

Safety data sheet in accordance with 2001/58/EC
ANTIFROGEN KF VP 1974

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Substance key: SXR103368
Version : 2 - 12 / EURevision Date: 19.02.2004
Date of printing : 30.06.2008**1. Identification of the substance/preparation and company****Trade name****ANTIFROGEN KF VP 1974****Use of the substance/preparation.**Industry sector : Functional Fluids
Type of use : Brine for refrigeration**Identification of the company**

Clariant Produkte (Deutschland) GmbH

65926 Frankfurt am Main
Telephone no. : +49 69 305 18000**Information about the substance/preparation**Div. Functional Chemicals/PRODUCT SAFETY
++49(0)69-305-2092/15315/32251**Emergency telephone number** : +49 69 305 6418**2. Composition/information on ingredients****Chemical characterization**

Inhibited potassium formate, approx 50% aqueous solution

Hazardous ingredientsPotassium carbonate
Concentration : < 5 %
CAS number : 584-08-7
EINECS number : 209-529-3
Hazard symbols Xn
R phrases 22 36**3. Hazards identification**

The preparation described in this Safety Data Sheet is not classified as dangerous but does contain at least one dangerous component according to Article 14, paragraph 2.1b of the EU Dangerous Preparations Directive 1999/45/EEC

4. First aid measures**General information**

Remove soiled or soaked clothing immediately

After inhalation

When inhaled remove to fresh air and seek medical aid.

After contact with skin

In case of contact with skin wash off immediately with soap and water

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In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice

After ingestion

When swallowed accidentally, drink sufficient amounts of water and seek medical aid.

5. Fire-fighting measures**Suitable extinguishing media**water spray jet
foam
carbon dioxide
dry powder**Special hazards from the substance itself, its combustion products or from its vapours**

In case of fires, hazardous combustion gases are formed: Carbon monoxide (CO)

Special protective equipment for firefighting

Use self-contained breathing apparatus

6. Accidental release measures**Personal precautions**

Wear suitable personal protective equipment.

Environmental precautions

Do not allow to enter drains or waterways

Methods for cleaning up/taking upTake up with absorbent material (eg sand, kieselguhr, universal binder)
Dispose of as prescribed**7. Handling and storage****Advice on safe handling**

Open and handle container with care.

Advice on protection against fire and explosion

No special measures necessary

Requirements for storage rooms and vessels

Do not use zinc containers.

Advice on storage compatibilityDo not store with acids
Do not store together with oxidizing agents.**Further information on storage conditions**

Keep container tightly closed in a cool, well-ventilated place

8. Exposure controls/personal protection

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Avoid contact with eyes and skin

Hygiene measures

Do not eat or drink during work time.

Wash hands before breaks and after work.

Respiratory protection :

Use respiratory protection in case of insufficient exhaust ventilation or prolonged exposure
Half-mask according to DIN EN 140
Particle filter P, to standard DIN EN 143
The use of filter apparatus presupposes that the environment atmosphere contains at least 17% oxygen by volume, and does not exceed the maximum gas concentration, usually 0.5% by volume. Relevant guidelines to be considered include EN 136/141/143/371/372 as well as other national regulations.

Hand protection :

For long-term exposure:
Butyl rubber gloves.
Minimum breakthrough time / gloves : 480 min
Minimum thickness / gloves 0,7 mm

For short-term exposure (splash protection):
Nitrile rubber gloves.
Minimum breakthrough time / gloves : 30 min
Minimum thickness / gloves 0,4 mm

These types of protective gloves are offered by various manufacturers. Please note the manufacturers' detailed statements, especially about the minimum thickness and the minimum breakthrough time. Consider also the particular working conditions under which the gloves are being used.

Eye protection :

safety glasses

Body protection :

protective clothing

9. Physical and chemical properties

Form :	Liquid
Colour :	colourless
Odour :	slight, original odour
Freezing point :	approx. -53 °C Method : ASTM D 1177
Boiling point :	approx. 115 °C (1.013 mbar) Method : ASTM D 1120
Flash point :	> 110 °C Method : DIN 51758 (closed cup) No flash point - Measure made up to the boiling point.

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Ignition temperature :	> 550 °C Method : DIN 51794
Oxidizing properties :	Not applicable
Self-ignition temperature :	Not applicable
Lower explosion limit :	not determined
Upper explosion limit :	not determined
Evaporation rate :	not determined
Vapour pressure :	approx. 20 mbar (20 °C) Method : Calculated by Syracuse.
Density :	approx. 1,35 g/cm ³ (20 °C) Method : DIN 51757
Bulk density :	Not applicable
Vapour density in relation to air :	not determined
Solubility in water :	miscible in all proportions
Soluble in ... :	fat not determined
pH value :	10,8 - 11,4 Method : DIN EN 1262 Determined in the undiluted form
Octanol/water partition coefficient (log Pow) :	not determined
Viscosity (kinematic) :	approx. 2 mm ² /s (20 °C) Method : DIN 51562
Combustion number :	Not applicable

10. Stability and reactivity

Thermal decomposition : > 400 °C
Method : DSC

Hazardous reactions

Reactions with acids.
Reactions with oxidising agents.

11. Toxicological information

Acute oral toxicity : > 2.000 mg/kg (mouse)
Source : Analogy

Acute inhalation toxicity : not determined

Acute dermal toxicity : not determined

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Irritant effect on skin :	non-irritant (rabbit) Method : OECD 404 Source : Analogy
Irritant effect on eyes :	non-irritant (rabbit eye) Method : OECD 405 Source : Analogy
Sensitization :	not determined
Mutagenicity :	not determined

12. Ecological information

Biodegradability :	> 90 % (28 d) Method : DIN 38412 T.24
Fish toxicity :	LC50 > 1.000 mg/l (96 h, zebra fish) Method : OECD 203
Daphnia toxicity :	> 1.000 mg/l (48 h, Daphnia magna) Method : OECD 202
Bacteria toxicity :	EC0 > 10 g/l Method : OECD 209
Chemical oxygen demand (COD) :	211 mg/g Method : DIN 38409-H41

Remarks

By analogy with a product of similar composition

13. Disposal considerations**Product**

In accordance with regulations for special waste, must be taken to a special waste disposal site

14. Transport information

ADR	not restricted
ADNR	not restricted
RID	not restricted
IATA	not restricted
IMDG	not restricted

15. Regulatory information

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Labelling in accordance with EC-Directives

The product does not require a hazard warning label in accordance with EC Directives

Special labelling for certain preparations

Safety Data Sheet available for professional user on request.

16. Other information**Text of the R-phrases which are allocated to the ingredients/components mentioned in section 2 of this Safety Data Sheet.**

22	Harmful if swallowed.
36	Irritating to eyes.

The data are based on the current state of our knowledge, and are intended to describe the product with regard to the requirements of safety. The data should not be taken to imply any guarantee of a particular or general specification. It is the responsibility of the user of the product to ensure to his satisfaction that the product is suitable for the intended purpose and method of use. We do not accept responsibility for any harm caused by the use of this information. In all cases, our general conditions of sale apply.