
MATERIAL SAFETY DATA SHEET

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

Product name: Sulfuric acid 98%
CAS number: 7664-93-9
EC number: 231-639-5
Index number: 016-020-00-8
Reach number: 01-2119458838-20-XXXX
Product number: REA025
Brand: Solmedia Ltd

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

Laboratory Chemicals

1.3 Details of the supplier of the safety data sheet

Name of Supplier: Solmedia Ltd.
Address of Supplier: Unit 2, Vernon Drive
Battlefield Enterprise Park
Shrewsbury
SY1 3TF
UK
Telephone: 0844 80 80 900
Email: labsupplies@solmedialtd.com

1.4 Emergency telephone number

Emergency Phone: +44 (0)844 80 80 900

SECTION 2: Hazard's identification**2.1 Classification of the substance or mixture**

Classification under CLP:

Hazard Classes	Hazard category	Hazard Statements
Corrosive to metals	Category 1	H290
Skin corrosion	Category 1A	H314
Serious eye damage	Category 1	H318

2.2 Label elements

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

Signal words: Danger

Hazard pictograms:

GHS05: Corrosive



Precautionary statements:

P234: Keep only in original packaging.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340 + P310: IF INHALED: Remove person to fresh air and keep comfortable for breathing. immediately call a POISON CENTER/doctor.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.

P363: Wash contaminated clothing before reuse.

2.3 Other hazards

Other hazards: In use, may form flammable / explosive vapour-air mixture.

PBT: This product is not identified as a PBT/vPvB substance.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous ingredients Classification according to Regulation (EC) No. 1272/2008 [CLP]

			Classification (Regulation (EC) No 1272/2008 [CLP]	
Hazardous Components		Amount [%]	Hazard class/ Hazard category	Hazard Statements
Name:	Sulphuric acid	~98%	MET CORR. CAT. 1; SKIN CORR. CAT. 1A; EYE DAM. CAT. 1.	H290 H314 H218
CAS NO.	7664-93-9			
EC-NO.	231-639-5			
Index NO.	016-020-00-8			
Formula	H2O4S			
Molecular weight	98.09g/mol			

SECTION 4: First aid measures

4.1 Description of first aid measures

General information:	IF exposed or if you feel unwell: Call a POISON CENTRE or doctor/physician. If unconscious but breathing normally, place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.
Skin contact:	After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. In case of skin reactions, consult a physician.
Eye contact:	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. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.
Ingestion:	If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Do NOT induce vomiting. Give nothing to eat or drink.
Inhalation:	Call a POISON CENTRE/doctor. Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

4.2 Most important symptoms and effects, both acute and delayed

No data available.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Use appropriate extinguishing media for local circumstance and environment

5.2 Special hazards arising from the substance or mixture

In case of fire may be liberated: Non-combustible sulphur oxides.

5.3 Advice for firefighters

DO NOT fight fire when fire reaches explosives.
Special protective equipment for firefighters
Wear a self-contained breathing apparatus and chemical protective clothing.

Additional Information:

Do not allow run-off from fire-fighting to enter drains or water courses.
Do not inhale explosion and combustion gases.
Use caution when applying carbon dioxide in confined spaces.
Carbon dioxide can displace oxygen.
Use water spray jet to protect personnel and to cool endangered containers.
In case of fire: Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

In case of major fire and large quantities: Remove persons to safety.
Keep away from sources of ignition and heat.

6.2 Environmental precautions

Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Spilled product must never be returned to the original container for recycling. Collect in closed and suitable containers for disposal.
Isolate from ignition sources. Absorb with non-combustible spillage material.

6.4 Reference to other sections

Clear spills immediately.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Prevent contact with sources of ignition. All work processes must always be designed so that the following is as low as possible:
Inhalation, Skin contact, Eye contact
Use extractor hood (laboratory).
If handled uncovered, arrangements with local exhaust ventilation have to be used. If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means.

7.2 Conditions for safe storage, including any incompatibilities

Recommended storage temperature: 15 – 25 degrees C
Storage class: no data available
Keep container tightly closed and in a well-ventilated place.
Keep/Store only in original container.
Storage class : 3 : Flammable liquids.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

UK - EH40/2005 Workplace exposure limits (WEL):

Component	CAS NO.	State	8-hour TWA	15 min. STEL
Sulphuric acid	7664-93-9	UK	0.05 mg/m ³ Mist, thoracic fraction	N/A

8.2.1 Appropriate engineering controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

Personal protective equipment

Wear suitable protective clothing. When handling with chemical substances, protective clothing with CE-labels including the four control digits must be worn. For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique.

