

EU safety data sheet

Trade name: KRONES hydrocare RO 2000

Current version : 1.0.0, issued: 23.12.2021

Replaced version: 1.0.0, issued: 21.12.2021

Region: GB

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

1.1 Product identifier

Trade name

KRONES hydrocare RO 2000

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

Relevant identified uses of the substance or mixture

pH value correction

Uses advised against

No data available.

1.3 Details of the supplier of the safety data sheet

Address

KIC KRONES Internationale Cooperationsgesellschaft mbH
Böhmerwaldstraße 5
93073 Neutraubling

Telephone no. +49 9401 70-3020

e-mail kic@kic-krones.com

Advice on Safety Data Sheet

sdb_info@umco.de

1.4 Emergency telephone number

For medical advice (in German and English):

+49 (0)551 192 40 (Giftinformationszentrum Nord)

In case of transport incidents and other emergencies:

+44 (0) 1235 239 670 (NCEC, National Chemical Emergency Centre)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 (CLP)

Eye Dam. 1; H318

Met. Corr. 1; H290

Skin Corr. 1; H314

Classification information

Classification and labelling are based on toxicological studies performed on the product (mixture).

Product is classified as "Corrosive" based on the extreme pH-value, see:

- Regulation 1272/2008 (CLP), Annex. I, number 3.2.2.2 / 3.2.3.1.2

This product is assessed and classified using the methods and criteria below referred to in Article 9 of Regulation (EC) n° 1272/2008:

Physical hazards: determined through assessment data based on the methods or standards referred to in part 2 of Annex I to CLP

Health hazards and environmental hazards: determined through toxicological and ecotoxicological assessment data based on the methods or standards referred to in Part 3, 4 and 5 of Annex I to CLP.

2.2 Label elements

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

Hazard pictograms



GHS05

Signal word

Danger

Hazard statement(s)

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H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
Precautionary statement(s)	
P260	Do not breathe mist/vapours/spray.
P264	Wash thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.

2.3 Other hazards

PBT assessment

According to the information provided in the supply chain, the mixture does not contain > 0.1% of a substance that is considered to be PBT.

vPvB assessment

According to the information provided in the supply chain, the mixture does not contain > 0.1% of a substance that is considered to be vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable. The product is not a substance.

3.2 Mixtures

Hazardous ingredients

No	Substance name	Classification (EC) 1272/2008 (CLP)	Additional information	
	CAS / EC / Index / REACH no		Concentration	%
1	sulphuric acid			
	7664-93-9 231-639-5 016-020-00-8 01-2119458838-20	Skin Corr. 1A; H314 Eye Dam. 1; H318	>= 15.00 - < 51.00	wt%

Full Text for all H-phrases and EUH-phrases: pls. see section 16

No	Note	Specific concentration limits	M-factor (acute)	M-factor (chronic)
1	B	Eye Irrit. 2; H319: C >= 5% Skin Irrit. 2; H315: C >= 5% Eye Dam. 1; H318: C >= 15% Skin Corr. 1A; H314: C >= 15%	-	-

Full text for the notes: pls. see section 16 "Notes relating to the identification, classification and labelling of substances ((EC) No 1272/2008, Annex VI)".

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing. Adhere to personal protective measures when giving first aid. In all cases of doubt, or when sickness symptoms persist, seek medical attention.

After inhalation

Ensure supply of fresh air. If breathing is irregular or stopped, immediately seek medical assistance and start first aid

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actions.

After skin contact

Change contaminated, saturated clothing. In case of contact with skin wash off with plenty of water. Call a doctor immediately.

After eye contact

Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Call a doctor immediately.

After ingestion

Rinse the mouth thoroughly with water. Do not induce vomiting. Call a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

No data available.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Extinguishing measures to suit surroundings.

