

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier:

Trade name: **Klima Fresh & Clean**

Product number: 71450

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

Use of the substance

/Mixture: cleaner

1.3. Details of the supplier of the safety data sheet:

PETEC Verbindungstechnik GmbH

Wüstenbuch 26

96132 Schlüsselfeld / Deutschland

Telefon +49 (0) 9555 80994-0

Fax +49 (0) 9555 80994-25

Homepage www.petec.de

E-Mail: info@petec.de

Information department:

Technical information: info@petec.de

Material Safety Data Sheet: info@petec.de

1.4. Emergency telephone number:

Emergency call number: +49 (0)89-19240 (24h) (deutsch und englisch)

2. Hazard identification

2.1. Classification of the substance or mixture:

Classification (EC) 1272/2008

Aerosol 1; H222, H229

Eye Irrit. 2; H319

STOT SE 3; H336

2.2. Label elements:

Label elements (CLP)



Signal word: Danger

Hazard statements:

H222 Extremely flammable aerosol.

H229 Pressurized container: May burst if heated.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Precautionary statements:

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.

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.

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

P501 Dispose of contents/container to accordance with local / regional / national / international regulations.

Contains: Propan-2-ol

Text for labelling:

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2.3. Other hazards:

No data available.

3. Composition/information on ingredients

Substance: ☐

Mixture: ☒

Chemical name:	Content (% m/m):	CAS: EC: Index:	Classification (1272/2008/EC):
Dimethylether	50 – 100	115-10-6 204-065-8 603-019-00-8	Flam. Gas. 1; H220, Press. Gass; H280
Propan-2-ol	10 – 25	67-63-0 200-661-7 603-117-00-0	Flam. Liq. 2; H225, Eye Irrit. 2; H319, STOT SE 3; H336
Ethanol	10 – 25	64-17-5 200-578-6 603-002-00-5	Flam. Liq. 2; H225
1-Methoxy-2-propanol	2,5 – 10	107-98-2 203-539-1 603-064-00-3	Flam. Liq. 3; H226, STOT SE 3; H336

4. First aid measures

4.1. Description of first measures:

General advice: Remove contaminated clothing.

If inhaled: Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.

In case of skin contact: Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.

In case of eye contact: Flush eyes with water while holding eyelids open. Rest eyes for 30 minutes. If redness, burning, blurred vision, or swelling persist, transport to the nearest medical facility for additional treatment.

If swallowed: Not applicable.

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

No data available.

4.3. Identification of any immediate medical attention and special treatment needed:

No data available.

5. Firefighting measures

5.1. Extinguishing media:

Suitable extinguishing media: Foam, water spray or fog. Dry chemical powder, carbon dioxide.

Unsuitable extinguishing media: Water jet.

5.2. Special hazards arising from the substance or mixture:

Specific hazards during firefighting: Exposure to decomposition products may cause health problems. Possible in case of fire / high temperatures the formation of hazardous / toxic fumes.

5.3. Advice for firefighters:

Special protective equipment for firefighters: In the event of fire, self-contained breathing apparatus. Personal protective equipment.

Other information: Standard procedure for chemical fires. Fighting measures that suit the environment. Pay attention to flashback. Because of the high vapour pressure when heated bursting of the vessels.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:

Avoid contact with eyes. Ensure adequate ventilation, especially in confined spaces. Avoid inhalation of vapours or mists.

6.2. Environmental precautions:

Do not flush into surface water or sanitary sewer. Prevent further leakage or spillage if possible without risk. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3. Methods and material for containment and cleaning up:

Contain spilled liquid with sand, earth or other suitable absorbents. Recover free liquid in suitable containers. Clean contaminated area. Dispose of according to local regulations.

6.4. Reference to other sections:

See section: 7, 8, 11, 12 and 13.

7. Handling and storage

7.1. Precautions for safe handling:

Advice on safe handling: Use only in well ventilated areas. Avoid inhalation of vapours or mists. Avoid contact with eyes.

Advice on protection against fire and explosion: Normal measures for preventive fire protection. Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Keep away from heat and ignition sources. Do not smoke. Sparking tools. Electrical equipment should be protected to the appropriate standards.

