

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 06.03.2025

Version number 105.11 (replaces version 105.10)

Revision: 05.03.2025

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

1.1 Product identifier

Trade name **SK cooling medium for chillers, ready mixed 1:2 Outdoor**

Article number: 3301950 / 3301955 / 3301957

UFI: 4Q94-32HF-N00Q-H6DU

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

Restrictions on use:

Restrictions on use according to REGULATION (EC) No 1907/2006 ANNEX XVII apply to this product (see section 15).

Application of the substance / the mixture

antifreeze

coolant

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Rittal GmbH & Co. KG

Auf dem Stützelberg

D-35745 Herborn

1.4 Emergency telephone number:

This is an English-language document designed for the European region. For the emergency number and other country-specific data, please refer to the specific national versions of this safety data sheet.

Counselling Centre for Poisoning, Mainz

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Tel. (+49) 61 31 / 19 240.

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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Acute Tox. 4 H302 Harmful if swallowed.

STOT RE 2 H373 May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS07 GHS08

Signal word Warning

Hazard-determining components of labelling:

ethane-1,2-diol

Hazard statements

H302 Harmful if swallowed.

H373 May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P330 Rinse mouth.

P314 Get medical advice/attention if you feel unwell.

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

Additional information:

According to the current state of knowledge, no synthetic polymer microparticles > 0.01% are contained.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Determination of endocrine-disrupting properties Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description: Mixture of the following substances with non-hazardous additions.

Dangerous components:

CAS: 107-21-1	ethane-1,2-diol	25-50%
EINECS: 203-473-3	STOT RE 2, H373; Acute Tox. 4, H302	
Reg.nr.: 01-2119456816-28	substance with a Community workplace exposure limit	

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SVHC

This preparation does not contain any substances of very high concern (SVHC) in a concentration of ≥ 0.1 % according to Regulation (EC) 1907/2006, Article 57.

Additional information For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice: Instantly remove any clothing soiled by the product.

After inhalation Supply fresh air; consult doctor in case of symptoms.

After skin contact

Remove contaminated clothing immediately. Wash affected areas with plenty of water und soap. If irritation continues, contact a doctor.

After eye contact

Rinse immediately opened eye for several minutes under running water. Then consult doctor.

After swallowing

Induce vomiting, only if person affected is fully conscious.

Rinse out mouth and then drink plenty of water.

Call a doctor immediately.

Information for doctor

Maintain good diuresis; monitor renal function, electrolyte and acid-base balance. Early administration of ethanol may counteract the toxicity of ethylene glycol (metabolic acidosis and renal damage).

Supportive measures required. Treatment depends on physician's assessment and patient's condition.

4.2 Most important symptoms and effects, both acute and delayed

Irritant effect on skin, eyes and respiratory organs; headache; drowsiness; nausea; symptoms similar to drunkenness; unconsciousness.

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 agents

CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

5.3 Advice for firefighters

Protective equipment: Wear self-contained breathing apparatus.

Additional information Cool endangered containers in the vicinity with a water spray jet.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Put on protective equipment and keep unprotected persons away.

Ensure adequate ventilation

6.2 Environmental precautions:

Prevent material from reaching sewage system, holes and cellars.

In case of release of larger quantities, inform competent authorities.

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose of contaminated material as waste according to item 13.

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6.4 Reference to other sections

See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace. Avoid repeated or long-term skin contact.
Keep containers tightly sealed.

Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

7.2 Conditions for safe storage, including any incompatibilities

Storage Store in cool, dry conditions in well sealed containers.

Requirements to be met by storerooms and containers:

Observe laws and regulations on the storage and use of substances hazardous to water.

Do not use containers made of zinc or aluminum.

Information about storage in one common storage facility:

Do not store with strong oxidizing agents.

Do not store together with acids.

Further information about storage conditions: Protect from heat and direct sunlight.

