Copper Spray 500ml

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

1.1. Product identifier

Trade name/designation:

Copper Spray 500ml

Article No.:
T114002

UFI:
N8M4-DSQE-QPHJ-9405

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

Use of the substance/mixture:
Lubricating agent

1.3. Details of the supplier of the safety data sheet

Supplier:

KANDO Service GmbH
Hartleitnerstraße 3
4653 Eberstalzell
Austria
Telephone: +43 (0) 7241 213 79
Email: msds@kando.eu

1.4. Emergency telephone number

Vergiftungsinformationszentrale (VIZ), Stubenring 6, 1010 Wien, 24h: 01 406 43 43, Montag - Freitag: 8 bis 16 Uhr, Tel.: 01 406 68 98 (keine medizinische Auskunft) (Only available during office hours.)

SECTION 2: Hazards identification

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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
aerosol dispensers and lighters *(Aerosol 1)*	H222; H229: Extremely flammable aerosol. Pressurised container: May burst if heated.	
STOT-single exposure *(STOT SE 3)*	H336: May cause drowsiness or dizziness.	
Skin corrosion/irritation *(Skin Irrit. 2)*	H315: Causes skin irritation.	
Hazardous to the aquatic environment *(Aquatic Chronic 1)*	H410: Very toxic to aquatic life with long lasting effects.	
Acute toxicity (oral) *(Acute Tox. 4)*	H302: Harmful if swallowed.	

*

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, isoalkanes, cyclics, <5% n-hexane; copper

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

Hazard statements for health hazards	
H302	Harmful if swallowed.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.

Hazard statements for environmental hazards	
H410	Very toxic to aquatic life with long lasting effects.

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.
P260	Do not breathe mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing and eye protection/face protection.

Precautionary statements Response	
P302 + P352	IF ON SKIN: Wash with plenty of water and soap.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER if you feel unwell.

Precautionary statements Storage	
P403	Store in a well-ventilated place.
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.

Additional information:
Formation of explosive mixtures possible without adequate ventilation.

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

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3.2. Mixtures

Description:
Active ingredient mixture with propellant gas

Additional information:
Aerosols and containers fitted with a solid nebuliser containing substances or mixtures classified as hazardous by aspiration must not be labelled for this hazard.
The use of a TWD (Tactile Warning of Danger) is mandatory when this product is sold on the consumer market. Please note that the TWD forms part of the packaging and is not part of the classification.

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, isoalkanes, 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 **Acute Toxicity Estimate** ATE (oral) > 5,000 mg/kg ATE (dermal) > 2,920 mg/kg ATE (inhalation, gases) > 20 ppmV ATE (inhalation, vapour) > 25.2 mg/L	25 – < 50 %
CAS No.: 106-97-8 EC No.: 203-448-7 Index No.: 601-004-00-0 REACH No.: 01-2119474691-32	**Butane (with < 0,1 % butadiene (203-450-8))** Flam. Gas 1A (H220), Press. Gas (Comp.) (H280)  Danger **Acute Toxicity Estimate** ATE (inhalation, gases) > 800,000 ppmV ATE (inhalation, vapour) 658 mg/L	10 – < 25 %
CAS No.: 74-98-6 EC No.: 200-827-9 Index No.: 601-003-00-5 REACH No.: 01-2119486944-21	**propane** Flam. Gas 1A (H220), Press. Gas (Comp.) (H280)  Danger **Acute Toxicity Estimate** ATE (oral) 5,840 mg/kg ATE (dermal) 13,900 mg/kg ATE (inhalation, gases) > 25 ppmV ATE (inhalation, vapour) ≥ 50 mg/L	10 – < 25 %
CAS No.: 7440-50-8 EC No.: 231-159-6 REACH No.: 01-2119480154-42	**copper** Acute Tox. 3 (H331), Acute Tox. 4 (H302), Aquatic Acute 1 (H400), Aquatic Chronic 1 (H410), Eye Irrit. 2 (H319)  Danger M-factor (acute): 10 M-factor (chronic): 10 **Acute Toxicity Estimate** ATE (oral) 500 mg/kg ATE (dermal) 300 – 2,500 mg/kg ATE (inhalation, gases) 5.11 ppmV ATE (inhalation, vapour) 0.733 mg/L ATE (inhalation, dust/mist) 5.11 mg/L	2.5 – < 10 %
CAS No.: 75-28-5 EC No.: 200-857-2 REACH No.: 01-2119485395-27	**Isobutane (with < 0.1 % butadiene (203-450-8))** Flam. Gas 1A (H220), Press. Gas (Comp.) (H280)  Danger **Acute Toxicity Estimate** ATE (inhalation, vapour) 52,000 mg/L	2.5 – < 10 %

