

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH), (EU) 2020/878

Revision date: 11 Jan 2023

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Care & Protect 500ml

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

1.1. Product identifier

Trade name/designation:

Care & Protect 500ml

Article No.:

T162001

UFI:

G70M-DQ4W-NPNQ-JU5M

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

Use of the substance/mixture:

Vehicle interior cleaner

1.3. Details of the supplier of the safety data sheet

Supplier:

KANDO Service GmbH

Hartleitnerstraße 3

4653 Eberstälzell

Austria

Telephone: +43 (0) 7241 213 79

E-mail: 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

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
Hazardous to the aquatic environment (<i>Aquatic Chronic 2</i>)	H411: Toxic to aquatic life with long lasting effects.	
Serious eye damage/eye irritation (<i>Eye Irrit. 2</i>)	H319: Causes serious eye irritation.	
STOT-single exposure (<i>STOT SE 3</i>)	H336: May cause drowsiness or dizziness.	
Aspiration hazard (<i>Asp. Tox. 1</i>)	H304: May be fatal if swallowed and enters airways.	
Aerosols (<i>Aerosol 1</i>)	H222; H229: Extremely flammable aerosol. Pressurised container: May burst if heated.	

2.2. Label elements

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

Hazard pictograms:



GHS02
Flame



GHS07
Exclamation mark



GHS09
Environment

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Signal word: Danger

Hazard components for labelling:

pentane; Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics; propan-2-ol

Hazard statements for physical hazards

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.

Hazard statements for health hazards

H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Hazard statements for environmental hazards

H411	Toxic to aquatic life with long lasting effects.
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Supplemental hazard information

EUH066	Repeated exposure may cause skin dryness or cracking.
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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 dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

Precautionary statements Response

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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.
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2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

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.

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Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 109-66-0 EC No.: 203-692-4 REACH No.: 01-2119459286-30	pentane Aquatic Chronic 2 (H411), Asp. Tox. 1 (H304), Flam. Liq. 1 (H224), STOT SE 3 (H336) Danger	25 - < 50 %
CAS No.: 106-97-8 EC No.: 203-448-7 Index No.: 601-004-00-0 REACH No.: 01-2119474691-32	butane Flam. Gas 1A (H220), Press. Gas (Comp.) (H280) Danger	25 - < 50 %
	Aliphatic hydrocarbons The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].	≥ 30 %
CAS No.: 67-63-0 EC No.: 200-661-7 Index No.: 603-117-00-0 REACH No.: 01-2119457558-25	propan-2-ol Eye Irrit. 2 (H319), Flam. Liq. 2 (H225), STOT SE 3 (H336) Danger	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	2.5 - < 10 %
CAS No.: 64742-48-9 EC No.: 918-481-9 REACH No.: 01-2119463258-33	Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics Asp. Tox. 1 (H304) Danger	2.5 - < 10 %
CAS No.: 75-28-5 EC No.: 200-857-2 REACH No.: 01-2119485395-27	Isobutane Flam. Gas 1A (H220), Press. Gas (Comp.) (H280) Danger	2.5 - < 10 %
	Fragrances The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].	< 5 %
CAS No.: 1474044-65-9 EC No.: 939-607-9	Quaternary ammonium compounds, C12-14 (even-numbered)-alkylethyldimethyl, ethyl sulphates Acute Tox. 3 (H311), Acute Tox. 4 (H302), Aquatic Acute 1 (H400), Aquatic Chronic 1 (H410), Eye Dam. 1 (H318), Skin Corr. 1A (H314) Danger	≥ 0.25 - < 1 %

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

SECTION 4: First aid measures

4.1. Description of first aid measures

Following inhalation:

Fresh air supply, consult a doctor in case of complaints.

In case of skin contact:

In general, the product is not irritating to skin.

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:

Do not induce vomiting, seek medical help immediately.

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

No further relevant information available.

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

No further relevant information 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.

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

Further information on proper storage: see section 7.

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.