Unsuitable extinguishing media

High power water jet

5.2 Special hazards arising from the substance or mixture

Has a corrosive effect on metals. In the event of fire, the following can be released: Sulphur dioxide (SO₂); Corrosive gases/vapours

5.3 Advice for firefighters

Do not inhale explosion and/or combustion byproducts. Cool closed containers exposed to fire with water. Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations. In case of combustion use a suitable breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Refer to protective measures listed in sections 7 and 8. Ensure adequate ventilation. Remove persons to safety. Avoid contact with skin, eyes and clothing. Do not inhale vapours/aerosols.

For emergency responders

Personal protective equipment (PPE) - see section 8. Breathing apparatus must be worn when exposed to the effects of vapors, dusts, aerosols and gases.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil. Suppress gases/vapours/mists with water spray jet.

6.3 Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13). Ventilate the affected area.

6.4 Reference to other sections

Information regarding safe handling, see section 7. Information regarding personal protective measures, see section 8. Information regarding waste disposal, see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Risks inherent to handling the product must be minimised by applying the appropriate protective and preventive measures. Working processes should - so far as possible, according to the state of the art - be designed to rule out

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bodily contact or the release of hazardous substances. Avoid eye, skin and clothing contact. Provide good ventilation at the work area (local exhaust ventilation, if necessary). Do not add water.

General protective and hygiene measures

Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Do not inhale vapours. Avoid contact with eyes and skin. Wash hands before breaks and after work. Remove contaminated clothing and shoes and launder thoroughly before reusing. Provide eye wash fountain in work area. Have emergency shower available.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Keep container tightly closed and dry in a cool, well-ventilated place. Protect from heat and direct sunlight.

Requirements for storage rooms and vessels

Store in a corrosion-resistant container with a resistant inner liner. Containers which are opened must be carefully closed and kept upright to prevent leakage. Always keep in containers of same material as the original. Provide acid-resistant floor.

Incompatible products

Substances to be avoided, see section 10.

7.3 Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

No	Substance name	CAS no.	EC no.
1	sulphuric acid	7664-93-9	231-639-5
	2009/161/EU		
	sulphuric acid (mist)		
	Mist		
	WEL long-term (8-hr TWA reference period)	0.05	mg/m ³
	List of approved workplace exposure limits (WELs) / EH40		
	Sulphuric acid mist		
	WEL long-term (8-hr TWA reference period)	0.05	mg/m ³
	Comments	The mist is defined as the thoracic fraction	

DNEL, DMEL and PNEC values

DNEL values (worker)

DNEL values (worker)					
No	Substance name			CAS / EC no	
	Route of exposure	Exposure time	Effect	Value	
1	sulphuric acid			7664-93-9 231-639-5	
	inhalative	Long term (chronic)	local	0.05	mg/m³
	inhalative	Short term (acute)	local	0.1	mg/m³

PNEC values

PNEC Values				
No	Substance name		CAS / EC no	
	ecological compartment	Type	Value	
1	sulphuric acid		7664-93-9 231-639-5	
	water	fresh water	0.0025	mg/L
	water	marine water	0.00025	mg/L
	water	fresh water sediment	0.002	mg/kg
	water	marine water sediment	0.002	mg/kg
	sewage treatment plant	-	8.8	mg/L

8.2 Exposure controls

Appropriate engineering controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust

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ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL (=Occupational Exposure Limit), suitable respiratory protection must be worn.

Personal protective equipment

Respiratory protection

If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of aerosol and mist formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified. Filter device (EN 147).

Respirator B-P2

Eye / face protection

Safety glasses (EN 166)

Hand protection

Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product. Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Appropriate Material	IIR: butyl rubber, isobutene-isoprene rubber
Material thickness	>= 0.6 mm
Breakthrough time	> 480 min
Appropriate Material	chloroprene
Material thickness	>= 0.6 mm
Breakthrough time	> 480 min
Appropriate Material	NBR
Material thickness	>= 0.35 mm
Breakthrough time	> 480 min

Other

Chemical-resistant work clothes.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Prevent penetration into the sewage system or into surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

State of aggregation	
liquid	
Form/Colour	
liquid	
colourless	
Odour	
odourless	
pH value	
Value	1.0
Boiling point / boiling range	
No data available	
Melting point/freezing point	
No data available	
Decomposition temperature	
No data available	
Flash point	
No data available	
Ignition temperature	
No data available	

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Oxidising properties

The product does not have oxidizing properties.