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

SECTION 4: First aid measures

4.1. Description of first aid measures

Following inhalation:
If unconscious, position and transport in stable lateral position.

In case of skin contact:
Wash off immediately with soap and water and rinse well.

After eye contact:
Rinse opened eye for several minutes under running water. Consult a doctor if symptoms persist

Following ingestion:
Do not induce vomiting, seek medical help immediately.

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

No data available

4.3. Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media:
Water mist, Extinguishing powder, Carbon dioxide, alcohol resistant foam

Unsuitable extinguishing media:
Water in full jet

5.2. Special hazards arising from the substance or mixture
No further relevant information available.

5.3. Advice for firefighters
Special protective equipment: Put on breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
6.1.1. For non-emergency personnel
Personal precautions:
Wear protective equipment. Keep unprotected persons away.

6.1.2. For emergency responders
No data available

6.2. Environmental precautions
Do not allow to enter into surface water or drains. In case of spillage into water or sewage system, inform the competent authorities.

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6.3. Methods and material for containment and cleaning up
Other information:
Provide adequate ventilation. Do not wash away with water or aqueous detergents.

6.4. Reference to other sections
See section 7 for further information on safe handling.
For further information on personal protective equipment: see section 8.
For further information on disposal: see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Protective measures
Advices on safe handling:
Ensure good ventilation/extraction at the workplace.

Fire prevent measures:
Do not spray on naked flames or any incandescent material. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Container is under pressure. Protect from sunlight and temperatures above 50°C (e.g. from incandescent lamps). Do not open by force or burn even after use.

7.2. Conditions for safe storage, including any incompatibilities
Requirements for storage rooms and vessels:
Store in a cool place. The official regulations for the storage of pressurised gas packages must be observed.

Hints on storage assembly:
The official regulations for the storage of pressurised gas packages must be observed.
Storage class (TRGS 510, Germany): 2B – Aerosol dispensers and lighters

Further information on storage conditions:
Store in a cool, dry place in well-sealed containers. Protect from heat and direct sunlight.

