

## Safety data sheet

### according to UK REACH (SI 2020/1577) as amended

Printing date 17.06.2025

Version number 2 (replaces version 1)

Revision: 17.06.2025

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

##### · 1.1 Product identifier

· **Trade name:** Sulphuric Acid 0.5M

· **Product Code:** 20-5515

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

· **Product category** PC21 Laboratory chemicals

· **Application of the substance / the mixture** Laboratory chemicals

##### · Uses advised against

Any use involving aerosol formation or vapour release in excess of the assigned Workplace Exposure Limit where workers are exposed without suitable Respiratory Protective Equipment.

Any use carrying a risk of direct contact with eyes/skin where workers are exposed without adequate personal protective equipment (PPE).

Processes involving the use of incompatible substances - refer to section 10.

Processes involving extreme heat use advised against.

##### · 1.3 Details of the supplier of the safety data sheet

##### · **Supplier:**

Severn Biotech Ltd.

Unit 2,

Park Lane,

Kidderminster,

Worcestershire.

DY11 6TJ

UK

Tel: 0044 1562 825286

Fax: 0044 1562 825284

email: info@severnbiotech.com

· **Further information obtainable from:** Product safety department.

##### · 1.4 Emergency telephone number:

Members of the public seeking specific information on poisons should contact:

In England and Wales: NHS 111 - dial 111

In Scotland: NHS 24 - dial 111

#### SECTION 2: Hazards identification

##### · 2.1 Classification of the substance or mixture

##### · **Classification according to GB-CLP**

Met. Corr.1 H290 May be corrosive to metals.

##### · 2.2 Label elements

· **Labelling according to GB-CLP** The product is classified and labelled according to the GB CLP regulation.

##### · **Hazard pictograms**



GHS05

· **Signal word** Warning

##### · **Hazard-determining components of labelling:**

Sulphuric acid

##### · **Hazard statements**

H290 May be corrosive to metals.

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- **Precautionary statements**
  - P234 Keep only in original packaging.
  - P390 Absorb spillage to prevent material damage.
  - P406 Store in a corrosion resistant container / container with a resistant inner liner.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** An aqueous solution of sulphuric acid.

#### · **Dangerous components:**

CAS: 7664-93-9 EINECS: 231-639-5 Index number: 016-020-00-8 Reg.nr.: 01-2119458838-20-XXXX	Sulphuric acid  Met. Corr.1, H290; Skin Corr. 1A, H314 Note: B Specific concentration limits: Skin Corr. 1A; H314: C ≥ 15 % Skin Irrit. 2; H315: 5 % ≤ C < 15 % Eye Irrit. 2; H319: 5 % ≤ C < 15 % Met. Corr.1; H290: C ≥ 0.3 %	2.5 – < 5%
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- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
  - Immediately rinse with water.
  - If skin irritation continues, consult a doctor.
- **After eye contact:**
  - Check for and remove any contact lenses.
  - Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
  - Rinse out mouth and then drink plenty of water.
  - Do not induce vomiting; call for medical help immediately.
  - If vomiting occurs spontaneously, keep head below hips to prevent aspiration.
- **Information for doctor:** Treat symptomatically and supportively.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
  - No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
  - CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray.
  - Use fire extinguishing methods suitable to surrounding conditions.

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- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
Sulphur Oxides (SO<sub>x</sub>)  
Reacts with most metals to produce hydrogen gas, which can form explosive mixtures with air.
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.  
Do not inhale explosion gases or combustion gases.
- **Additional information**  
Cool endangered receptacles with water spray.  
Collect contaminated fire fighting water separately. It must not enter the sewage system.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Ensure adequate ventilation  
Particular danger of slipping on leaked/spilled product.
- **6.2 Environmental precautions:**  
Do not allow to penetrate the ground/soil.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Contain and collect spillage with non-combustible, absorbent material e.g.sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.  
Wash the area with plenty of water.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.  
Conduct maintenance and other work on or in storage/reactor/mixing vessels or closed spaces ONLY under strict Permit to Work conditions.  
Inspect the electrical fittings regularly against the risk of corrosion.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Prevent any seepage into the ground.
- **Information about storage in one common storage facility:**  
Store away from water.  
Store away from foodstuffs.  
Do not store together with alkalis (caustic solutions).
- **Further information about storage conditions:**  
Protect from frost.  
Store in a bunded area.