Explosive properties

The product does not have explosive properties.

Flammability

No data available

Lower explosion limit

No data available

Upper explosion limit

No data available

Vapour pressure

No data available

Relative vapour density

No data available

Relative density

No data available

Density

Value	1.1	-	1.4	g/cm ³
Reference temperature			20	°C

Solubility in water

Comments	Completely miscible
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Solubility

No data available

Partition coefficient n-octanol/water (log value)

No data available

Viscosity

No data available

Particle characteristics

No data available

9.2 Other information

Other information

No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable at ambient temperature. Can have a corrosive effect on metals.

10.2 Chemical stability

Stable under recommended storage and handling conditions (See section 7).

10.3 Possibility of hazardous reactions

Reacts with water, giving off excessive pressure or heat.

10.4 Conditions to avoid

Heat, naked flames and other ignition sources. Protect from light.

10.5 Incompatible materials

hypochlorites; Bases; Reducing agents

10.6 Hazardous decomposition products

Contact with metals in an acidic/alkaline environment results in hydrogen formation. Sulphurous oxides (SO_x)

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SECTION 11: Toxicological information

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

Acute oral toxicity			
No	Substance name	CAS no.	EC no.
1	sulphuric acid	7664-93-9	231-639-5
LD50		2140	mg/kg bodyweight
Species	rat		
Method	OECD 401		
Source	ECHA		

Acute dermal toxicity	
No data available	

Acute inhalational toxicity	
No data available	

Skin corrosion/irritation	
No	Product Name
1	KRONES hydrocare RO 2000
Source	supplier
Evaluation	strongly corrosive
Evaluation/classification	Based on available data, the classification criteria are met.

Serious eye damage/irritation	
No	Product Name
1	KRONES hydrocare RO 2000
Source	supplier
Evaluation	strongly corrosive
Evaluation/classification	Based on available data, the classification criteria are met.

Respiratory or skin sensitisation	
No	Product Name
1	KRONES hydrocare RO 2000
Route of exposure	Skin
Source	supplier
Evaluation/classification	On the basis of the available information, the classification criteria are not met.

Germ cell mutagenicity	
No	Product Name
1	KRONES hydrocare RO 2000
Source	supplier
Evaluation/classification	On the basis of the available information, the classification criteria are not met.

Reproduction toxicity	
No	Product Name
1	KRONES hydrocare RO 2000
Source	supplier
Evaluation/classification	On the basis of the available information, the classification criteria are not met.

Carcinogenicity	
No	Product Name
1	KRONES hydrocare RO 2000
Source	supplier
Evaluation/classification	On the basis of the available information, the classification criteria are not met.

STOT - single exposure	
No data available	

STOT - repeated exposure	
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No	Substance name	CAS no.	EC no.
1	sulphuric acid	7664-93-9	231-639-5
Route of exposure		inhalational	
LOAEC		0.3	mg/m ³
Duration of exposure		28	day(s)
Species		rat	
Method		OECD 412	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	

Aspiration hazard

On the basis of the information available, the classification criteria are not met.

11.2 Information on other hazards

Endocrine disrupting properties

No data available.