(Without touching glove's outer surface) to avoid skin contact with this product. Dispose of Contaminated gloves after use in accordance with applicable laws and good laboratory practices.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Splash contact Material: butyl-rubber Minimum layer thickness: 0.7 mm Break through time: 120 min.

Body Protection

Impervious clothing, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection required if workplace exposure limits cannot be controlled/if ventilation or exhaust is not adequate. For nuisance exposures use type OV/AG (US) or type ABEK

(EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Eye protection:

Goggles recommended during refilling: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU)

Additional Information

Wash hands before breaks and after work. Avoid contact with skin and eyes. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

Control of environmental exposure

Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. If the product contaminates rivers and lakes or drains inform respective authorities. If material reaches soil inform authorities responsible for such cases.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

State:	Liquid
Colour:	Colourless/slight yellow
Odour:	odourless
Odour threshold:	No data available
pH:	No data available
Melting point/freezing point:	10.31°C
Initial boiling point and boiling range:	290°C
Flash point:	No data available
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Flammability or explosive limits	
Lower explosion limit:	No data available
Upper explosion limit:	No data available
Vapour pressure:	No data available
Vapour density:	No data available
Relative density:	1.84 g/cm ³ (25 °C)

Solubility(ies)**Water solubility:**

No data available

Soluble (g/L) in Ethanol:

No data available

Partition coefficient:**n-octanol/water:**

No data available

Auto-ignition temperature:

No data available

Decomposition temperature:

No data available

Viscosity**Kinematic viscosity:**

No data available

Dynamic viscosity:

No data available

Explosive properties: Not applicable**Oxidising properties:** Not applicable**9.2 Other safety information****Bulk density:** No data available**Refraction index:** No data available**Dissociation constant:** No data available**Surface tension:** No data available**Henry's Law Constant:** No data available

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

Vapour may form explosive mixture with air.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

A risk of explosion and/or of toxic gas formation exists with the following substances: Water, Alkali metals, alkali compounds, Ammonia, Aldehydes, acetonitrile, Alkaline earth metals, alkalines, Acids, alkaline earth compounds, Metals, metal alloys, Oxides of phosphorus, phosphorus, hydrides, halogen-halogen compounds, oxyhalogenic compounds, permanganates, nitrates, carbides, combustible substances, organic solvent, acetylidene, Nitriles, organic nitro compounds, anilines, Peroxides, picrates, nitrides, lithium silicide, iron(III) compounds, bromates, chlorates, Amines, perchlorates, hydrogen peroxide

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Contact with metals liberates hydrogen gas. Will corrode organic tissue.

10.6 Hazardous decomposition products

Other decomposition products - No data available

In the event of fire: see section 5

SECTION 11: Toxicological information**11.1 Information on toxicological effects**

Component	LD50 Oral
Sulphuric acid	2140 mg/kg (Rat, Male and female)

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Symptoms / routes of exposure

Skin contact:	Causes skin irritation
Eye contact:	causes serious eye irritation
Ingestion:	May be harmful if swallowed Causes burns
Inhalation:	May be harmful if inhaled. The substance is destructive to the respiratory tract and mucous membranes.

SECTION 12: Ecological information**12.1 Ecotoxicity**

Ecotoxicity values: Toluene

Aquatic toxicity	Dose (hours/days)	Species
Toxicity to daphnia and other aquatic invertebrates	EC50 (50% maximal effective concentration): >100 mg/L 48h	Daphnia magna (water flea)
Toxicity to algae	ErC50 (50% growth reduction concentration): >100 mg/L 72h	Desmodesmus subspicatus (green algae)

12.2 Persistence and degradability

Not applicable to inorganic substances

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This product is not identified as a PBT/vPvB substance.

12.6 Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Disposal operations:

Dispose according to local legislation. Consult the appropriate local waste disposal expert about waste disposal.

Waste code product: no data available

Handle contaminated packages in the same way as the substance itself.

Recovery operations: Not applicable.

Disposal of packaging: Dispose of as unused product.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

SECTION 14: Transport information

14.1 UN number

UN1830

14.2 UN proper shipping name

Sulphuric acid

14.3 Transport hazard class(es)

8

Hazard label(s): 1

14.4 Packaging group

II

14.5 Environmental hazards

No

14.6 Special precautions for user

Tunnel restriction code:

E

(Passage forbidden through tunnels of category D when carried in bulk or in tanks. Passage forbidden through tunnels of category E.)

SECTION 15: Regulatory information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

SECTION 16: Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Solmedia Ltd shall not be held liable for any damage resulting from handling or from contact with the above product.