7.3. Specific end use(s)
No data available

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
MAK (AT)	**Butane (with < 0,1 % butadiene (203-450-8))** CAS No.: 106-97-8 EC No.: 203-448-7	① 800 ppm (1,900 mg/m³)
MAK (AT)	**Butane (with < 0,1 % butadiene (203-450-8))** CAS No.: 106-97-8 EC No.: 203-448-7	② 1,600 ppm (3,800 mg/m³) ⑤ (max. 3x60 min./Schicht, Momentanwert) 60(Mow); 3x
MAK (AT)	**propane** CAS No.: 74-98-6 EC No.: 200-827-9	② 2,000 ppm (3,600 mg/m³) ⑤ (max. 3x60 min./Schicht, Momentanwert) 60(Mow); 3x
MAK (AT)	**propane** CAS No.: 74-98-6 EC No.: 200-827-9	① 1,000 ppm (1,800 mg/m³)
MAK (AT) from 3 Jan 2026	**copper** CAS No.: 7440-50-8 EC No.: 231-159-6	② 4 mg/m³ ⑤ (einatembare Fraktion, max. 4x15 min./Schicht) E; 15(Miw); 4x; als Cu berechnet
MAK (AT) from 3 Jan 2026	**copper** CAS No.: 7440-50-8 EC No.: 231-159-6	① 1 mg/m³ ⑤ (einatembare Fraktion) E; als Cu berechnet
MAK (AT) from 1 Jan 2026	**copper** CAS No.: 7440-50-8 EC No.: 231-159-6	② 0.4 mg/m³ ⑤ (alveolengängige Fraktion max. 4x15 min./Schicht) A; 15(Miw); 4x; als Cu berechnet (als Rauch)
MAK (AT) from 1 Jan 2026	**copper** CAS No.: 7440-50-8 EC No.: 231-159-6	① 0.1 mg/m³ ⑤ (alveolengängige Fraktion) A; als Cu berechnet (als Rauch)
MAK (AT)	**Isobutane (with < 0.1 % butadiene (203-450-8))** CAS No.: 75-28-5 EC No.: 200-857-2	② 1,600 ppm (3,800 mg/m³) ⑤ (max. 3x60 min./SchichtMomentanwert) 60(Mow); 3x
MAK (AT)	**Isobutane (with < 0.1 % butadiene (203-450-8))** CAS No.: 75-28-5 EC No.: 200-857-2	① 800 ppm (1,900 mg/m³)

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, isoalkanes, cyclics, <5% n-hexane EC No.: 921-024-6	2,035 mg/m³	① DNEL worker ② Long-term – inhalation, systemic effects
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane EC No.: 921-024-6	608 mg/m³	① DNEL Consumer ② Long-term – inhalation, systemic effects
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, 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, isoalkanes, cyclics, <5% n-hexane EC No.: 921-024-6	300 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane EC No.: 921-024-6	699 mg/kg bw/day	① DNEL Consumer ② Long-term - dermal, systemic effects
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane EC No.: 921-024-6	699 mg/kg bw/day	① DNEL Consumer ② Long-term - oral, systemic effects
copper CAS No.: 7440-50-8 EC No.: 231-159-6	20 mg/m³	① DNEL worker ② Acute - inhalation, systemic effects
copper CAS No.: 7440-50-8 EC No.: 231-159-6	20 mg/m³	① DNEL Consumer ② Acute - inhalation, systemic effects
copper CAS No.: 7440-50-8 EC No.: 231-159-6	1 mg/m³	① DNEL Consumer ② Long-term – inhalation, local effects
copper CAS No.: 7440-50-8 EC No.: 231-159-6	1 mg/m³	① DNEL Consumer ② Acute - inhalation, local effects
copper CAS No.: 7440-50-8 EC No.: 231-159-6	137 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
copper CAS No.: 7440-50-8 EC No.: 231-159-6	137 mg/kg bw/day	① DNEL Consumer ② Long-term - dermal, systemic effects
copper CAS No.: 7440-50-8 EC No.: 231-159-6	273 mg/kg bw/day	① DNEL worker ② Acute – dermal, systemic effects
copper CAS No.: 7440-50-8 EC No.: 231-159-6	273 mg/kg bw/day	① DNEL Consumer ② Acute – dermal, systemic effects
copper CAS No.: 7440-50-8 EC No.: 231-159-6	0.041 mg/kg bw/day	① DNEL Consumer ② Long-term - oral, systemic effects

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No further details. See section 7.

8.2.2. Personal protection equipment



Eye/face protection:

Safety goggles (EN-166)

Skin protection:
Hand protection:
Gloves / solvent resistant
Selection of glove material considering breakthrough times, permeation rates and degradation.
Glove material:
The selection of a suitable glove depends not only on the material but also on other quality features and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of glove materials cannot be calculated in advance and must therefore be checked before use.
NBR (Nitrile rubber)
Recommended material thickness: ≥ 0,5 mm
Permeation time (maximum wear duration):
For continuous contact we recommend gloves with a breakthrough time of at least 240 minutes, with the preference for a breakthrough time greater than 480 minutes. For short term or splash protection we recommend the same. We are aware that suitable gloves offering this protection are not available. In this case, a shorter breakthrough time is permissible, provided the procedures for maintenance and timely replacement are followed. The thickness of the gloves is not a good measure of the resistance the gloves give against a chemical substance, as this depends on the exact composition of the material of the gloves. The exact breakthrough time should be checked with the glove manufacturer and adhered to.