Other information

No data available.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish (acute)			
No	Substance name	CAS no.	EC no.
1	sulphuric acid	7664-93-9	231-639-5
LC50		16 - 28	mg/l
Duration of exposure		96	h
Species		Lepomis macrochirus	
Source		ECHA	

Toxicity to fish (chronic)			
No	Substance name	CAS no.	EC no.
1	sulphuric acid	7664-93-9	231-639-5
NOEC		0.025	mg/l
Duration of exposure		65	day(s)
Species		Jordanella floridae	
Source		ECHA	

Toxicity to Daphnia (acute)			
No	Substance name	CAS no.	EC no.
1	sulphuric acid	7664-93-9	231-639-5
EC50		> 100	mg/l
Duration of exposure		48	h
Species		Daphnia magna	
Method		OECD 202	
Source		ECHA	

Toxicity to Daphnia (chronic)			
No	Substance name	CAS no.	EC no.
1	sulphuric acid	7664-93-9	231-639-5
NOEC		0.15	mg/l
Duration of exposure		35	day(s)
Species		T. dissimilis	
Source		ECHA	

Toxicity to algae (acute)			
No	Substance name	CAS no.	EC no.
1	sulphuric acid	7664-93-9	231-639-5
EC50		> 100	mg/l
Duration of exposure		72	h
Species		Desmodesmus subspicatus	

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Method	OECD 201
Source	ECHA

Toxicity to algae (chronic)

No data available

Bacteria toxicity

No data available

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

Results of PBT and vPvB assessment	
PBT assessment	According to the information provided in the supply chain, the mixture does not contain > 0.1% of a substance that is considered to be PBT.
vPvB assessment	According to the information provided in the supply chain, the mixture does not contain > 0.1% of a substance that is considered to be vPvB.

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Disposal of the product should be carried out in accordance with all applicable regulations following consultation with the responsible local authority and the disposal company in an authorised and suitable disposal facility. Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging

Residues must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

SECTION 14: Transport information

14.1 Transport ADR/RID/ADN

Class	8
Classification code	C1
Packing group	II
Hazard identification no.	80
UN number	UN2796
Proper shipping name	SULPHURIC ACID
Tunnel restriction code	E
Label	8

14.2 Transport IMDG

Class	8
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Packing group	II
UN number	UN2796
Proper shipping name	SULPHURIC ACID
EmS	F-A, S-B
Label	8

14.3 Transport ICAO-TI / IATA

Class	8
Packing group	II
UN number	UN2796
Proper shipping name	Sulphuric acid
Label	8

14.4 Other information

No data available.

14.5 Environmental hazards

Information on environmental hazards, if relevant, please see 14.1 - 14.3.

14.6 Special precautions for user

No data available.

14.7 Maritime transport in bulk according to IMO instruments

Not relevant

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances considered as substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

REACH candidate list of substances of very high concern (SVHC) for authorisation

According to available data and the information provided by preliminary suppliers, the product does not contain substances that are considered substances meeting the criteria for inclusion in annex XIV (List of Substances Subject to Authorisation) as laid down in Article 57 and article 59 of REACH (EC) 1907/2006.

Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES

The product is considered being subject to REACH regulation (EC) 1907/2006 annex XVII.	No 3
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Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances

This product is not subject to Part 1 or 2 of Annex I.

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out for this mixture.

SECTION 16: Other information

Sources of key data used to compile the data sheet:

Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.

Directives 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164.

National Threshold Limit Values of the corresponding countries as amended in each case.

Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding section.

Full text of the H- and EUH- phrases drawn up in sections 2 and 3 (provided not already drawn up in these sections)

H318 Causes serious eye damage.

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Notes relating to the identification, classification and labelling of substances and mixtures ((EC) No 1272/2008, Annex VI)

B Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: 'nitric acid ... %'. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.

Creation of the safety data sheet

UMCO GmbH - D-21107 Hamburg, Georg-Wilhelm-Strasse 187, Tel.: +49(40)555 546 300, Fax: +49(40)555 546 357, e-mail: umco@umco.de

This information is based on our present knowledge and experience.

The safety data sheet describes products with a view to safety requirements.

It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.

Alterations/supplements:

Alterations to the previous edition are marked in the left-hand margin.

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