7.2. Conditions for safe storage, including any incompatibilities:

Requirements for storage areas and containers: Store in original container. CAUTION: Aerosol are under pressure. Keep away from direct sunlight and temperatures above 50 ° C. Do not apply force or throw into fire even after use. Do not spray on flames or red-hot objects. Keep container tightly closed in a dry, cool and well ventilated place. Storage regulations for aerosols!

Storage class: 2B, Aerosols

7.3. Specific end use(s):

No data available.

8. Exposure controls/personal protection

8.1. Control parameters:

8.1.1. Limits for occupational exposure

Components	CAS-No.	Control parameters	Excess factor	Base
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		ml/m ³ (ppm)	mg/m ³		
Propan-2-ol	67-63-0	200	500	4	
1-Methoxy-2-propanol	107-98-2	100	375	1,5	
Ethanol	64-17-5	1000	1900	4	
Dimethyl ether	115-10-6	1.000	1.920		

8.1.2. DNEL-and PNEC-values

Substance	Type	Type of exposure	Exposure time	Value
Propan-2-ol	DNEL (workers)	Inhalation	Long term exposure – systemic effects	500 mg/m ³
Propan-2-ol	DNEL (workers)	dermal	Long term exposure – systemic effects	888 mg/kg bw/day
Propan-2-ol	DNEL (consumer)	inhalation	Long term exposure – systemic effects	89 mg/m ³
Propan-2-ol	DNEL (consumer)	dermal	Long term exposure – systemic effects	319 mg/kg bw/day
Propan-2-ol	DNEL (consumer)	oral	Long term exposure – systemic effects	26 mg/kg bw/day
Propan-2-ol	PNEC	fresh water		140,9 mg/l
Propan-2-ol	PNEC	marine water		140,9 mg/l
Propan-2-ol	PNEC	water (intermittent releases)		140,9 mg/l
Propan-2-ol	PNEC	STP		2251 mg/l
Propan-2-ol	PNEC	sediment (freshwater)		552 mg/kg sed. dw
Propan-2-ol	PNEC	sediment (marine water)		552 mg/kg sed. dw
Propan-2-ol	PNEC	soil		28 mg/kg soil dw
Propan-2-ol	PNEC	oral		160 mg/kg food
Ethanol	DNEL (workers)	Inhalation	Long term exposure – systemic effects	950 mg/m ³
Ethanol	DNEL (workers)	Inhalation	Short term exposure – local effects	1900 mg/m ³
Ethanol	DNEL (workers)	Dermal	Long term exposure – systemic effects	343 mg/kg bw/day
Ethanol	DNEL (consumer)	Inhalation	Long term exposure – systemic effects	114 mg/m ³
Ethanol	DNEL (consumer)	Inhalation	Short term exposure – local effects	950 mg/m ³
Ethanol	DNEL (consumer)	Dermal	Long term exposure – systemic effects	206 mg/kg bw/day
Ethanol	DNEL (consumer)	Oral	Long term exposure – systemic effects	87 mg/kg bw/day
Ethanol	PNEC	fresh water		0,96 mg/l
Ethanol	PNEC	marine water		0,79 mg/l
Ethanol	PNEC	water (intermittent releases)		2,75 mg/l
Ethanol	PNEC	STP		580 mg/l
Ethanol	PNEC	sediment (freshwater)		3,6 mg/kg dwt

