

Antifrogen KF VP 1974

Print date 04.07.2024
Revision date 04.07.2024
Version 8.0 (en)
replaces version of 20.06.2018 (6.0)

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

*** 1.1 Product identifier**

Trade name/designation Antifrogen KF VP 1974
Art-Nr(n). 1620

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

Use of the substance/mixture
Cooling liquid brine.
Functional fluid.

1.3 Details of the supplier of the safety data sheet

Supplier
GHC Gerling, Holz & Co. Handels GmbH
Ruhrstraße 113
D-22761 Hamburg
Telephone +49 40 853 123 0
E-mail hamburg@ghc.de
Website www.ghc.com

Department responsible for information:
GHC Gerling, Holz & Co. Handels GmbH
Telephone +49 40 853 123 0

E-mail (competent person):
msds@ghc.de

*** 1.4 Emergency telephone number**

EN: Poison Information Center Mainz +49 6131 19240

*** SECTION 2: Hazards identification**

*** 2.1 Classification of the substance or mixture**

Remark
The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

2.2 Label elements

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

Special rules for supplemental label elements for certain mixtures
EUH210 Safety data sheet available on request.

*** 2.3 Other hazards**

Other adverse effects
The substance/mixture does not contain components identified as having endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1% or more.

Results of PBT and vPvB assessment

The substance/mixture does not contain components meeting the PBT/vPvB criteria of the Reach Regulation, Annex XIII, at levels of 0.1% or higher.

*** SECTION 3: Composition / information on ingredients**

3.1 Substances

not applicable

3.2 Mixtures

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Hazardous ingredients

CAS No	EC No	Index No	Substance name	Concentration	Classification according to Regulation (EC) No 1272/2008 [CLP]	SCL/ M/ ATE
590-29-4	209-677-9		potassium-formate	50 weight-%		
584-08-7	209-529-3		potassium-carbonate	1 - 10 weight-%	Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335	

REACH No.	Substance name
01-2119486456-26	potassium-formate
01-2119532646-36	potassium-carbonate

*** SECTION 4: First aid measures***** 4.1 Description of first aid measures***** General information**

Remove contaminated, saturated clothing immediately.
 In the event of persistent symptoms obtain medical treatment.
 First aider: Pay attention to self-protection!

*** Following inhalation**

Remove casualty to fresh air and keep warm and at rest.
 In the event of symptoms refer for medical treatment.

*** Following skin contact**

After contact with skin, wash immediately with plenty of water and soap.
 In case of skin irritation, consult a physician.

*** After eye contact**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical assistance.

*** Following ingestion**

Do NOT induce vomiting.
 Rinse mouth immediately and drink plenty of water.
 Call a physician immediately.

*** 4.2 Most important symptoms and effects, both acute and delayed***** Symptoms**

The following symptoms may occur in case of strong exposition:
 Eye Irritation
 Gastrointestinal complaints

*** 4.3 Indication of any immediate medical attention and special treatment needed***** Notes for the doctor**

Treat symptomatically.

*** SECTION 5: Firefighting measures***** 5.1 Extinguishing media***** Suitable extinguishing media**

The product itself does not burn. The product itself does not burn. Match extinguishing measures to surrounding fire.
 Extinguishing powder
 alcohol resistant foam
 Water spray jet
 Carbon dioxide (CO₂)

Unsuitable extinguishing media

Full water jet

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* **5.2 Special hazards arising from the substance or mixture**

- * **Hazardous combustion products**
In case of fire formation of dangerous gases possible.
Carbon monoxide
Carbon dioxide (CO₂)

* **5.3 Advice for firefighters**

- * **Special protective equipment for firefighters**
Wear a self-contained breathing apparatus and chemical protective clothing.

* **Additional information**

Use water spray jet to protect personnel and to cool endangered containers.
Exposure to fire may cause rupture / explosion of the containers.
Dispose of fire residues and contaminated extinguishing water in accordance with local, official regulations.