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7.3. Specific end use(s)

Recommendation:

No further relevant information 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)	pentane CAS No.: 109-66-0 EC No.: 203-692-4	② 1,200 ppm (3,600 mg/m ³) ⑤ (max. 3x60 min./Schicht, Momentanwert)
IOELV (EU)	pentane CAS No.: 109-66-0 EC No.: 203-692-4	① 1,000 ppm (3,000 mg/m ³)
MAK (AT)	pentane CAS No.: 109-66-0 EC No.: 203-692-4	① 600 ppm (1,800 mg/m ³)
MAK (AT)	butane CAS No.: 106-97-8 EC No.: 203-448-7	① 800 ppm (1,900 mg/m ³)
MAK (AT)	butane CAS No.: 106-97-8 EC No.: 203-448-7	② 1,600 ppm (3,800 mg/m ³) ⑤ (max. 3x60 min./Schicht, Momentanwert)
MAK (AT)	propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	② 800 ppm (2,000 mg/m ³) ⑤ (max. 4x15 min./Schicht)
MAK (AT)	propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	① 200 ppm (500 mg/m ³)
MAK (AT)	propane CAS No.: 74-98-6 EC No.: 200-827-9	② 2,000 ppm (3,600 mg/m ³) ⑤ (max. 3x60 min./Schicht, Momentanwert)
MAK (AT)	propane CAS No.: 74-98-6 EC No.: 200-827-9	① 1,000 ppm (1,800 mg/m ³)
MAK (AT)	Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics CAS No.: 64742-48-9 EC No.: 918-481-9	① 200 mL/m ³ ② 400 mL/m ³ ⑤ (für Kohlenwasserstoffgemische mit einem Gehalt an aromatischen Kohlenwasserstoffen von weniger als 1 %, an n-Hexan von weniger als 5 % und an Cyclo-/Isohexanen von weniger als 25 %)
MAK (AT)	Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics CAS No.: 64742-48-9 EC No.: 918-481-9	① 170 mL/m ³ ② 340 mL/m ³ ⑤ (für Kohlenwasserstoffgemische mit einem Gehalt an aromatischen Kohlenwasserstoffen von weniger als 1 %, an n-Hexan von weniger als 5 % und an Cyclo-/Isohexanen von 25 % oder mehr)
MAK (AT)	Isobutane CAS No.: 75-28-5 EC No.: 200-857-2	② 1,600 ppm (3,800 mg/m ³) ⑤ (max. 3x60 min./SchichtMomentanwert)
MAK (AT)	Isobutane CAS No.: 75-28-5 EC No.: 200-857-2	① 800 ppm (1,900 mg/m ³)

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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
pentane CAS No.: 109-66-0 EC No.: 203-692-4	3,000 mg/m ³	① DNEL worker ② Long-term - inhalation, systemic effects
pentane CAS No.: 109-66-0 EC No.: 203-692-4	643 mg/m ³	① DNEL Consumer ② Long-term - inhalation, systemic effects
pentane CAS No.: 109-66-0 EC No.: 203-692-4	432 mg/kg bw/ day	① DNEL worker ② Long-term - dermal, systemic effects
pentane CAS No.: 109-66-0 EC No.: 203-692-4	214 mg/kg bw/ day	① DNEL Consumer ② Long-term - dermal, systemic effects
pentane CAS No.: 109-66-0 EC No.: 203-692-4	214 mg/kg bw/ day	① DNEL Consumer ② Long-term - oral, systemic effects
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	500 mg/m ³	① DNEL worker ② Long-term - inhalation, systemic effects
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	89 mg/m ³	① DNEL Consumer ② Long-term - inhalation, systemic effects
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	888 mg/kg bw/ day	① DNEL worker ② Long-term - dermal, systemic effects
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	319 mg/kg bw/ day	① DNEL Consumer ② Long-term - dermal, systemic effects
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	26 mg/kg bw/ day	① DNEL Consumer ② Long-term - oral, systemic effects
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics CAS No.: 64742-48-9 EC No.: 918-481-9	871 mg/m ³	① DNEL worker ② Long-term - inhalation, systemic effects
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics CAS No.: 64742-48-9 EC No.: 918-481-9	185 mg/m ³	① DNEL Consumer ② Long-term - inhalation, systemic effects
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics CAS No.: 64742-48-9 EC No.: 918-481-9	208 mg/kg bw/ day	① DNEL worker ② Long-term - dermal, systemic effects
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics CAS No.: 64742-48-9 EC No.: 918-481-9	125 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, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics CAS No.: 64742-48-9 EC No.: 918-481-9	125 mg/kg bw/day	① DNEL Consumer ② Long-term - oral, systemic effects