Ethanol	PNEC	sediment (marine water)		2,9 mg/kg dwt
Ethanol	PNEC	soil		0,63 mg/kg dwt
Ethanol	PNEC	oral		0,72 g/kg food
1-Methoxy-2-propanol	DNEL (workers)	Inhalation	Long term exposure – systemic effects	369 mg/m ³
1-Methoxy-2-propanol	DNEL (workers)	Inhalation	Kurzzeit – lokale Auswirkungen	553,5 mg/m ³
1-Methoxy-2-propanol	DNEL (workers)	Dermal	Long term exposure – systemic effects	50,6 mg/kg bw/day
1-Methoxy-2-propanol	DNEL (consumer)	Inhalation	Long term exposure – systemic effects	43,9 mg/m ³
1-Methoxy-2-propanol	DNEL (consumer)	Dermal	Long term exposure – systemic effects	18,1 mg/kg bw/day
1-Methoxy-2-propanol	DNEL (consumer)	Oral	Long term exposure – systemic effects	3,3 mg/kg bw/day
1-Methoxy-2-propanol	PNEC	fresh water		10 mg/l
1-Methoxy-2-propanol	PNEC	marine water		0,1 mg/l
1-Methoxy-2-propanol	PNEC	water (intermittent releases)		100 mg/l
1-Methoxy-2-propanol	PNEC	STP		100 mg/l
1-Methoxy-2-propanol	PNEC	sediment (freshwater)		52,3 mg/kg dwt
1-Methoxy-2-propanol	PNEC	sediment (marine water)		5,2 mg/kg dwt
1-Methoxy-2-propanol	PNEC	soil		5,49 mg/kg dwt
Dimethylether	DNEL (workers)	Inhalation	Long term exposure – systemic effects	1894 mg/m ³
Dimethylether	DNEL (consumer)	Inhalation	Long term exposure – systemic effects	471 mg/m ³
Dimethylether	PNEC	fresh water		0,155 mg/l
Dimethylether	PNEC	marine water		0,016 mg/l
Dimethylether	PNEC	water (intermittent releases)		1,549 mg/l
Dimethylether	PNEC	STP		160 mg/l
Dimethylether	PNEC	sediment (freshwater)		0,681 mg/kg dwt
Dimethylether	PNEC	sediment (marine water)		0,069 mg/kg dwt
Dimethylether	PNEC	soil		0,045 mg/kg dwt

8.2. Exposure controls:

Technical protective equipment:

Provide sufficient air exchange and / or exhaust in work rooms.

Personal protective equipment:

Respiratory protection:

At concentrations above the exposure limit they must use respiratory protection. Respirator with combination filter for particles and vapors (EN 141). Respirator with AX filter.

Hand protection:

Not applicable.

Eye protection:

Tightly fitting safety goggles.

Protective clothing:

Flame retardant antistatic protective clothing. Choose body protection according to the amount and concentration of the hazardous substance at the workplace.

Hygien measures:

Handle with good industrial hygiene and safety practice. General industrial hygiene measures. Do

not breathe spray. Contact with skin, eyes and clothing. When using do not eat, drink or smoke. Wash hands before breaks and after work. Skin protection plan note. Wash contaminated clothing before reuse.

Environmental exposure controls:

General advice: Do not flush into surface water or sanitary sewer. Further leakage or spillage if possible without risk. If the product contaminates rivers and lakes or drains inform respective authorities.

9. Physical and chemical properties

9.1. Information on basis physical and chemical properties:

	Value	Unit	At	Method	Notice
Appearance:	aerosol				
Colour:	colourless to yellowish				
Odour:	characteristic				
Flash point:	Ca. -80	°C			Isobutane
Lower explosion limit:	1,40	Vol. %			Isobutane
Upper explosion limit:	10,80	Vol. %			Isobutane
Density:	0,808	g/cm ³			Active substance

9.2. Other information:

No data available.

10. Stability and reactivity

10.1. Reactivity:

No data available.

10.2. Chemical stability:

The product is chemical stable.

10.3. Possibility of hazardous reactions:

No decomposition if stored and applied. Vapours may form explosive mixtures with air. Because of the high vapour pressure when heated bursting of the vessels.

10.4. Conditions to avoid:

Heat, flames and sparks.

10.5. Incompatible materials:

No data available.

10.6. Hazardous decomposition products:

Hazardous decomposition products: Possible in case of fire / high temperatures the formation of hazardous / toxic fumes.

