Safety Data Sheet

according to UK REACH Regulation

sera pH/KH-minus

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

1.1. Product identifier

sera pH/KH-minus

EAN

4001942035408
4001942035507
4001942035606
4001942035798
4001942035804

UFI: WRT0-796F-YFF3-UG9X

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

Use of the substance/mixture

Water treatment chemicals: Solution for adjustment of water parameters in aquariums and ponds.
The product is intended for consumer use.
The product is intended for professional use.

1.3. Details of the supplier of the safety data sheet

Manufacturer

Company name:	sera Werke Heimtierbedarf J. Ravnak GmbH & Co. KG	
Street:	Borsigstraße 49	
Place:	D-52525 Heinsberg	
Post-office box:	1466 D-52518 Heinsberg	
Telephone:	+49 (0)2452 91260	Telefax: +49 (0)2452 5922
e-mail:	info@sera.de	
Contact person:	Dr. Matthias Dahm	
e-mail:	sds.info@sera.biz	
Internet:	www.sera.de	
Responsible Department:	Labor	

Supplier

Company name:	sera GmbH	
Street:	Borsigstr. 49	
Place:	D-52525 Heinsberg	
Post-office box:	1466 D-52518 Heinsberg	
Telephone:	+49 (0)2452 91260	Telefax: +49 (0)2452 5922
e-mail:	info@sera.de	
Contact person:	Dr. Matthias Dahm	
e-mail:	sds.info@sera.biz	
Internet:	www.sera.de	
Responsible Department:	Labor	

1.4. Emergency telephone number:

+49 (0)2452 91260 (Only available during office hours.)
+49 (0)2452 9126555

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Skin Corr. 1; H314

Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

hydrochloric acid 32%
sulphuric acid 96 %

Signal word: Danger

Pictograms:

Hazard statements

H314	Causes severe skin burns and eye damage.

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P280	Wear protective gloves and eye/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.

Additional advice on labelling

The product is classified and labelled according to EC directives or corresponding national laws.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Highly thinned solution of an inorganic acid.

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
-	hydrochloric acid 32%			5 - < 10 %
	231-595-7	017-002-01-X		
	Met. Corr. 1, Skin Corr. 1B, Eye Dam. 1, STOT SE 3; H290 H314 H318 H335			
7664-93-9	sulphuric acid 96 %			5 - < 10 %
	231-639-5	016-020-00-8	01-2119458838-20	
	Met. Corr. 1, Skin Corr. 1A, Eye Dam. 1; H290 H314 H318			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
-	231-595-7	hydrochloric acid 32%	5 - < 10 %
	Skin Corr. 1B; H314: >= 25 - 100 Skin Irrit. 2; H315: >= 10 - < 25 Eye Irrit. 2; H319: >= 10 - < 25 STOT SE 3; H335: >= 10 - 100		
7664-93-9	231-639-5	sulphuric acid 96 %	5 - < 10 %
	oral: LD50 = 2140 mg/kg Skin Corr. 1A; H314: >= 15 - 100 Skin Irrit. 2; H315: >= 5 - < 15 Eye Irrit. 2; H319: >= 5 - < 15		

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated, saturated clothing immediately.

After inhalation

Provide fresh air. After inhaling vapours, first symptoms of poisoning may develop hours later, so always consult a doctor.

After contact with skin

Wash with plenty of water. Take off contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion

Observe risk of aspiration if vomiting occurs. Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water. Do not allow a neutralisation agent to be drunk. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Serious eye damage/eye irritation
Skin corrosion/irritation
If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).
Subsequent observance for pneumonia and lung oedema.

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

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Non-flammable. The product itself does not burn. In case of fire may be liberated: Hydrogen chloride (HCl), Sulphur oxides, Carbon monoxide.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes.

For non-emergency personnel

First aider: Pay attention to self-protection! Remove persons to safety.

For emergency responders

Cover drains. Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. The product is an acid. Before discharge into sewage plants the product normally needs to be neutralised. Suitable material for diluting or neutralizing: Water, Lime, Soda.

6.3. Methods and material for containment and cleaning up

For containment

Make sure spills can be contained, e.g. in sump pallets or kerbed areas. Contain leaks or spills within cabinets with removable trays.

For cleaning up

Large amounts of spillages: Use approved industrial vacuum cleaner for removal.
Small amounts of spillages: Wipe up with absorbent material (eg. cloth, fleece).
Clear contaminated areas thoroughly. Clean contaminated articles and floor according to the environmental legislation.

Other information

Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13 Neutralise with chalk, alkali solution or ammonia.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Do not breathe gas/fumes/vapour/spray. Keep out of the reach of children.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

Avoid contact with skin, eyes and clothes. Remove contaminated, saturated clothing immediately.
Keep away from food, drink and animal feedingstuffs. Do not eat, drink or smoke when using this product.
Wash hands and face before breaks and after work and take a shower if necessary. Draw up and observe skin protection programme.

