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

1.1. Product identifier:

Trade name: **Klimaanlagereiniger**
Product number: 71350

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

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.

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.
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 no expose to temperatures exceeding 50 oC/122oF.
P501	Dispose of contents/container to accordance with local / regional / national / international regulations.

Contains: /

Continued on next page

Text for labelling:

Contains: <5% anionic surfactants, perfume

2.3. Other hazards:

Pressurized container. Heating will cause pressure rise: bursting and explosion. Vapours may form explosive mixtures with air.

3. Composition/information on ingredients

Substance: ☐

Mixture: ☒

Chemical name:	Content (% m/m):	CAS: EC: Index:	Classification (1272/2008/EC):
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
1-Methoxy-2-propanol	< 2,5	107-98-2 203-539-1 603-064-00-3	Flam. Liq. 3; H226, STOT SE 3; H336
Propane	2,5 – 10	74-98-6 200-827-9 601-003-00-5	Flam. Gas. 1; H220, Press. Gass; H280
Isobutane	2,5 – 10	75-28-5 200-857-2 601-004-00-0	Flam. Gas. 1; H220, Press. Gass; H280

4. First aid measures

4.1. Description of first measures:

General advice:	Remove contaminated clothing immediately.
If inhaled	Remove victim to fresh air, loosen tight clothing and keep quiet. In case of respiratory symptoms consult with doctor immediately.
In case of skin contact	Generally the product does not irritate the skin.
In case of eye contact	Immediately rinse the open eyes 10 to 15 minutes, rinse with running water. In case of eye irritation persists, consult an ophthalmologist.
If swallowed	inapplicable

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.

Continued on next page

Unsuitable extinguishing media	Water jet.

5.2. Special hazards arising from the substance or mixture:

Specific hazards during firefighting:	Extremely flammable. Vapors may form an explosive mixture with air. In case of fire: Dense black smoke, which can cause a health hazard. Furthermore: Carbon monoxide and carbon dioxide.

5.3. Advice for firefighters:

Special protective equipment for firefighters:	In the event of fire, self-contained breathing apparatus. Personal protective equipment.
Other information:	Cool endangered containers with water spray to cool. Pressurized container. Heating will cause pressure rise: bursting and explosion.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Do not breathe vapor / spray. Avoid substance contact with eyes.

6.2. Environmental precautions:

Prevent penetration into soil, drains, ponds, low-lying areas and pits.

6.3. Methods and material for containment and cleaning up:

Isolate leaked material using non-flammable absorption agent (eg sand, earth, vermiculite, diatomaceous earth) and collect it for disposal according to local regulations in the appropriate containers (see Chapter 13). Clean using cleansing agents perform, do not use solvents.

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. Do not breathe vapor / spray. Prolonged and intense. Do not spray in eyes.
Advice on protection against fire and explosion	Vapors may form explosive mixtures with air that are heavier than air. Protect from sunlight and temperatures above 50 ° C. Keep ignition sources away - Do not smoke. Take precautionary measures against static discharges. Pierce or burn, even after use, do not force. Do not spray on a naked flame or any incandescent material.

7.2. Conditions for safe storage, including any incompatibilities:

Requirements for storage areas and containers:	Keep container in a well-ventilated place. Keep only in original container. Store at room temperature. Store containers upright. Do not store with strong oxidizing agents.
Storage class:	2B, Aerosols

7.3. Specific en 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
		ml/m^3 (ppm)	mg/m^3		
Propan-2-ol	67-63-0	200	500	4	

Continued on next page

1-Methoxy-2-propanol	107-98-2	100	375	1,5	
Propane	74-98-6	1.000	1.800	4	
Isobutane	75-28-5	1.000	2.400	4	

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
1-Methoxy-2-propanol	DNEL (workers)	inhalation	Long term exposure – systemic effects	369 mg/m^3
1-Methoxy-2-propanol	DNEL (workers)	Inhalation	Short term exposure – local effects	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

8.2. Exposure controls:

Technical protective equipment:

Continued on next page

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

Personal protective equipment:

Respiratory protection:	When exceeding the occupational exposure limits (OEL) is to wear a respirator. Use filter type A (= against vapors of volatile organic compounds) according to EN 371. The following applies to propane: When concentration exceeded insulating equipment must be used!
Hand protection:	inapplicable
Eye protection:	Tightly fitting safety goggles EN166.
Protective clothing:	Wear suitable protective clothing.
Hygiene measures:	Avoid contact with eyes, skin and clothing. When using do not eat, drink or smoke. Wash hands before breaks and at end of work.

Environmental exposure controls:

General advice:	Do not flush into surface water or sanitary sewer system. Further leakage or spillage if this is possible without hazard. 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				
Color:	colorless to yellow				
Odor:	characteristic				
Flash point:	approx. -80	°C			isobutane
Lower explosion limit:	1,4	Vol. %			isobutane
Upper explosion limit:	10,80	Vol. %			propane
Density:	0,948	g/cm^3			active substance
Water solubility:	soluble				

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. Vapors may form explosive mixtures with air. Because of the high vapor pressure of the vessels in temperature rise with risk of bursting.

10.4. Conditions to avoid:

Extremely flammable. Keep away from heat, sparks and open flames. Vapors may form explosive mixtures with air that are heavier than air. Protect from sunlight and temperatures above 50 ° C.

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

Continued on next page

Acute toxicity:

Acute oral toxicity:

Propan-2-ol	LD_{50} > 2000 mg/kg
1-Methoxy-2-propanol	LD_{50} > 2000 mg/kg (rat)

Acute inhalation toxicity:

Propan-2-ol	LC_{50} > 20 mg/l
1-Methoxy-2-propanol	LC_{50} > 20 mg/l (4 h, rabbit)

Acute dermal toxicity:

Propan-2-ol	LD_{50} > 2000 mg/kg
1-Methoxy-2-propanol	LD_{50} > 2000 mg/kg (rat)

Skin corrosion/irritation:	May cause irritation.
Serious eye damage/eye irritation:	May 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:	No data available

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

Toxicity to Daphnia:

Propan-2-ol	LC/EC/IC50 > 1000 mg/l
1-Methoxy-2-propanol	LC/EC/IC50 > 1000 mg/l

Toxicity to algae:

Propan-2-ol	LC/EC/IC50 > 1000 mg/l
1-Methoxy-2-propanol	LC/EC/IC50 > 1000 mg/l

Toxicity to bacteria:

Propan-2-ol	LC/EC/IC50 > 1000 mg/l
1-Methoxy-2-propanol	LC/EC/IC50 > 1000 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

Continued on next page

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)
Dangerous for the environment:	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:	225 g/l = 25 %		

15.2. Chemical safety assessment:

No data available.

16. Other information

Continued on next page

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

H220	Extremely flammable gas.
H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
H280	Contains gas under pressure; may explode if heated.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Changes:

- Item 2
- Item 3
- Item 8.2
- Item 15.1