11. Toxicological information

Acute toxicity:

Acute oral toxicity:

Propan-2-ol	LD ₅₀ > 2000 mg/kg
1-Methoxy-2-propanol	LD ₅₀ > 2000 mg/kg (rat)
Ethanol	LC50 = 6200 mg/l (rat)

Acute inhalation toxicity:

Propan-2-ol	LC ₅₀ > 20 mg/l
1-Methoxy-2-propanol	LC ₅₀ > 20 mg/l (4 h, Rabbit)
Ethanol	LC50 > 8000 mg/l (rat)

Acute dermal toxicity:

Propan-2-ol	LD ₅₀ > 2000 mg/kg
1-Methoxy-2-propanol	LD ₅₀ > 2000 mg/kg (rat)
Ethanol	LC50 > 20000 mg/l (rabbit)

Skin corrosion/irritation: May cause irritation.

Serious eye damage/eye irritation: Cause irritation.

Respiratory or skin sensitization: Possible sensitization through the skin.

Germ cell mutagenicity: No data available

Carcinogenicity: No data available

Reproductive and developmental toxicity: No data available

Other information: Drowsiness and dizziness. Irritation and dermatitis, weakness.

12. Ecological information

12.1. Toxicity:

Toxicity to fish:

Propan-2-ol	100 < LC/EC/IC50 ≤ 1000 mg/l
1-Methoxy-2-propanol	LC/EC/IC50 > 1000 mg/l
Ethanol	LC50 (48 h) = 8140 mg/l

Toxicity to Daphnia:

Propan-2-ol	LC/EC/IC50 > 1000 mg/l
1-Methoxy-2-propanol	LC/EC/IC50 > 1000 mg/l
Ethanol	LC50 (48 h) 9268 – 14221 mg/l

Toxicity to algae:

Propan-2-ol	LC/EC/IC50 > 1000 mg/l
1-Methoxy-2-propanol	LC/EC/IC50 > 1000 mg/l
Ethanol	IC5 (7 day) = 5000 mg/l

Toxicity to bacteria:

Propan-2-ol	LC/EC/IC50 > 1000 mg/l
1-Methoxy-2-propanol	LC/EC/IC50 > 1000 mg/l
Ethanol	EC5 (72 h) = 65 mg/l

12.2. Persistence and degradability:

No data available.

12.3. Bioaccumulative potential:

No data available.

12.4. Mobility in soil:

No data available.

12.5. Results of PBT- and vPvB assessment:

No data available.

12.6. Other adverse effects:

The penetration of the product into drains, water courses or the soil should be prevented.

13. Disposal considerations

13.1. Product:

Waste key number: 160504* = Accumulators containing certain dangerous gases in pressurized containers.
* = The disposal must be provided.

Recommendation: Do not open, even after use or burn.
Disposal according to official regulations.

13.2. Packaging:

Waste key number: 150110 = Packaging containing residues of hazardous substances or contaminated by dangerous substances

Recommendation: Drain thoroughly and completely as possible.
Disposal according to official regulations.

14. Transport information

ADR

UN number: 1950
Product designation: AEROSOLS
Class: 2
Packaging group: --
Code: 5F
Label: 2.1
Limited quantities: 1 L
Tunnel restriction code: (D)
Environmentally hazardous: no

RID

UN number: 1950
Product designation: AEROSOLS
Class: 2
Packaging group: --
Code: 5F
Label: 2.1
Hazard identification No.: 23
Limited quantities: LQ2
Tunnel restriction code: (D)
Environmentally hazardous: no

Special precautions for user:

See chapter: 6, 7 and 8

15. Regulatory information

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

Council Directive (2012/18/EC):	P3a FLAMMABLE AEROSOLS	Quantity 1 150 t (net)	Quantity 2 500 t (net)
VOC (Directive 1999/13/EG):	VOC: 710 g/l = 96 %		
According to EU Detergents EC 648/2004:	Contains: <5% anionic surfactants, perfume		

15.2. Chemical safety assessment:

No data available.

16. Other information

Full text of H-statements referred to under sections 2 and 3:

- | | |
|------|---|
| H220 | Extremely flammable gas. |
| H226 | Flammable liquid and vapour. |
| H280 | Contains gas under pressure; may explode if heated. |
| H319 | Causes serious eye irritation. |
| H336 | May cause drowsiness or dizziness. |

Changes:

- /