Storage class 10 (VCI - concept, 2007)

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with critical values that require monitoring at the workplace:

107-21-1 ethane-1,2-diol

AGW (Germany)	Long-term value: 26 mg/m ³ , 10 ppm 2(l);DFG, EU, H, Y, 11
IOELV (EU)	Short-term value: 104 mg/m ³ , 40 ppm Long-term value: 52 mg/m ³ , 20 ppm Skin

DNELs

107-21-1 ethane-1,2-diol

Dermal	DNEL (worker)	106 mg/kg bw/day (Long-term, systemic effects)
	DNEL (population)	53 mg/kg bw/day (Long-term, systemic effects)
Inhalative	DNEL (worker)	35 mg/m ³ (Long-term, local effects)
	DNEL (population)	7 mg/m ³ (Long-term, local effects)

PNECs

107-21-1 ethane-1,2-diol

PNEC water	10 mg/l (intermittent releases)
	10 mg/l (freshwater)
	1 mg/l (marine water)
PNEC sediment	20,9 mg/kg dw (freshwater)
PNEC sediment	37 mg/kg (freshwater)

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PNEC STP	3,7 mg/kg (marine water)
PNEC soil	199,5 mg/l (sewage plant)
	1,53 mg/kg (soil)

Additional information: The lists that were valid during the compilation were used as basis.

8.2 Exposure controls

Appropriate engineering controls No further data; see section 7.

Individual protection measures, such as personal protective equipment

General protective and hygienic measures

Keep away from food, beverages and fodder.

Wash hands during breaks and at the end of the work.

Avoid contact with the eyes and skin.

Gases, fumes and aerosols should not be inhaled.

Breathing equipment: Not necessary if room is well-ventilated.

Recommended filter device for short term use: Combination filter A-P2

Hand protection

Protective gloves (EN 374).

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

Butyl rubber, BR

Fluorocarbon rubber (Viton)

Recommended thickness of the material: $\geq 0,6-0,8$ mm

Penetration time of glove material

Penetration time: ≥ 480 min.

Note information regarding permeation rate, penetration times and the degradation supplied by the manufacturer of gloves just as workplace-specific conditions.

Change protective gloves if you notice signs of wear.

Eye/face protection Safety glasses

Body protection:

Standard protective work clothing. Chemical resistant safety shoes or boots. If skin contact may occur, wear impermeable protective clothing for this solution.

* SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Physical state

Liquid

Colour:

Light yellow

Smell:

Odourless

Odour threshold:

Not determined.

Melting point/freezing point:

Not determined

Boiling point or initial boiling point and boiling range

>100 °C

Flammability

Not applicable.

Lower and upper explosion limit

Lower:

Not determined.

Upper:

Not determined.

Flash point:

Not determined

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Decomposition temperature:	Not determined.
pH at 20 °C	8-9 not applicable
pH-value:	
Viscosity:	
Kinematic viscosity	Not determined.
dynamic:	Not determined.
Solubility	
Water:	Insoluble
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure at 20 °C:	~23 hPa
Density and/or relative density	
Density at 20 °C	1,05 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.

9.2 Other information

Appearance:

Form: Fluid

Important information on protection of health and environment, and on safety.

Self-inflammability: Product is not selfigniting.

Explosive properties: Product is not potentially explosive

Evaporation rate Not determined.

Information with regard to physical hazard classes

Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Void
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammable gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void
Desensitised explosives	Void

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

Can be distilled without decomposing at normal pressure

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10.3 Possibility of hazardous reactions Reacts with strong acids and oxidizing agents

10.4 Conditions to avoid No further relevant information available.

10.5 Incompatible materials:

strong oxidising agents

Strong acids

Aluminium, zinc and other light metals.

10.6 Hazardous decomposition products:

Formation of carbon monoxide and carbon dioxide in case of fire.

* SECTION 11: Toxicological information

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

Acute toxicity

Harmful if swallowed.

LD/LC50 values that are relevant for classification:

107-21-1 ethane-1,2-diol

Dermal	LD50	>3500 mg/kg (mouse)
		9530 mg/kg (rabbit)
Inhalative	LC 50	>2,5 mg/l (rat) (6 h)

Primary irritant effect:

Skin corrosion/irritation Slight irritant effect on skin and mucous membranes

Serious eye damage/irritation Slight 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

May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral.

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

Other information (about experimental toxicology):

In animal experiments (long-term tests), liver and kidney damage as well as deposits of calcium salts in various tissues were observed.

Additional toxicological information:

Skin absorption possible. Irritant effect on the respiratory tract. Oral toxicity from single ingestion is moderate. Excessive exposure may cause central nervous system effect, cardiopulmonary effects (metabolic acidosis) and renal failure. The estimated lethal dose for the average person is 100 ml of 1,2-ethanediol.

11.2 Information on other hazards

Endocrine disrupting properties

None of the ingredients is listed.

* SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

107-21-1 ethane-1,2-diol

LC 50 / 96 h	18000 mg/l (Oncorhynchus mykiss)
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EC 50 / 48 h	72860 mg/l (Pimephales promelas) >100 mg/l (Daphnia magna) >10000 mg/l (Algae)
EC 50 / 96 h	6500-13000 mg/l (Selenastrum capricornutum)

12.2 Persistence and degradability

107-21-1 ethane-1,2-diol

Biodegradability 90-100 % (OECD 301A) (10 h, OECD 301 A / ISO 7827)

Other information: The product is readily biodegradable.

12.3 Bioaccumulative potential No bioaccumulation

12.4 Mobility in soil No further relevant information available.

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

12.7 Other adverse effects

Remark: On proper use no troubles in clarification plants

Respiratory inhibition of communal activated sludge EC 20 (mg/l according to ISO 8192 B):

107-21-1 ethane-1,2-diol

EC 20 / 0,5 h >1995 mg/l (activated sludge (method OECD 209))

Other information:

Inhibitor concentration (IC50) according to OECD "Activated sludge respiration inhibitor test" (Guideline 209): >1000 mg/l.

Additional ecological information:

General notes:

Do not allow to enter drainage system, surface or ground water

Water hazard class 1 (Self-assessment): slightly hazardous for water.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

The note below refers to the product left as it is and not to further processed products. When mixed with other products, other disposal routes may be required; if in doubt, consult the supplier of the product or the local authority.

Recommendation

After prior treatment product has to be disposed of in an incinerator for hazardous waste under adherence to the regulations pertaining to the disposal of particularly hazardous waste.

Waste disposal key number:

Since 1 January 1999, the waste code numbers have not only been product-related but essentially application-related. The waste code number valid for the application can be taken from the European Waste Catalogue.

Uncleaned packagings: Disposal in accordance with official regulations.

Recommendation:

Levelopment: After optimal emptying, immediately return to the supplier tightly closed and without cleaning. Make sure that no foreign matter gets into the packaging!

Other containers: Empty completely and clean for reconditioning or reprocessing.

Caution: Leftovers in the containers may cause the risk of explosion.

Uncleaned containers should not be perforated, cut or welded.

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Recommended cleaning agent: Water, if necessary with cleaning agent.

SECTION 14: Transport information

14.1 UN number or ID number ADR/RID, IMDG, IATA	Void
14.2 UN proper shipping name ADR/RID, IMDG, IATA	Void
14.3 Transport hazard class(es) ADR/RID, IMDG, IATA Class	Void
14.4 Packing group ADR/RID, IMDG, IATA	Void
14.6 Special precautions for user	Not applicable.
14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
Transport/Additional information:	Not dangerous according to the above specifications.
UN "Model Regulation":	Void

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS07 GHS08

Signal word Warning

Hazard-determining components of labelling:

ethane-1,2-diol

Hazard statements

H302 Harmful if swallowed.

H373 May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure:
Oral.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P330 Rinse mouth.

P314 Get medical advice/attention if you feel unwell.

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

Directive 2012/18/EU

Named dangerous substances - ANNEX I None of the ingredients is listed.

LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)

None of the ingredients is listed.

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 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 is listed.

REGULATION (EU) 2019/1148

Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

National regulations

Information about limitation of use:

Employment restrictions concerning young persons must be observed.

Other regulations, limitations and prohibitive regulations

Substances of very high concern (SVHC) according to REACH, Article 57

None of the ingredients is listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

This safety data sheet complies with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

Registration-Number

Relevant phrases

Complete wording of hazard statements and risk phrases (H-phrases) mentioned in section 3. These phrases refer to the constituents. The labelling for this product is stated in section 2.

H302 Harmful if swallowed.

H373 May cause damage to organs through prolonged or repeated exposure.

Department issuing data specification sheet: See section 1.3: Responding area

Date of previous version: 03.02.2025

Version number of previous version: 105.10

Abbreviations and acronyms:

RPE: Respiratory Protective Equipment

RCR: Risk Characterisation Ratio (RCR= PEC/PNEC)

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

CLP: Classification, Labelling and Packaging (Regulation (EC) No. 1272/2008)

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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CAS: Chemical Abstracts Service (division of the American Chemical Society)
TRGS: Technische Regeln für Gefahrstoffe (Technical Rules for Dangerous Substances, BAuA, Germany)
ISO: International Organisation for Standardisation
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
SVHC: Substance of Very High Concern
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 4: Acute toxicity – Category 4
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
*** Data compared to the previous version altered.**

EUE