* **SECTION 6: Accidental release measures**

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

- * **For non-emergency personnel**
Use personal protection equipment.
Leave the danger area.

For emergency responders
Personal protection by wearing close-fitting protective clothing and breathing apparatus.
Remove persons to safety.

6.2 Environmental precautions

Do not allow to enter into soil/subsoil.
Do not allow to enter into surface water or drains.

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

- * **For containment**
Prevent the liquid from spreading over a wide area (set up barriers, cover sewage systems).

- * **For cleaning up**
Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).
Collect in closed and suitable containers for disposal.

6.4 Reference to other sections

Disposal: see section 13
Personal protection equipment: see section 8

* **SECTION 7: Handling and storage**

* **7.1 Precautions for safe handling**

- * **Protective measures**
Use only in well-ventilated areas.
Usual measures for fire prevention.
If used properly, no special measures are required.

Advices on general occupational hygiene
When using do not eat, drink, smoke, sniff.
Wash hands before breaks and after work.
Remove contaminated clothing and protective equipment before entering eating areas.

* **7.2 Conditions for safe storage, including any incompatibilities**

- * **Requirements for storage rooms and vessels**
All regulations and local requirements for the storage of containers have to be respected.
Keep container tightly closed and in a well-ventilated place.
Only use containers specifically approved for the substance/product.

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- * **Materials to avoid**
 Do not store together with explosives.
 Do not store together with infectious substances.
 Do not store together with radioactive material.
 Do not store together with food or feed.

* **7.3 Specific end use(s)**

- * **Recommendation**
 See section 1.2
 An exposure scenario is not required.

* **SECTION 8: Exposure controls/personal protection*** **8.1 Control parameters*** **DNEL worker**

CAS No	Substance name	DNEL value	DNEL type	Remark
584-08-7	potassium-carbonate	10 mg/m ³	acute inhalative (local)	
584-08-7	potassium-carbonate	10 mg/m ³	long-term inhalative (local)	
590-29-4	potassium-formate	12.35 mg/kg bw/day	long-term dermal (systemic)	Assessment factor 100, assessment factor.
590-29-4	potassium-formate	43.55 mg/m ³	long-term inhalative (systemic)	Assessment factor 25, assessment factor.

* **DNEL Consumer**

CAS No	Substance name	DNEL value	DNEL type	Remark
590-29-4	potassium-formate	6.175 mg/kg bw/day	Long-term – oral, systemic effects	Assessment factor 200, assessment factor.
590-29-4	potassium-formate	6.175 mg/kg bw/day	long-term dermal (systemic)	Assessment factor 200, assessment factor.
590-29-4	potassium-formate	10.74 mg/m ³	long-term inhalative (systemic)	Assessment factor 50, assessment factor.

PNEC

CAS No	Substance name	PNEC Value	PNEC type	Remark
590-29-4	potassium-formate	2 mg/L	aquatic, freshwater	Assessment factor 50, assessment factor.
590-29-4	potassium-formate	10 mg/L	aquatic, intermittent release	
590-29-4	potassium-formate	0.2 mg/L	aquatic, marine water	Assessment factor 500, assessment factor.
590-29-4	potassium-formate	13.4 mg/kg	sediment, freshwater	
590-29-4	potassium-formate	1.34 mg/kg	sediment, marine water	
590-29-4	potassium-formate	1.8 mg/L	sewage treatment plant (STP)	Assessment factor 10, assessment factor.
590-29-4	potassium-formate	1.5 mg/kg	soil	

* **8.2 Exposure controls*** **Personal protection equipment****Eye/face protection**

Protective goggles according to EN 166, in case of increased risk add protective face shield.

Hand protection

Safety gloves according to EN 374:

Glove material specification [make/type, thickness, permeation time/life]: IIR, >= 0,7 mm, > 480 min

Body protection:

Safety shoes with steel toecap.

