

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

sera PO4 Test, Reagenz 1

Revision date: 04.09.2023

Product code: PO4-R1

Page 1 of 12

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

sera PO4 Test, Reagenz 1

EAN

4001942040020

4001942040037

4001942040044

4001942049306

4001942077156

UFI:

704N-U62J-E8Q8-0GSX

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

Solution for monitoring water parameters in aquarium and tap water.

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

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

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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 +49 (0)2452 91260 (Only available during office hours.)**number:** +49 (0)2452 9126555**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Skin Corr. 1; H314

Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

2.2. Label elements**Regulation (EC) No 1272/2008****Hazard components for labelling**

sulphuric acid 96 %

sulphamidic acid; sulphamic acid; sulfamic acid

Signal word: Danger

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Pictograms:



Hazard statements

H314 Causes severe skin burns and eye damage.

Precautionary statements

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.
P310 Immediately call a doctor.

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. Aqueous solution of organic and inorganic salts.

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
7664-93-9	sulphuric acid 96 %			10 - < 15 %
	231-639-5	016-020-00-8	01-2119458838-20	
	Met. Corr. 1, Skin Corr. 1A, Eye Dam. 1; H290 H314 H318			
5329-14-6	sulphamidic acid; sulphamic acid; sulfamic acid			1 - < 5 %
	226-218-8	016-026-00-0	01-2119488633-28	
	Skin Irrit. 2, Eye Irrit. 2, Aquatic Chronic 3; H315 H319 H412			

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		
7664-93-9	231-639-5	sulphuric acid 96 %	10 - < 15 %
	oral: LD50 = 2140 mg/kg Skin Corr. 1A; H314: >= 15 - 100 Skin Irrit. 2; H315: >= 5 - < 15 Eye Irrit. 2; H319: >= 5 - < 15		
5329-14-6	226-218-8	sulphamidic acid; sulphamic acid; sulfamic acid	1 - < 5 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = 2140 mg/kg		

SECTION 4: First aid measures

4.1. Description of first aid measures

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General information

Remove contaminated, saturated clothing immediately.

After inhalation

Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

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. Adverse human health effects and symptoms: Gastric perforation. 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).

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. Wear breathing apparatus if exposed to vapours/dusts/aerosols.

In case of fire may be liberated: Sulphur oxides, Nitrogen oxides (NO_x), Carbon monoxide, Carbon dioxide (CO₂).

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**

Avoid contact with skin, eyes and clothes. Use personal protection equipment.

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

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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. Wash with plenty of water.

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

Neutralize with chalk, alkali solution or ammonia.

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Keep out of 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 container tightly closed. Keep locked up. Store in a place accessible by authorized persons only.

Keep/Store only in original container. 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 monitoring water parameters in aquarium and tap water.

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

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Occupational exposure limits

CAS No	Substance	ppm	mg/m ³	fib/cm ³	Category	Origin
7664-93-9	Sulphuric acid	-	0.05		TWA (8 h)	

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
7664-93-9	sulphuric acid 96 %			
Worker DNEL, long-term		inhalation	local	0,05 mg/m ³
Worker DNEL, acute		inhalation	local	0,1 mg/m ³
5329-14-6	sulphamidic acid; sulphamic acid; sulfamic acid			
Worker DNEL, long-term		inhalation	systemic	70,5 mg/m ³
Worker DNEL, long-term		dermal	systemic	10 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	17,4 mg/m ³
Consumer DNEL, long-term		dermal	systemic	5 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	5 mg/kg bw/day

PNEC values

CAS No	Substance	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
5329-14-6	sulphamidic acid; sulphamic acid; sulfamic acid	
Freshwater		1,8 mg/l
Marine water		0,18 mg/l
Freshwater sediment		8,36 mg/kg
Marine sediment		0,84 mg/kg
Micro-organisms in sewage treatment plants (STP)		20 mg/l
Soil		5 mg/kg

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

Avoid contact with eyes. Wear eye/face protection. Suitable eye protection: goggles.

Hand protection

Avoid contact with skin. Wear suitable gloves.

Suitable gloves type acid-resistant

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Suitable material: FKM (fluoro rubber), Butyl caoutchouc (butyl rubber)

Thickness of the glove material: 0,4-0,7 mm

Permeation time (maximum wear duration): > 2 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. Not required because of small size of the container

Respiratory protection

Usually no personal respirative protection necessary. In case of inadequate ventilation wear respiratory protection. 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: Sulphur oxides, Nitrogen oxides (NOx), Carbon monoxide, Carbon dioxide (CO2).