Body protection:
Use protective suit. (EN-13034/6)
Antistatic, chemical and oil resistant clothing and safety shoes are recommended. (EN1149 EN340&EN ISO 13688 EN13034-6).

Respiratory protection:
In case of inadequate ventilation wear respiratory protection. Filter A2/P2

Other protection measures:
General protective and hygienic measures: Keep away from food, drink and animal feed. Remove contaminated, saturated clothing immediately. Wash hands before breaks and after work. Do not inhale gases/vapours/aerosols. Avoid contact with eyes and skin. General ventilation.

8.2.3. Environmental exposure controls
Use a suitable container to prevent environmental pollution.

SECTION 9: Physical and chemical properties

*
9.1. Information on basic physical and chemical properties

Appearance

Form: Aerosol
Colour: According to product designation
Odour: characteristic
flammability: No data available

Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	*not applicable*		② Mixture is not polar/aprotic.
Melting point	-60 °C		
Initial boiling point and boiling range	-44.5 °C		
Flash point	-97 °C		
Evaporation rate	*No data available*		
Auto-ignition temperature	> 200 °C		
Upper/lower flammability or explosive limits	0.8 – 10.9 Vol-%		
Vapour pressure	3,800 hPa	20 °C	② 6200 hPa (50°C)
Density	0.714 g/cm³	20 °C	
Water solubility	Immiscible		
Kinematic viscosity	≤ 20.5 mm²/s	40 °C	

9.2. Other information

The product is not self-igniting. The product is not explosive, but the formation of explosive vapour/air mixtures is possible.
Organic solvents: 65,0%
Solid content: 34,7%

9.2.1. Information with regard to physical hazard classes

Aerosols:

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

SECTION 10: Stability and reactivity

10.1. Reactivity

No further relevant information available.

10.2. Chemical stability

Thermal decomposition / Conditions to avoid: No decomposition when used as directed.

10.3. Possibility of hazardous reactions

No dangerous reactions known.

10.4. Conditions to avoid

No further relevant information available.

10.5. Incompatible materials

No further relevant information available.

10.6. Hazardous decomposition products

No dangerous decomposition products known.

SECTION 11: Toxicological information

*

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

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane EC No.: 921-024-6
LD_{50} oral: >5,000 mg/kg (Rat) OECD 401
LD_{50} dermal: >2,920 mg/kg (Rabbit)
LC_{50} Acute inhalation toxicity (gas): >20 ppmV 4 h (Rat) OECD 403
LC_{50} Acute inhalation toxicity (vapour): >25.2 mg/L 4 h (Rat)
Butane (with < 0,1 % butadiene (203-450-8)) CAS No.: 106-97-8 EC No.: 203-448-7
LC_{50} Acute inhalation toxicity (gas): >800,000 ppmV (Rat)
LC_{50} Acute inhalation toxicity (vapour): 658 mg/L 4 h (Rat)
propane CAS No.: 74-98-6 EC No.: 200-827-9
LD_{50} oral: 5,840 mg/kg (Rat)
LD_{50} dermal: 13,900 mg/kg (Rabbit)
LC_{50} Acute inhalation toxicity (gas): >25 ppmV 4 h (Rat)
LC_{50} Acute inhalation toxicity (vapour): ≥50 mg/L 4 h (Rat)
copper CAS No.: 7440-50-8 EC No.: 231-159-6
ATE (oral): 500 mg/kg
ATE (inhalation, vapour): 0.73 mg/L
LD_{50} oral: >2,000 mg/kg (Rat)
LD_{50} dermal: 300 – 2,500 mg/kg (Rat)
LC_{50} Acute inhalation toxicity (gas): 5.11 ppmV 4 h (Rat)
LC_{50} Acute inhalation toxicity (vapour): 5.11 mg/L 4 h (Rat)
LC_{50} Acute inhalation toxicity (dust/mist): 5.11 mg/L (Rat)
Isobutane (with < 0.1 % butadiene (203-450-8)) CAS No.: 75-28-5 EC No.: 200-857-2
LC_{50} Acute inhalation toxicity (vapour): 52,000 mg/L 2 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.