Body covering work clothing or chemical resistant suit at increased risk.

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* **Respiratory protection**
 Keep self contained breathing apparatus readily available for emergency use.
 Respiratory protection complying with EN 137.

* **Environmental exposure controls**

* **Remark**
 Prevent release to the environment.

* **SECTION 9: Physical and chemical properties*** **9.1 Information on basic physical and chemical properties****Physical state**

liquid

Colour

colourless

Odour

characteristic

Safety relevant basis data

	Value	Method	Source, Remark
Odour threshold:			not determined
Melting point/freezing point	Freezing point approx. -53 °C	ASTM D 1177	
Boiling point or initial boiling point and boiling range	approx. 115 °C pressure 1013 hPa	ASTM D1120	
flammability			not determined
Lower and upper explosion limit			not determined
Flash point	> 110 °C	DIN 51758	No flash point - measurement carried out until boiling temperature.
Auto-ignition temperature	> 550 °C	DIN 51794	
Decomposition temperature			No decomposition if used as directed.
pH	10.8- 11.4	EN 1262	determined undiluted
Viscosity	kinematic approx. 2 mm ² /s (20°C)	DIN 51562	
Solubility(ies)	Water solubility		miscible
Partition coefficient n-octanol/water (log value)			not applicable
Vapour pressure	approx. 20 hPa (20°C)	calculated	
Density and/or relative density	approx. 1.35 g/cm ³ (20°C)	DIN 51757	
Relative vapour density			not determined
particle characteristics			not applicable

* **9.2 Other information**

No data available

* **SECTION 10: Stability and reactivity****10.1 Reactivity**

See section "Possibility of hazardous reactions".

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*** 10.2 Chemical stability**

The mixture is chemically stable under recommended conditions of storage, use and temperature.

10.3 Possibility of hazardous reactions

Reactions with acids.
 Reactions with strong oxidising agents.

*** 10.4 Conditions to avoid**

Heat sources / heat - risk of bursting.
 Ignition sources, open flames, glowing metal surfaces, etc.

*** 10.5 Incompatible materials**

Alkali metals

10.6 Hazardous decomposition products

When handled and stored appropriately, no dangerous decomposition products are known.

*** SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008***** Acute toxicity***** Animal data**

	Effective dose	Method, Evaluation	Source, Remark
Acute oral toxicity	LD50: 5500 mg/kg Species Mouse	OECD 401	Information concerns main component.
Acute dermal toxicity	LD50: > 2000 mg/kg Species Rat	EPA	Data apply to the main component.
Acute inhalation toxicity	Acute inhalation toxicity (dust/mist) LC50: > 4.96 mg/L Species Rat Exposure time 4.5 h	EPA/TSCA CFR part 798.1150	Data apply to the main component.

*** Assessment/classification**

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

*** Skin corrosion/irritation****Animal data**

Result / Evaluation	Method	Source, Remark
non-irritant. Species Rabbit	OECD 404	Information concerns main component.

*** Assessment/classification**

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

*** Serious eye damage/irritation****Animal data**

Result / Evaluation	Method	Source, Remark
non-irritant. Species Rabbit	OECD 405	Information concerns main component.

*** Assessment/classification**

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

*** Sensitisation to the respiratory tract***** Assessment/classification**

No data available

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*** Skin sensitisation****Animal data**

Result / Evaluation	Dose / Concentration	Method	Source, Remark
not sensitising.	Species Guinea pig	OECD 406	Information concerns main component.

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

*** Germ cell mutagenicity**

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

*** Carcinogenicity**

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

*** Reproductive toxicity**

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

*** STOT-single exposure***** STOT SE 1 and 2**

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

*** STOT-repeated exposure***** Animal data**

	Effective dose	Method	Specific effects:	Organs affected:	Source, Remark
Oral specific target organ toxicity (repeated exposure)	NOAEL(C): 3877 mg/kg	OECD 408			Information concerns main component.