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:	colourless
Odour:	odourless
Odour threshold:	not applicable
Melting point/freezing point:	0 °C
Boiling point or initial boiling point and boiling range:	100 °C
Flammability:	not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	> 100 °C
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value (at 20 °C):	-0,3-0,5
Viscosity / kinematic:	not determined
Water solubility:	completely miscible
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	not determined
Vapour pressure:	23 hPa
(at 20 °C)	
Density (at 20 °C):	1,09 g/cm³
Bulk density:	not applicable
Relative vapour density:	not determined

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

May cause strong formation of hydrogen by contact with amphoteric metals (e.g. alumina, lead, zinc) - danger of explosion.

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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 determined
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.
No hazardous reaction when handled and stored according to provisions.

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. alumina, lead, zinc) - danger of explosion.

10.6. Hazardous decomposition products

Sulphur oxides, Nitrogen oxides (NO_x), Carbon monoxide, Carbon dioxide (CO₂).
Thermal decomposition can lead to the escape of irritating gases and vapours.

Further information

Corrodes base metals.

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Toxicokinetics, 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.

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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
5329-14-6	sulphamidic acid; sulphamic acid; sulfamic acid				
	oral	LD50 2140 mg/kg	Rat	ECHA	OECD 401
	dermal	LD50 > 2000 mg/kg	Rat	ECHA	OECD 402

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

Skin contact, Eye contact, Ingestion, Inhalation

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

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: Neutralize with chalk, alkali solution or ammonia. After neutralisation, toxicity is no longer observed. Ecological injuries are not known or expected under normal use.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
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
5329-14-6	sulphamidic acid; sulphamic acid; sulfamic acid					
	Acute fish toxicity	LC50 mg/l	70,3	96 h	Pimephales promelas (fathead minnow)	ECHA OECD 203
	Acute algae toxicity	ErC50	48 mg/l	72 h	Desmodesmus subspicatus	ECHA OECD 201
	Acute crustacea toxicity	EC50 mg/l	71,6	48 h	Daphnia magna (Big water flea)	ECHA OECD 202
	Fish toxicity	NOEC mg/l	> 60	34 d	Danio rerio (zebrafish)	ECHA OECD 210
	Algae toxicity	NOEC	18 mg/l	3 d	Desmodesmus subspicatus	ECHA OECD 201
	Crustacea toxicity	NOEC	19 mg/l	21 d	Daphnia magna (Big water flea)	ECHA OECD 211
	Acute bacteria toxicity	(EC50 mg/l)	> 200	3 h	Activated sludge	ECHA OECD 209

12.2. Persistence and degradability

The product has not been tested. The organic part of the product is biodegradable.

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
5329-14-6	sulphamidic acid; sulphamic acid; sulfamic acid	0,0

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 REACH, annex XIII.

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

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plants the product normally needs to be neutralised. Suitable material for diluting or neutralizing: Neutralize 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

160507 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded inorganic chemicals consisting of or 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. Dispose of waste according to applicable legislation.

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. (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. (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. (sulphuric acid 96 %)
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Special Provisions:	223, 274

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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. (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): 0,06 % (0,654 g/l)
 Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

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

Changes

This data sheet contains changes from the previous version in section(s): 16.

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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 Regulation (EC) No 1272/2008 [CLP]

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.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.

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.)

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according to Regulation (EC) No 1907/2006

sera PO4 Test, Reagenz 2

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

sera PO4 Test, Reagenz 2

EAN

4001942040020
4001942040037
4001942040044
4001942049306
4001942077156

UFI: AVVH-0J3J-UW1R-XHYA

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

Solution for monitoring water parameters in aquarium and tap water.

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

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	

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****Regulation (EC) No 1272/2008**

Skin Corr. 1; H314

Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

2.2. Label elements**Regulation (EC) No 1272/2008****Hazard components for labelling**

sulphuric acid 96 %

Signal word: Danger**Pictograms:**

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Hazard statements

H314 Causes severe skin burns and eye damage.

Precautionary statements

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.

P310 Immediately call a doctor.

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. Aqueous solution of inorganic salts.

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
7664-93-9	sulphuric acid 96 %			10 - < 15 %
	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	
7664-93-9	231-639-5	sulphuric acid 96 %	10 - < 15 %
	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. When in doubt or if symptoms are observed, get medical advice.

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.

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After ingestion

Observe risk of aspiration if vomiting occurs. Do NOT induce vomiting. Adverse human health effects and symptoms: Gastric perforation. 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).

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. Wear breathing apparatus if exposed to vapours/dusts/aerosols.

In case of fire may be liberated: Sulphur oxides, Hydrogen chloride (HCl), Pyrolysis products, toxic.