Aspiration hazard:
May be fatal if swallowed and enters airways.

11.2. Information on other hazards

Endocrine disrupting properties:
None of the ingredients are included.

SECTION 12: Ecological information

*

12.1. Toxicity

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane EC No.: 921-024-6
LC_{50}: 11.4 mg/L 4 d (fish, Oncorhynchus mykiss) OECD 203
EC_{50}: 3 mg/L 2 d (crustaceans, Daphnia magna) OECD 202
NOEC: 0.17 mg/L 21 d (crustaceans, Daphnia magna) OECD 211
LOEC: 0.32 mg/L 21 d (crustaceans, Daphnia magna)
EC_{50}: 30 – 100 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata)
LC_{50}: >1 – 10 mg/L 4 d (fish, Pimephales promelas)
EC_{50}: >1 – 10 mg/L 2 d (crustaceans, Daphnia magna)
NOEC: 2.045 mg/L 28 d (fish, Oncorhynchus mykiss)
NOEC: 1 mg/L 21 d (crustaceans, Daphnia magna) OECD 211
ErC_{50}: 10 – 30 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata) OECD 201
LOEC: 0.32 mg/L 21 d (Daphnia magna)
LC_{50}: 11.4 mg/L 4 d (fish)
Butane (with < 0,1 % butadiene (203-450-8)) CAS No.: 106-97-8 EC No.: 203-448-7
LC_{50}: 24.11 mg/L 4 d (fish) QSAR
LC_{50}: 14.22 mg/L 2 d (crustaceans) QSAR
LC_{50}: 24 mg/L 4 d (Pisces (generic)) ECOSAR QSAR
EC_{50}: 7.7 mg/L 4 d (Algae (generic)) ECOSAR v1.00 QSAR

propane CAS No.: 74-98-6 EC No.: 200-827-9
LC_{50}: 9,640 mg/L 4 d (fish, Pimephales promelas)
LC_{50}: 0.41 mg/L 4 d (fish, Oncorhynchus mykiss)
LC_{50}: 49.9 mg/L 4 d (fish)
EC_{50}: >100 mg/L (Algae/water plant, Bacteria)
EC_{50}: 0.17 mg/L 3 d (Algae/water plant, Selenastrum capricornutum)
EC_{50}: 69.43 mg/L 2 d (crustaceans, Daphnia) Calculation with the ECOSAR programme v1.00.
NOEC: 0.017 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata)
ErC_{50}: 19.37 mg/L 4 d (Algae/water plant, Algae) Calculation with the ECOSAR programme v1.00.
LOEC: 1,000 mg/L (Algae/water plant, Algae)
LOEC: 1,000 mg/L (Algae/water plant, Alge)
IC_{50}: 11.3 mg/L 3 d (Algae/water plant)
LOEC: 1,000 mg/L
copper CAS No.: 7440-50-8 EC No.: 231-159-6
LC_{50}: 0.000072 mg/L 2 d (crustaceans, Krustazeen)
LC_{50}: 0.000072 mg/L 2 d (crustaceans, Krustazeen, Adultus)
LC_{50}: 0.000072 mg/L 2 d (crustaceans, Amphipoda)
EC_{50}: 0.0021 mg/L 2 d (crustaceans, Daphnia)
NOEC: 0.0008 mg/L (fish, Oreochromis niloticus)
NOEC: 0.0008 mg/L (crustaceans, Krustazeen)
IC_{50}: 0.016 mg/L 3 d (Algae/water plant, Chlorella pyrenoidosa)
IC_{50}: 0.016 mg/L 3 d (Algae/water plant, Chlorella pyrenoidosa)

12.2. Persistence and degradability

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane EC No.: 921-024-6
Biodegradation: Yes, rapidly
Butane (with < 0,1 % butadiene (203-450-8)) CAS No.: 106-97-8 EC No.: 203-448-7
Biodegradation: Yes, rapidly
propane CAS No.: 74-98-6 EC No.: 200-827-9
Biodegradation: Yes, rapidly

Biodegradation:
Not readily biodegradable.