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

*** Aspiration hazard****Remark**

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

11.2 Information on other hazards*** Other information**

The product has not been tested. The information is derived from the properties of the individual components.

*** SECTION 12: Ecological information***** 12.1 Toxicity***** Aquatic toxicity**

	Effective dose	Method, Evaluation	Source, Remark
Acute (short-term) fish toxicity	> 1000 mg/L Species Pimephales promelas (fathead minnow) Test duration 96 h	EPA OTS 797.1400	Information concerns main component.
Chronic (long-term) fish toxicity	not determined		
Acute (short-term) toxicity to crustacea	EC50 > 1000 mg/L Species Daphnia magna (Big water flea) Test duration 48 h	EPA 660/3-75/009	Data apply to the technically active substance.

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	Effective dose	Method, Evaluation	Source, Remark
Chronic (long-term) toxicity to aquatic invertebrate	not determined		
Acute (short-term) toxicity to algae and cyanobacteria	not determined		
Chronic (long-term) toxicity to aquatic algae and cyanobacteria	not determined		
Toxicity to other aquatic plants/organisms	not determined		
Toxicity to microorganisms	EC0 > 10 g/L Species activated sludge Test duration 28 d	OECD 209	

* **12.2 Persistence and degradability**

	Value	Method	Source, Remark
Biodegradation	Degradation rate > 90 % Test duration 28 h	DIN 38412 / Part 24	

* **12.3 Bioaccumulative potential**

No data available

* **12.4 Mobility in soil**

No data available

12.5 Results of PBT and vPvB assessment

The substance/mixture does not contain components meeting the PBT/vPvB criteria of the Reach Regulation, Annex XIII, at levels of 0.1% or higher.

* **12.6 Endocrine disrupting properties**

No data available

* **12.7 Other adverse effects**

* **Additional ecotoxicological information**

* **Additional information**

The product has not been tested. The data are derived from the individual components of the mixture.

* **SECTION 13: Disposal considerations**

* **13.1 Waste treatment methods**

Waste codes/waste designations according to EWC/AVV

Waste code product	Waste name
160114 *	antifreeze fluids containing hazardous substances

* **Appropriate disposal / Product**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.
 Prevent release to the environment. No disposal via the sewage.
 Disposal according to local regulations.

* **Appropriate disposal / Package**

Disposal according to local regulations.

SECTION 14: Transport information

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1 UN number or ID number	-	-	-
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-

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	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.5 Environmental hazards	-	-	-

14.6 Special precautions for user

The protective measures listed in Sections 6, 7 and 8 of the Safety Data Sheet have to be considered.

14.7 Maritime transport in bulk according to IMO instruments

No carriage in bulk.

Land transport (ADR/RID)**Remark**

Not classified for this transport carrier.

Sea transport (IMDG)**Remark**

No hazardous material as defined by the prescriptions.

Air transport (ICAO-TI / IATA-DGR)**Remark**

No hazardous material as defined by the prescriptions.

*** SECTION 15: Regulatory information***** 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture***** Other regulations (EU)***** To follow:**

National and local regulations concerning chemicals shall be observed.

*** 15.2 Chemical Safety Assessment***** National regulations**

Chemical safety assessments for substances in this mixture were carried out.

*** SECTION 16: Other information***** Abbreviations and acronyms**

Skin Irrit. 2: Skin irritation, Category 2

Eye Irrit. 2: Eye irritation, Category 2

STOT SE 3, H335: Specific target organ toxicity (single exposure), Category 3

Key literature references and sources for data

Information from our suppliers and data from the "GESTIS Substances Database" and the "Registered Substances" database of the European Chemicals Agency (ECHA) were used to create this safety data sheet.

*** Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]**

The mixture was classified by the manufacturer.

*** Additional information**

The information contained herein is based on the state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

Relevant H- and EUH-phrases (Number and full text)

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

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Indication of changes

* Data changed compared with the previous version