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**

Avoid contact with skin, eyes and clothes. Use personal protection equipment.

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. Wash with plenty of water.

Other information

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

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6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13 Neutralize with chalk, alkali solution or ammonia.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Keep out of 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 container tightly closed. Keep locked up. Store in a place accessible by authorized persons only.

Keep/Store only in original container. 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 monitoring water parameters in aquarium and tap water.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m ³	fib/cm ³	Category	Origin
7664-93-9	Sulphuric acid	-	0.05		TWA (8 h)	

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
7664-93-9	sulphuric acid 96 %			
Worker DNEL, long-term		inhalation	local	0,05 mg/m ³
Worker DNEL, acute		inhalation	local	0,1 mg/m ³

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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

Avoid contact with eyes. Wear eye/face protection. Suitable eye protection: goggles.

Hand protection

Avoid contact with skin. Wear suitable gloves.
Suitable gloves type acid-resistant
Suitable material: FKM (fluoro rubber), Butyl caoutchouc (butyl rubber)
Thickness of the glove material: 0,4-0,7 mm
Permeation time (maximum wear duration): > 2 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. Not required because of small size of the container

Respiratory protection

Usually no personal respirative protection necessary. In case of inadequate ventilation wear respiratory protection. 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: Sulphur oxides, Hydrogen chloride (HCl), Pyrolysis products, toxic.

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:	colourless
Odour:	odourless
Odour threshold:	not applicable
Melting point/freezing point:	0 °C

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Boiling point or initial boiling point and boiling range:	100 °C
Flammability:	not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	> 100 °C
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value (at 20 °C):	-0,3-0,5
Viscosity / kinematic:	not determined
Water solubility:	completely miscible
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	not determined
Vapour pressure:	23 hPa
(at 20 °C)	
Density (at 20 °C):	1,07 g/cm³
Bulk density:	not applicable
Relative vapour density:	not determined

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

May cause strong formation of hydrogen by contact with amphoteric metals (e.g. alumina, lead, zinc) - danger of explosion.

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 determined

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.

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

Protect from direct sunlight.

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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. alumina, lead, zinc) - danger of explosion.

10.6. Hazardous decomposition products

Sulphur oxides, Hydrogen chloride (HCl), Pyrolysis products, toxic.
Thermal decomposition can lead to the escape of irritating gases and vapours.

Further information

Corrodes base metals.

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Toxicokinetics, 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

Skin contact, Eye contact, Ingestion, Inhalation

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.

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Other information

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

Further information

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: Neutralize with chalk, alkali solution or ammonia. After

neutralisation, toxicity is no longer observed. Ecological injuries are not known or expected under normal use.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
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 methods for determining the biological degradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

The study does not need to be conducted because the substance is inorganic.

12.4. Mobility in soil

The study does not need to be conducted because the substance is inorganic.

12.5. Results of PBT and vPvB assessment

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

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: Neutralize 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

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160507 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded inorganic chemicals consisting of or 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. Dispose of waste according to applicable legislation.

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. (sulphuric acid 95-97 %)
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. (sulphuric acid 95-97 %)
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. (sulphuric acid 95-97 %)
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

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14.2. UN proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (sulphuric acid 95-97 %)
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

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

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

Changes

This data sheet contains changes from the previous version in section(s): 2,3,4,5,6,7,8,9,12,15,16.

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

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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 Regulation (EC) No 1272/2008 [CLP]

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.

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.)

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

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EAN

4001942040020

4001942040037

4001942040044

4001942049306

4001942077156

CAS No: 50-81-7

EC No: 200-066-2

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

Solid for monitoring water parameters in aquarium and tap water.

The product is intended for consumer use.

1.3. Details of the supplier of the safety data sheet

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

1.4. Emergency telephone +49 (0)2452 91260 (Only available during office hours.)**number:** +49 (0)2452 9126555**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

This substance is not classified as hazardous in accordance with Regulation (EC) No 1272/2008.

Voluntary safety information following the Safety Data Sheet format according to Regulation (EC) No. 1907/2006 (REACH).

2.2. Label elements**Additional advice on labelling**

According to EC directives or the corresponding national regulations the product does not have to be labelled.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.1. Substances****Chemical characterization**

Substance, organic (Acid)

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Sum formula: C₆H₈O₆

Molecular weight: 176,12

Hazardous components

none (according to Regulation (EC) No 1907/2006 (REACH))

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

Take off contaminated clothing. Brush off contaminated clothing.

After inhalation

Provide fresh air. If symptoms persist, call a physician.

After contact with skin

Wash with plenty of water. Take off contaminated clothing and wash it before reuse.