12.3. Bioaccumulative potential

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane EC No.: 921-024-6
Log K_{OW}: 5.2
Bioconcentration factor (BCF): 250
Butane (with < 0,1 % butadiene (203-450-8)) CAS No.: 106-97-8 EC No.: 203-448-7
Log K_{OW}: 2.89
propane CAS No.: 74-98-6 EC No.: 200-827-9
Log K_{OW}: 1.09

12.4. Mobility in soil
No data available

* 12.5. Results of PBT and vPvB assessment

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane EC No.: 921-024-6
Results of PBT and vPvB assessment: —
Butane (with < 0,1 % butadiene (203-450-8)) CAS No.: 106-97-8 EC No.: 203-448-7
Results of PBT and vPvB assessment: —

propane CAS No.: 74-98-6 EC No.: 200-827-9	
Results of PBT and vPvB assessment: —	
copper CAS No.: 7440-50-8 EC No.: 231-159-6	
Results of PBT and vPvB assessment: —	
Isobutane (with < 0.1 % butadiene (203-450-8)) CAS No.: 75-28-5 EC No.: 200-857-2	
Results of PBT and vPvB assessment: —	

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

12.6. Endocrine disrupting properties
The product does not contain any substances with endocrine-disrupting properties.

*
12.7. Other adverse effects
water hazard class 2: obviously hazardous to water
Do not allow to enter into surface water or drains.
Drinking water hazard even when small quantities leak into the subsoil.
Toxic to aquatic life. Toxic to fish.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Must not be disposed of together with household waste. Do not allow to enter into surface water or drains.

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 5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP 14	Ecotoxic

Waste treatment options
Appropriate disposal / Package:
Uncleaned packaging: Dispose of waste according to applicable legislation.
Recommended cleaning agent: Water, if necessary with the addition of cleaning agents.

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			
1950	1950	1950	1950
14.2. UN proper shipping name			
AEROSOLS, ENVIRONMENTALLY HAZARDOUS (Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane)	AEROSOLS, ENVIRONMENTALLY HAZARDOUS (Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane)	AEROSOLS, MARINE POLLUTANT (Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane)	AEROSOLS, flammable (Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane)
14.3. Transport hazard class(es)			
 2.1	 2.1	 2.1	 2.1
14.4. Packing group			
		-	

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.5. Environmental hazards			
		 MARINE POLLUTANT	No
14.6. Special precautions for user			
Limited quantity (LQ): 1 L **Excepted Quantities (EQ):** E0 **Classification code:** 5F **Tunnel restriction code:** (D) **Remark:** Attention: Gases	**Limited quantity (LQ):** 1 L **Excepted Quantities (EQ):** E0 **Classification code:** 5F **Remark:** Attention: Gases	**Limited quantity (LQ):** 1 L **Excepted Quantities (EQ):** E0 **EmS-No.:** F-D, S-U **Remark:** Attention: Gases Stowage Code: SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters. Segregation Code: SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.	**Remark:** Attention: Gases On passenger aircraft/rail: 75kg On cargo aircraft only: 150kg

14.7. Maritime transport in bulk according to IMO instruments
not applicable

SECTION 15: Regulatory information

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

15.1.1. EU legislation

Authorisations:
Directive 2012/18/EU
Named dangerous substances - ANNEX I: None of the ingredients are included.