Substance name	PNEC Value	① PNEC type
pentane CAS No.: 109-66-0 EC No.: 203-692-4	0.23 mg/L	① PNEC aquatic, freshwater
pentane CAS No.: 109-66-0 EC No.: 203-692-4	0.23 mg/L	① PNEC aquatic, marine water
pentane CAS No.: 109-66-0 EC No.: 203-692-4	3.6 mg/L	① PNEC sewage treatment plant
pentane CAS No.: 109-66-0 EC No.: 203-692-4	1.2 mg/kg bw/day	① PNEC sediment, freshwater
pentane CAS No.: 109-66-0 EC No.: 203-692-4	1.2 mg/kg	① PNEC sediment, marine water
pentane CAS No.: 109-66-0 EC No.: 203-692-4	0.55 mg/kg	① PNEC soil
pentane CAS No.: 109-66-0 EC No.: 203-692-4	0.88 mg/L	① PNEC aquatic, intermittent release
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	140.9 mg/L	① PNEC aquatic, freshwater
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	140.9 mg/L	① PNEC aquatic, marine water
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	2,251 mg/L	① PNEC sewage treatment plant
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	552 mg/kg	① PNEC sediment, freshwater
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	552 mg/kg	① PNEC sediment, marine water
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	28 mg/kg	① PNEC soil
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	140.9 mg/L	① PNEC aquatic, intermittent release

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No further details. See section 7.

8.2.2. Personal protection equipment



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Eye/face protection:

Safety goggles (EN-166)

Skin protection:

Hand protection:

Wear gloves for protection against chemicals according to EN 374.

Gloves / solvent resistant

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

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.

Nitrilkautschuk Recommended material thickness: $\geq 0,5$ 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: Wash hands before breaks and after work. Do not inhale gases/vapours/aerosols. 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

Physical state: Aerosol

Colour: According to product designation

Odour: characteristic

Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	<i>not applicable</i>		② Mixture is not polar/aprotic.
Initial boiling point and boiling range	-44.5 °C		
Flash point	-97 °C		
Evaporation rate	<i>No data available</i>		
Auto-ignition temperature	<i>not applicable</i>		② The product is not self-igniting.
Upper/lower flammability or explosive limits	0.7 - 12 Vol-%		
Vapour pressure	2,100 hPa	20 °C	
Density	0.625 g/cm ³		
Bulk density	<i>not applicable</i>		
Water solubility	<i>not applicable</i>		② Not miscible or only slightly miscible.
Kinematic viscosity	≤ 20.5 mm ² /s	40 °C	

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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. formation of explosive vapour/air mixtures is possible.

9.2.1. Information with regard to physical hazard classes

Explosives:

Not applicable

Flammable gases:

Not applicable

Aerosols:

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

Oxidizing gases:

Not applicable

Gases under pressure:

Not applicable

Flammable liquids:

Not applicable

Flammable solids:

Not applicable

Self-reactive substances and mixtures:

Not applicable

Pyrophoric liquids:

Not applicable

Pyrophoric solids:

Not applicable

Self-heating substances and mixtures:

Not applicable

Substances or mixtures which, in contact with water, emit flammable gases:

Not applicable

Oxidizing liquids:

Not applicable

Oxidizing solids:

Not applicable

Organic peroxides:

Not applicable

Corrosive to metals:

Not applicable

Desensitised explosives:

Not applicable

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.

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SECTION 11: Toxicological information

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

pentane CAS No.: 109-66-0 EC No.: 203-692-4
LD₅₀ oral: >5,000 mg/kg (Rat)
LD₅₀ dermal: >2,000 mg/kg (Rat)
LC₅₀ Acute inhalation toxicity (vapour): >25.3 mg/L 4 h (Rat) OECD 403
butane CAS No.: 106-97-8 EC No.: 203-448-7
LD₅₀ oral: ≥5,000 mg/kg (Rat)
LD₅₀ dermal: ≥5,000 mg/kg (Rabbit)
LC₅₀ Acute inhalation toxicity (gas): 658 ppmV 4 h (Rat)
LC₅₀ Acute inhalation toxicity (vapour): ≥50 mg/L 4 h (Rat)
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7
LD₅₀ oral: >2,000 mg/kg (Rat)
LD₅₀ dermal: >2,000 mg/kg (Rat)
LC₅₀ Acute inhalation toxicity (gas): >25 ppmV (Rat)
LC₅₀ Acute inhalation toxicity (vapour): >20 mg/L (Rat)
propane CAS No.: 74-98-6 EC No.: 200-827-9
LD₅₀ oral: 5,840 mg/kg (Rat)
LD₅₀ dermal: 13,900 mg/kg (Rabbit)
LC₅₀ Acute inhalation toxicity (gas): >25 ppmV 4 h (Rat)
LC₅₀ Acute inhalation toxicity (vapour): ≥50 mg/L 4 h (Rat)
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics CAS No.: 64742-48-9 EC No.: 918-481-9
LD₅₀ oral: >8,000 mg/kg (Rat)
LD₅₀ dermal: >3,160 mg/kg (Rabbit)
LC₅₀ Acute inhalation toxicity (dust/mist): >4,951 mg/L
Isobutane CAS No.: 75-28-5 EC No.: 200-857-2
LC₅₀ Acute inhalation toxicity (vapour): 1,237 mg/L (Mouse)

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:

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

Serious eye damage/irritation:

Causes serious eye irritation.