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

Rinse mouth immediately and drink plenty of water.

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

The product causes irritation of eyes, skin and mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

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

Full water jet

5.2. Special hazards arising from the substance or mixtureNon-flammable. In case of fire may be liberated: Carbon monoxide, Carbon dioxide (CO₂).**5.3. Advice for firefighters**

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

Additional information

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**

Do not breathe dust. 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

Use personal protection equipment.

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6.2. Environmental precautions

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

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

Take up mechanically, placing in appropriate containers for disposal.

For cleaning up

Large amounts of spillages: Use approved industrial vacuum cleaner for removal.

Small amounts of spillages: Take up mechanically.

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

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Keep out of reach of children. Avoid dust formation. Do not breathe dust.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

Take off contaminated clothing. Keep away from food, drink and animal feedingstuffs. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work.

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 container tightly closed. Keep container dry. Keep/Store only in original container. Moisture-sensitive.

Keep the packing dry and well sealed to prevent contamination and absorption of humidity. Protect from direct sunlight.

Recommended storage temperature: at room temperature

Hints on joint storage

No materials to be specially mentioned

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)

Solid for monitoring water parameters in aquarium and tap water.

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

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Appropriate engineering controls

No special technical protective measures are necessary.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Avoid contact with eyes. Suitable eye protection: Dust protection eye glasses

Not required because of small size of the container

Hand protection

Hand protection is not required.

Skin protection

Body protection: not required.

Respiratory protection

Usually no personal respirative protection necessary. In case of inadequate ventilation wear respiratory protection. In the case of dust or aerosol formation use respirator with filter model P2 (according to DIN 3181, 1980).

Thermal hazards

Non-flammable. Thermal decomposition can lead to the escape of irritating gases and vapours. In case of fire may be liberated: Carbon monoxide, Carbon dioxide (CO₂)

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:	solid
Colour:	white, crystalline
Odour:	odourless
Odour threshold:	not determined
Melting point/freezing point:	191 °C
Boiling point or initial boiling point and boiling range:	> 191 °C
Flammability:	This material is combustible, but will not ignite readily.
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	not determined
Auto-ignition temperature:	380 °C
Decomposition temperature:	not determined
pH-Value (at 20 °C):	2,1-2,6 (50 g/l)
Viscosity / kinematic:	not applicable
Water solubility:	330 g/L
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	-1,85
Vapour pressure:	not determined
Density (at 20 °C):	1,65 g/cm ³
Bulk density:	not determined
Relative vapour density:	not determined

9.2. Other information**Information with regard to physical hazard classes****Explosive properties**

The product is not: Explosive. Dust can form an explosive mixture with air.

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

Other safety characteristics

Evaporation rate:	not determined
Solvent separation test:	No data available
Solvent content:	0 %
Solid content:	100,00 %
Sublimation point:	No data available
Softening point:	not applicable
Pour point:	not applicable
Viscosity / dynamic:	not applicable
Flow time:	not applicable

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

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Protect from direct sunlight., Moisture-sensitive.

10.5. Incompatible materials

Oxidising agent, Air, humid, Light metals

10.6. Hazardous decomposition products

Carbon monoxide, Carbon dioxide (CO₂).

Thermal decomposition can lead to the escape of irritating gases and vapours.

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

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

Irritation and corrosivity

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

Causes skin and eye irritation. Inhalation of dust may cause irritation of the respiratory system.

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.

Did not show carcinogenic effects in animal experiments.

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.

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Aspiration hazard

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

Information on likely routes of exposure

Skin contact, Eye contact, Ingestion, Inhalation

Specific effects in experiment on an animal

No data available.

Additional information on tests

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

Practical experience

No data available.

11.2. Information on other hazards**Endocrine disrupting properties**

No data available.

Other information

No data available.

Further information

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**

On the basis of existing data about the elimination/degradation and bioaccumulation potential longer term damage to the environment is unlikely. Harmless to aquatic organisms up to the tested concentration..

According to the results of tests of biodegradability this product is considered as being readily biodegradable.

12.2. Persistence and degradability

Readily biodegradable (according to OECD criteria).

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

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects

No information available.

Further information

Avoid release to the environment. Ecological injuries are not known or expected under normal use.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

160306 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes other than those mentioned in 16 03 05

List of Wastes Code - used product

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160509 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

List of Wastes Code - contaminated packaging

150102 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); plastic packaging

Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number or ID number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number or ID number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No information available.

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

2004/42/EC (VOC): 100 % (1650 g/l)
Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

Additional information

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

National regulatory information

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

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15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information**Changes**

This data sheet contains changes from the previous version in section(s): 2.

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

Further Information

Classification 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.