Restrictions on use:
Quantity threshold (in tons) for use in lower class farms 100t
Quantity threshold (in tons) for use in upper-tier establishments 200t
Regulation (EC) No 1907/2006 ANNEX XVII: Restriction conditions: 3
Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment - Annex II: None of the ingredients are included.
Regulation (EU) 2019/1148

Annex I - RESTRICTED EXPORT SUBSTANCES FOR EXPLOSIVES (upper concentration limit for a permit pursuant to Article 5(3)): None of the ingredients are included.
Annex II - EXPLOSIVES REPORTABLE FOR EXPLOSIVES: None of the ingredients are included.
Regulation (EC) No 273/2004 on drug precursors: None of the ingredients are included.
Regulation (EC) No 111/2005 laying down rules for the monitoring of trade in drug precursors between the Community and third countries: None of the ingredients are included.

Other regulations (EU):

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive], Hazard categories:
• P3a 'Flammable' aerosols Category 1 or 2, containing flammable gases Category 1 or 2 or flammable liquids
• E1 Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

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

Volatile organic compound (VOC) content: 464.1 g/L

15.1.2. National regulations

No data available

15.2. Chemical Safety Assessment

A chemical safety assessment has not been carried out.

SECTION 16: Other information

*
16.1. Indication of changes

2.1.	Classification of the substance or mixture
2.2.	Label elements
3.2.	Mixtures
6.3.	Methods and material for containment and cleaning up
8.1.	Control parameters
9.1.	Information on basic physical and chemical properties
11.1.	Information on hazard classes as defined in Regulation (EC) No 1272/2008
12.1.	Toxicity
12.5.	Results of PBT and vPvB assessment
12.7.	Other adverse effects
14.6.	Special precautions for user
15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture
16.1.	Indication of changes
16.2.	Abbreviations and acronyms
16.4.	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
ATE	Acute Toxicity Estimate
AVV	Waste Shipment Ordinance (DE)
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
DNEL	derived no-effect level
EAK	European Waste Catalogue
EC_{50}	Effective Concentration 50%
EG	European Community
EN	European Standard
ES	Exposure scenario
EU	European Union

EWC	European Waste Catalogue
IC_{50}	Inhibition Concentration 50 %
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
KG	body weight
LC_{50}	Lethal (fatal) Concentration 50%
LD_{50}	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
OEL	Threshold Limit Value
OSHA	Occupational Safety & Health Administration
PBT	persistent and bioaccumulative and toxic
PNEC	Predicted No Effect Concentration
QSAR	Quantitative Structure-Activity Relationship
REACH	Registration, Evaluation and Authorization of Chemicals
RID	Dangerous goods regulations for transport by rail
SCL	Specific concentration limit
Tox.	Toxicity
TRGS	Technische Regeln für Gefahrstoffe
UFI	Unique Formula Identifier
UN	United Nations
VOC	Volatile organic compounds
ZNS	central nervous system

16.3. Key literature references and sources for data
No data available

* 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
aerosol dispensers and lighters *(Aerosol 1)*	H222; H229: Extremely flammable aerosol. Pressurised container: May burst if heated.	
STOT-single exposure *(STOT SE 3)*	H336: May cause drowsiness or dizziness.	
Skin corrosion/irritation *(Skin Irrit. 2)*	H315: Causes skin irritation.	
Hazardous to the aquatic environment *(Aquatic Chronic 1)*	H410: Very toxic to aquatic life with long lasting effects.	
Acute toxicity (oral) *(Acute Tox. 4)*	H302: Harmful if swallowed.	

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

Hazard statements	
H220	Extremely flammable gas.
H225	Highly flammable liquid and vapour.
H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.

Hazard statements	
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

16.6. Training advice
No data available

16.7. Additional information
To the best of our knowledge, the information contained herein is accurate. However, neither the above-mentioned supplier nor its subsidiaries assume any liability with regard to the correctness or completeness of the information provided. A final determination of the suitability of individual materials is the sole responsibility of the user. All materials may involve unknown risks and should be used with caution. While certain risks are described herein, we cannot guarantee that these are the only possible risks.

* Data changed compared with the previous version.