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:

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

STOT-repeated exposure:

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

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Aspiration hazard:

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

11.2. Information on other hazards

Endocrine disrupting properties:

None of the ingredients are included.

SECTION 12: Ecological information

12.1. Toxicity

pentane	CAS No.: 109-66-0	EC No.: 203-692-4
LC₅₀: 4.26 mg/L 4 d (fish, <i>Oncorhynchus mykiss</i>)		
EC₅₀: 10.7 mg/L 3 d (Algae/water plant, <i>Pseudokirchneriella subcapitata</i>)		
EC₅₀: 2.7 mg/L 2 d (crustaceans, <i>Daphnia magna</i>)		
NOEC: 7.51 mg/L 3 d (Algae/water plant, <i>Pseudokirchneriella subcapitata</i>)		
butane	CAS No.: 106-97-8	EC No.: 203-448-7
LC₅₀: 49.9 mg/L 4 d (fish)		
EC₅₀: 69.43 mg/L 2 d (crustaceans, <i>Daphnia</i>)		
ErC₅₀: 19.37 mg/L 4 d (Algae/water plant)		
propan-2-ol	CAS No.: 67-63-0	EC No.: 200-661-7
LC₅₀: 9,640 mg/L 4 d (fish, <i>Pimephales promelas</i>)		
LC₅₀: >1,000 mg/L 4 d (fish)		
EC₅₀: >100 mg/L (Algae/water plant)		
EC₅₀: >100 mg/L 2 d (crustaceans, <i>Daphnia magna</i>)		
EC₅₀: >1,000 mg/L 2 d (crustaceans)		
ErC₅₀: >100 mg/L 3 d (Algae/water plant, <i>Desmodesmus subspicatus</i>)		
LOEC: 1,000 mg/L (Algae/water plant, Algae)		
LC₅₀: 8,970 mg/L 2 d (fish, <i>Leuciscus idus</i> (golden orfe))		
propane	CAS No.: 74-98-6	EC No.: 200-827-9
LC₅₀: 9,640 mg/L 4 d (fish, <i>Pimephales promelas</i>)		
LC₅₀: 0.41 mg/L 4 d (fish, <i>Oncorhynchus mykiss</i>)		
LC₅₀: 49.9 mg/L 4 d (fish)		
EC₅₀: >100 mg/L (Algae/water plant, Bacteria)		
EC₅₀: 0.17 mg/L 3 d (Algae/water plant, <i>Selenastrum capricornutum</i>)		
EC₅₀: 69.43 mg/L 2 d (crustaceans, <i>Daphnia</i>)		
NOEC: 0.017 mg/L 3 d (Algae/water plant, <i>Pseudokirchneriella subcapitata</i>)		
ErC₅₀: 19.37 mg/L 4 d (Algae/water plant)		
LOEC: 1,000 mg/L (Algae/water plant, Algae)		
LOEC: 1,000 mg/L (Algae/water plant, Alge)		
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics		CAS No.: 64742-48-9
EC No.: 918-481-9		
LC₅₀: >1,000 mg/L 4 d (fish, <i>Oncorhynchus mykiss</i> (Rainbow trout))		
LC₅₀: >1,000 mg/L 4 d (fish, <i>Oncorhynchus mykiss</i> (Rainbow trout))		
EC₅₀: >1,000 mg/L 2 d (crustaceans, <i>Daphnia magna</i>)		
ErC₅₀: >1,000 mg/L 4 d (Algae/water plant, <i>Scenedesmus subspicatus</i>)		
isobutane	CAS No.: 75-28-5	EC No.: 200-857-2
LC₅₀: 91.42 mg/L 4 d (fish)		
EC₅₀: 69.43 mg/L 2 d (crustaceans, <i>Daphnia</i> sp.)		
ErC₅₀: 19.37 mg/L 4 d (Algae/water plant)		

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12.2. Persistence and degradability

pentane CAS No.: 109-66-0 EC No.: 203-692-4
Biodegradation: Yes, rapidly
butane CAS No.: 106-97-8 EC No.: 203-448-7
Biodegradation: Yes, rapidly
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7
Biodegradation: Yes, rapidly
Remark: Readily biodegradable (according to OECD criteria).
propane CAS No.: 74-98-6 EC No.: 200-827-9
Biodegradation: Yes, rapidly
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics CAS No.: 64742-48-9 EC No.: 918-481-9
Biodegradation: Yes, rapidly

Biodegradation:

Not readily biodegradable.