Further information on handling

Handle and open container with care. Put lids on containers immediately after use.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep only in the original container in a cool, well-ventilated place away from iron, water, alkalis. Keep in an area equipped with acid resistant flooring. Keep container tightly closed. Store in a place accessible by authorized persons only. Protect from direct sunlight.
Do not store at temperatures below 0°C. Recommended storage temperature: at room temperature

Hints on joint storage

Do not mix with alkali.

Further information on storage conditions

No special measures are necessary. The product is stable under storage at normal ambient temperatures.

7.3. Specific end use(s)

Solution for adjustment of water parameters in aquariums and ponds.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
7647-01-0	Hydrogen chloride (gas and aerosol mists)	1	2		TWA (8 h)	WEL
		5	8		STEL (15 min)	WEL
7664-93-9	Sulphuric acid (mist)	-	0.05		TWA (8 h)	WEL

DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
-	hydrochloric acid 32%		
Worker DNEL, long-term	inhalation	local	8 mg/m³
Worker DNEL, acute	inhalation	local	15 mg/m³
7664-93-9	sulphuric acid 96 %		
Worker DNEL, long-term	inhalation	local	0,05 mg/m³
Worker DNEL, acute	inhalation	local	0,1 mg/m³

PNEC values

CAS No	Substance
Environmental compartment	Value
7664-93-9	sulphuric acid 96 %
Freshwater	0,003 mg/l
Marine water	0,0 mg/l
Freshwater sediment	0,002 mg/kg
Marine sediment	0,002 mg/kg
Micro-organisms in sewage treatment plants (STP)	8,8 mg/l

Additional advice on limit values

To date, no national critical limit values exist.
When using do not eat, drink, smoke, sniff.

8.2. Exposure controls

Appropriate engineering controls

No special technical protective measures are necessary.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye/face protection. Suitable eye protection: goggles.

Hand protection

Suitable gloves type acid-resistant
Suitable material: NBR (Nitrile rubber)
Thickness of the glove material: 0,2-0,3 mm

Permeation time (maximum wear duration): > 48 h

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Wear suitable protective clothing. (long sleeved clothing).

Wash contaminated clothing prior to re-use.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Usually no personal respirative protection necessary. In the case of vapour formation use a respirator with filter model B2 (according to DIN 3181, 1980).

Thermal hazards

Non-flammable. The product itself does not burn. Thermal decomposition can lead to the escape of irritating gases and vapours. In case of fire may be liberated: Hydrogen chloride (HCl), Sulphur oxides, Carbon monoxide.

Environmental exposure controls

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid	
Colour:	light pink	
Odour:	odourless	
Odour threshold:	not applicable	
Melting point/freezing point:		< 0 °C
Boiling point or initial boiling point and boiling range:		100 °C
Flammability:		Non-flammable.
Lower explosion limits:		not determined
Upper explosion limits:		not determined
Flash point:		> 100 °C
Auto-ignition temperature:		Non-flammable.
Decomposition temperature:		not determined
pH-Value (at 20 °C):		-0,3-0,3
Viscosity / kinematic:		not determined
Water solubility:		completely miscible
Solubility in other solvents		
not determined		
Partition coefficient n-octanol/water:		not applicable
Vapour pressure: (at 20 °C)		23 hPa
Density (at 20 °C):		1,03 g/cm³
Relative density:		not determined
Bulk density:		not applicable
Relative vapour density:		not determined
Particle characteristics:		not applicable

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

No ignition, explosion, self-heating or visible decomposition.

The product is not: Explosive

Sustaining combustion:	Not sustaining combustion
Self-ignition temperature	
Solid:	not applicable
Gas:	not applicable
Oxidizing properties	
Not oxidising.	

Other safety characteristics

Evaporation rate:	not determined
Solvent separation test:	No data available
Solvent content:	not determined
Solid content:	not determined
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	not applicable
Viscosity / dynamic:	not determined
Flow time:	not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

Possibility of hazardous reactions. During dilution or dissolving in water, strong heating-up always takes place.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

Exothermic reaction with: Base, Peroxides, Oxidising agent.

10.4. Conditions to avoid

Protect from direct sunlight.

10.5. Incompatible materials

Keep away from: Base, Oxidising agent, Alkali metals, Light metals, Peroxides.
May cause strong formation of hydrogen by contact with amphoteric metals (e.g. aluminia, lead, zinc) - danger of explosion.

10.6. Hazardous decomposition products

Hydrochloric gas, Sulphur oxides, Carbon monoxide.
Thermal decomposition can lead to the escape of irritating gases and vapours.