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Store in cool, dry conditions in well sealed receptacles.

- **Storage class:** 12
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

#### · 8.1 Control parameters

##### · **Ingredients with limit values that require monitoring at the workplace:**

**CAS: 7664-93-9 Sulphuric acid**

WEL	Long-term value: 0.05* mg/m <sup>3</sup> *mist: defined as thoracic fraction
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#### · **PNECs**

No hazards identified.

No potential for bioaccumulation.

- **Additional information:** The lists valid during the making were used as basis.

#### · 8.2 Exposure controls

- **Appropriate engineering controls** No further data; see section 7.

- **Individual protection measures, such as personal protective equipment**

##### · **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Do not eat, drink, smoke or sniff while working.

Storing food in the working area is prohibited.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Take note of assigned Workplace Exposure Limits.

- **Respiratory protection:** Use suitable respiratory protective device in case of insufficient ventilation.

##### · **Hand protection**



Protective gloves.

Use gloves tested and approved under appropriate government standards such as NIOSH (US) or EN374 (EU).

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

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

##### · **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

##### · **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

##### · **Eye/face protection**



Safety glasses with side-shields conforming to EN166.

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

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· **Body protection:**



Acid resistant protective clothing

Body protection must be chosen depending on product properties, activity and possible exposure.

- **Environmental exposure controls** Do not allow to enter drains, sewers or watercourses.

### SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· <b>Physical state</b>	Liquid
· <b>Colour:</b>	Colourless
· <b>Odour:</b>	Mild
· <b>Odour threshold:</b>	Not determined.
· <b>Melting point/freezing point:</b>	Undetermined.
· <b>Boiling point or initial boiling point and boiling range</b>	Undetermined.
· <b>Flammability</b>	Not applicable.
· <b>Lower and upper explosion limit</b>	
· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.
· <b>Flash point:</b>	Not applicable.
· <b>Decomposition temperature:</b>	Not determined.
· <b>pH at 20 °C</b>	1
· <b>Viscosity:</b>	
· <b>Kinematic viscosity</b>	Not determined.
· <b>Dynamic:</b>	Not determined.
· <b>Solubility</b>	
· <b>water:</b>	Fully miscible.
· <b>Partition coefficient n-octanol/water (log value)</b>	Not determined.
· <b>Vapour pressure:</b>	Not determined.
· <b>Density and/or relative density</b>	
· <b>Density at 20 °C:</b>	1.04 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.

· **9.2 Other information**

· <b>Appearance:</b>	
· <b>Form:</b>	Fluid
· <b>Important information on protection of health and environment, and on safety.</b>	
· <b>Ignition temperature:</b>	Product is not self-igniting.
· <b>Explosive properties:</b>	Product does not present an explosion hazard.
· <b>Solvent content:</b>	
· <b>VOC (EC)</b>	0.00 %
· <b>Molecular weight</b>	18.02 g/mol
· <b>Change in condition</b>	
· <b>Evaporation rate</b>	Not determined.

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<b>· Information with regard to physical hazard classes</b>	
· Explosives	Not applicable
· Flammable gases	Not applicable
· Aerosols	Not applicable
· Oxidising gases	Not applicable
· Gases under pressure	Not applicable
· Flammable liquids	Not applicable
· Flammable solids	Not applicable
· Self-reactive substances and mixtures	Not applicable
· Pyrophoric liquids	Not applicable
· Pyrophoric solids	Not applicable
· Self-heating substances and mixtures	Not applicable
· Substances and mixtures, which emit flammable gases in contact with water	Not applicable
· Oxidising liquids	Not applicable
· Oxidising solids	Not applicable
· Organic peroxides	Not applicable
· Corrosive to metals	May be corrosive to metals.
· Desensitised explosives	Not applicable

## SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**  
Reacts with metals forming hydrogen.  
Reacts with cyanides and sulphites to form toxic gases.  
Exothermic reaction with alkalis
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**  
Cyanides  
Sulphides  
Chlorates  
Oxidising agents  
Metals  
Reducing agents
- **10.6 Hazardous decomposition products:** Sulphur oxides (SO<sub>x</sub>)

## 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.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Frequent or prolonged contact may irritate and cause dermatitis.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

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- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **Subacute to chronic toxicity:**  
Prolonged or repeated skin contact may irritate and cause dermatitis.  
May have effects on the teeth, resulting in teeth erosion.
- **Additional toxicological information:**  
ROUTES OF EXPOSURE: Can be absorbed into the body by inhalation and by ingestion.
- **11.2 Information on other hazards**

· <b>Endocrine disrupting properties</b>
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None of the ingredients are listed.
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## SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** Product is not expected to bioaccumulate.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**  
Must not reach sewage water or drainage ditch undiluted or unneutralised.  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

## SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Recommended Hierarchy of Controls:
  - Minimise waste;
  - Reuse if not contaminated;
  - Recycle, if possible; or
  - Safe disposal (if all else fails).
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.  
Contact waste processors for recycling information.  
Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.
- **Uncleaned packaging:**
- **Recommendation:**  
Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.  
Container remains hazardous when empty. Continue to observe all precautions.

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Disposal must be made according to official regulations.

Containers, even those that are "empty," may contain residues that can develop hazardous gases and vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

· <b>14.1 UN number or ID number</b>	
· <b>ADR/RID/ADN, IMDG, IATA</b>	UN3264
· <b>14.2 UN proper shipping name</b>	
· <b>ADR/RID/ADN</b>	UN3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (SULPHURIC ACID)
· <b>IMDG, IATA</b>	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (SULPHURIC ACID)
· <b>14.3 Transport hazard class(es)</b>	
· <b>ADR/RID/ADN</b>	
	
· <b>Class</b>	8 (C1) Corrosive substances.
· <b>Label</b>	8
· <b>IMDG, IATA</b>	
	
· <b>Class</b>	8 Corrosive substances.
· <b>Label</b>	8
· <b>14.4 Packing group</b>	
· <b>ADR/RID/ADN, IMDG, IATA</b>	III
· <b>14.5 Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>14.6 Special precautions for user</b>	Warning: Corrosive substances.
· <b>Hazard identification number (Kemler code):</b>	80
· <b>Hazchem Code:</b>	2X
· <b>EMS Number:</b>	F-A,S-B
· <b>Segregation groups</b>	(SGG1a) Strong acids
· <b>Stowage Category</b>	B
· <b>Stowage Code</b>	SW2 Clear of living quarters.
· <b>Segregation Code</b>	SG36 Stow "separated from" SGG18-alkalis. SG49 Stow "separated from" SGG6-cyanides
· <b>14.7 Maritime transport in bulk according to IMO instruments</b>	Not applicable.

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· <b>Transport/Additional information:</b>	
· <b>ADR/RID/ADN</b>	5L
· <b>Limited quantities (LQ)</b>	Code: E1
· <b>Excepted quantities (EQ)</b>	Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>Transport category</b>	3
· <b>Tunnel restriction code</b>	E
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>UN "Model Regulation":</b>	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (SULPHURIC ACID), 8, III

## SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Poisons Act**

- **Regulated explosives precursors**

CAS: 7664-93-9	Sulphuric acid	15%
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- **Regulated poisons**

None of the ingredients are listed.

- **Reportable explosives precursors**

None of the ingredients are listed.

- **Reportable poisons**

None of the ingredients are listed.

- **Control Of Major Accident Hazards Regulations 2015 (COMAH)**
- **Named dangerous substances - ANNEX I** None of the ingredients are listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

- **Relevant phrases**

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

- **Department issuing SDS:** Product safety department.

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**· Abbreviations and acronyms:**

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised 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 (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

PNEC: Predicted No-Effect Concentration (UK REACH)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

ATE: Acute toxicity estimate values

Met. Corr. 1: Corrosive to metals – Category 1

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

**· \* Data compared to the previous version altered.**

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