical Safety Report  
 DMEL - Derived Minimal Effect Level  
 DNEL - Derived No Effect Level  
 DPD - Dangerous Preparations Directive 1999/45/EC  
 DSD - Dangerous Substances Directive 67/548/EEC  
 DU - Downstream User  
 EC - European Community  
 ECHA - European Chemicals Agency  
 EC-Number - EINECS and ELINCS Number (see also EINECS and ELINCS)  
 EEA - European Economic Area (EU + Iceland, Liechtenstein and Norway)  
 EEC - European Economic Community  
 EINECS - European Inventory of Existing Commercial Substances  
 ELINCS - European List of notified Chemical Substances  
 EN - European Standard  
 EQS - Environmental Quality Standard  
 EU - European Union  
 Euphrac - European Phrase Catalogue  
 EWC - European Waste Catalogue (replaced by LoW – see below)  
 GES - Generic Exposure Scenario  
 GHS - Globally Harmonized System  
 IATA - International Air Transport Association  
 ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air  
 IMDG - International Maritime Dangerous Goods  
 IMSBC - International Maritime Solid Bulk Cargoes  
 IT - Information Technology  
 IUCLID - International Uniform Chemical Information Database  
 IUPAC - International Union for Pure Applied Chemistry  
 JRC - Joint Research Centre  
 Kow - octanol-water partition coefficient  
 LC50 - Lethal Concentration to 50 % of a test population  
 LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)  
 LE - Legal Entity  
 LoW - List of Wastes (see <http://ec.europa.eu/environment/waste/framework/list.htm>)  
 LR - Lead Registrant  
 M/I - Manufacturer / Importer  
 MS - Member States  
 MSDS - Material Safety Data Sheet  
 OC - Operational Conditions  
 OECD - Organization for Economic Co-operation and Development  
 OEL - Occupational Exposure Limit

OJ - Official Journal  
OR - Only Representative  
OSHA - European Agency for Safety and Health at work  
PBT - Persistent, Bioaccumulative and Toxic substance  
PEC - Predicted Effect Concentration  
PNEC(s) - Predicted No Effect Concentration(s)  
PPE - Personal Protection Equipment  
(Q)SAR - Qualitative Structure Activity Relationship  
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006  
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail  
RIP - REACH Implementation Project  
RMM - Risk Management Measure  
SCBA - Self-Contained Breathing Apparatus  
SDS - Safety data sheet  
SIEF - Substance Information Exchange Forum  
SME - Small and Medium sized Enterprises  
STOT - Specific Target Organ Toxicity  
(STOT) RE - Repeated Exposure  
(STOT) SE - Single Exposure  
SVHC - Substances of Very High Concern  
UN - United Nations  
vPvB - Very Persistent and Very Bioaccumulative

#### List of relevant H phrases

H220 Extremely flammable gas.  
H225 Highly flammable liquid and vapour.  
H226 Flammable liquid and vapour.  
H280 Contains gas under pressure; may explode if heated.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H336 May cause drowsiness or dizziness.  
H361f Suspected of damaging fertility.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
H411 Toxic to aquatic life with long lasting effects.  
EUH066 Repeated exposure may cause skin dryness or cracking.



- Provided correct labelling of the product
- Compliance with the local legislation
- Provided correct classification of the product
- Provided adequate transport data

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