Further information

Corrosive to metals

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Toxicocinetics, metabolism and distribution

There are no data available on the preparation/mixture itself.

Acute toxicity

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7664-93-9	sulphuric acid 96 %				
	oral	LD50 2140 mg/kg	Rat	ECHA	OECD 401

Irritation and corrosivity

Causes severe skin burns and eye damage. (On basis of test data)
Causes serious eye damage. (On basis of test data)
If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

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

Aspiration hazard

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

Information on likely routes of exposure

Inhalation, Skin contact, Eye contact, Ingestion

Specific effects in experiment on an animal

There are no data available on the preparation/mixture itself.

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

Practical experience

There are no data available on the preparation/mixture itself.

11.2. Information on other hazards

Endocrine disrupting properties

There are no data available on the preparation/mixture itself.

Other information

There are no data available on the preparation/mixture itself.

Further information

Description of possible hazardous to health effects is based on experience and/or toxicological characteristics of several components.
Handle in accordance with good industrial hygiene and safety practice.
Health injuries are not known or expected under normal use.

SECTION 12: Ecological information

12.1. Toxicity

The product is an acid. Before discharge into sewage plants the product normally needs to be neutralised. Suitable material for diluting or neutralizing: Neutralise with chalk, alkali solution or ammonia. After neutralisation, toxicity is no longer observed. According to the criteria of the European classification and labelling system, the substance/the product has not to be labelled as "dangerous for the environment". Ecological injuries are not known or expected under normal use.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
-	hydrochloric acid 32%						
	Acute fish toxicity	LC50	862 mg/l	96 h	Leuciscus idus		
7664-93-9	sulphuric acid 96 %						
	Acute fish toxicity	LC50 mg/l	16-28	96 h	Lepomis macrochirus (Bluegill)	ECHA	
	Acute algae toxicity	ErC50 mg/l	> 100	72 h	Desmodesmus subspicatus	ECHA	OECD 201
	Acute crustacea toxicity	EC50 mg/l	> 100	48 h	Daphnia magna (Big water flea)	ECHA	OECD 202
	Crustacea toxicity	NOEC mg/l	0,15	35 d	Tanytarsus dissimilis	ECHA	

12.2. Persistence and degradability

The product has not been tested. The methods for determining the biological degradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Dispose of waste according to applicable legislation. The product is an acid. Before discharge into sewage plants the product normally needs to be neutralised. Suitable material for diluting or neutralizing: Neutralise with chalk, alkali solution or ammonia.

List of Wastes Code - residues/unused products

160303 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; inorganic wastes containing hazardous substances; hazardous waste

List of Wastes Code - used product

161001 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; aqueous liquid wastes destined for off-site treatment; aqueous liquid wastes containing hazardous substances; hazardous waste

List of Wastes Code - contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled. If recycling is not practicable,

dispose of in compliance with the Environmental Protection (Duty of Care) Regulations 1991.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 3264
14.2. UN proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (hydrochloric acid 32%, sulphuric acid 96 %)
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Classification code:	C1
Special Provisions:	274
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	80
Tunnel restriction code:	E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 3264
14.2. UN proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (hydrochloric acid 32%, sulphuric acid 96 %)
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Classification code:	C1
Special Provisions:	274
Limited quantity:	5 L
Excepted quantity:	E1

Marine transport (IMDG)

14.1. UN number or ID number:	UN 3264
14.2. UN proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (hydrochloric acid 32%, sulphuric acid 96 %)
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Special Provisions:	223, 274
Limited quantity:	5 L
Excepted quantity:	E1
EmS:	F-A, S-B
Segregation group:	1 - acids

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 3264
14.2. UN proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (hydrochloric acid 32%, sulphuric acid 96 %)
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Special Provisions:	A3 A803
Limited quantity Passenger:	1 L
Passenger LQ:	Y841
Excepted quantity:	E1
IATA-packing instructions - Passenger:	852
IATA-max. quantity - Passenger:	5 L

IATA-packing instructions - Cargo: 856
IATA-max. quantity - Cargo: 60 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: strongly corrosive. Safe handling: see section 7
Personal protection equipment: see section 8

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

2004/42/EC (VOC): 0,022 % (0,225 g/l)

Additional information

To follow: 850/2004/EC, 79/117/EEC, 689/2008/EC
This product is regulated by Regulation (EU) 2019/1148: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 1 - slightly hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

ADR: Accord européen sur le transport 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
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

Key literature references and sources for data

Safety Data Sheet, ECHA

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Skin Corr. 1; H314	On basis of test data
Eye Dam. 1; H318	On basis of test data

Relevant H and EUH statements (number and full text)

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

H318	Causes serious eye damage.
H335	May cause respiratory irritation.

Further Information

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP].
The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)