12.3. Bioaccumulative potential

pentane CAS No.: 109-66-0 EC No.: 203-692-4
Log K_{OW}: 3.39
butane CAS No.: 106-97-8 EC No.: 203-448-7
Log K_{OW}: 1.09
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7
Log K_{OW}: 0.05
propane CAS No.: 74-98-6 EC No.: 200-827-9
Log K_{OW}: 1.09
Isobutane CAS No.: 75-28-5 EC No.: 200-857-2
Log K_{OW}: 1.09

Accumulation / Evaluation:

No further relevant information available.

12.4. Mobility in soil

No further relevant information available.

12.5. Results of PBT and vPvB assessment

pentane CAS No.: 109-66-0 EC No.: 203-692-4
Results of PBT and vPvB assessment: —
butane CAS No.: 106-97-8 EC No.: 203-448-7
Results of PBT and vPvB assessment: —
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7
Results of PBT and vPvB assessment: —
propane CAS No.: 74-98-6 EC No.: 200-827-9
Results of PBT and vPvB assessment: —
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics CAS No.: 64742-48-9 EC No.: 918-481-9
Results of PBT and vPvB assessment: —
Isobutane CAS No.: 75-28-5 EC No.: 200-857-2
Results of PBT and vPvB assessment: —
Quaternary ammonium compounds, C12-14 (even-numbered)-alkylethyldimethyl, ethyl sulphates CAS No.: 1474044-65-9 EC No.: 939-607-9
Results of PBT and vPvB assessment: —
Aliphatic hydrocarbons
Results of PBT and vPvB assessment: —

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Fragrances

Results of PBT and vPvB assessment: —

The product does not meet the PBT/vPvB criteria.

12.6. Endocrine disrupting properties

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

12.7. Other adverse effects

Toxic to fish.

Toxic to aquatic life.

Drinking water hazard even when small quantities leak into the subsoil.

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Must not be disposed of together with household waste.

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 treatment options

Appropriate disposal / Package:

Uncleaned packaging: Dispose of waste according to applicable legislation.

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 (PENTANES, Quaternary ammonium compounds, C12-14 (even-numbered)-alkylethyl dimethyl, ethyl sulphates)	AEROSOLS, flammable
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
14.6. Special precautions for user			
Special Provisions: 190 327 344 625 Limited quantity (LQ): 1 L	Special Provisions: 190 327 344 625 Limited quantity (LQ): 1 L	Special Provisions: 63 190 277 327 344 381 959 Limited quantity (LQ): Siehe SV277	Special Provisions: A145 A167 Limited quantity (LQ): Y203

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Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
Excepted Quantities (EQ): E0 Classification code: 5F Tunnel restriction code: (D) Remark: Attention: Gases	Excepted Quantities (EQ): E0 Classification code: 5F Remark: Attention: Gases	Excepted Quantities (EQ): E0 EmS-No.: F-D, S-U Remark: Attention: Gases	Excepted Quantities (EQ): E0 Remark: Attention: Gases

14.7. Maritime transport in bulk according to IMO instruments

No data available

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:

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

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):

Hazard categories:

- P3a 'Flammable' aerosols Category 1 or 2, containing flammable gases Category 1 or 2 or flammable liquids
- E2 Hazardous to the Aquatic Environment in Category Chronic 2

Named dangerous substances:

- Liquefied flammable gases, Category 1 or 2 (including liquefied petroleum gas) and natural gas

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

Volatile organic compounds (VOC) content in percent by weight: 589.7 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

No data available

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
DNEL	derived no-effect level

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EC ₅₀	Effective Concentration 50%
EN	European Standard
ES	Exposure scenario
EWC	European Waste Catalogue
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
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
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
Hazardous to the aquatic environment (<i>Aquatic Chronic 2</i>)	H411: Toxic to aquatic life with long lasting effects.	
Serious eye damage/eye irritation (<i>Eye Irrit. 2</i>)	H319: Causes serious eye irritation.	
STOT-single exposure (<i>STOT SE 3</i>)	H336: May cause drowsiness or dizziness.	
Aspiration hazard (<i>Asp. Tox. 1</i>)	H304: May be fatal if swallowed and enters airways.	
Aerosols (<i>Aerosol 1</i>)	H222; H229: Extremely flammable aerosol. Pressurised container: May burst if heated.	

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

Hazard statements	
H220	Extremely flammable gas.
H224	Extremely flammable liquid and vapour.
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.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.

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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

No data available