

EC safety data sheet

Sulphuric acid 98%

Status: 14.03.2012

AM-AG002

1.3.0, issued: 14.03.2012

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

1.1 Product identifier

Trade name

Sulphuric acid 98%

Identification numbers

CAS no. 7664-93-9
EC no. 231-639-5
Index no. 016-020-00-8

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

Relevant identified uses of the substance or mixture

Production of sulphuric acid

Use of sulphuric acid as an intermediate in manufacture of inorganic and organic chemicals incl. fertilizers

Use of sulphuric acid as a processing aid, catalyst, dehydrating agent, pH regulator

Use of sulphuric acid for extractions and processing of minerals, ores

Use of sulphuric acid in the process of surface treatments, purification and etching

Use of sulphuric acid in electrolytic processes

Use of sulphuric acid in gas purification, scrubbing, flue gas scrubbing

Use of sulphuric acid in production of sulphuric acid contained batteries

Use of sulphuric acid in maintenance of sulphuric acid contained batteries

Use of sulphuric acid in recycling of sulphuric acid contained batteries

Use of sulphuric acid contained batteries

Use of sulphuric acid as laboratory chemicals

Use of sulphuric acid in industrial cleaning

mixing, preparation and repackaging of sulphuric acid

Uses advised against

None known

1.3 Details of the supplier of the safety data sheet

Address

Ameropa AG
Rebgasse 108
CH-4102 Binningen

Telephone no. +41 61 301 2711
Fax no. +41 61 302 9863

Advice on Safety Data Sheet

info@umco.de

1.4 Emergency telephone number

For medical advice (in German and English):
+49 (0)551 192 40 (Giftinformationszentrum Nord)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Skin Corr. 1A; H314

Classification in accordance with Directive 67/548/EEC or 1999/45/EC

C; R35

Note	Specific concentration limits	M-factor
B	Eye Irrit. 2; H319: C >= 5% Skin Irrit. 2; H315: C >= 5% Skin Corr. 1A; H314: C >= 15%	-

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

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2.2 Label elements

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

Product identifier

016-020-00-8 (sulphuric-acid)

Hazard pictograms



GHS05

Signal word

Danger

Hazard statements

H314 Causes severe skin burns and eye damage.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.
P363 Wash contaminated clothing before reuse.
P405 Store locked up.
P501 Dispose of contents/container to hazardous or special waste collection point.

2.3 Other hazards

No data available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical characterization

Substance name sulphuric-acid

Identification numbers

CAS no. 7664-93-9
EC no. 231-639-5
Index no. 016-020-00-8

3.2 Mixtures

Not applicable. The product is not a mixture.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing.

After inhalation

Remove to fresh air, keep patient warm and at rest. Summon a doctor immediately.

After skin contact

Wash immediately with plenty of water for several minutes. Summon a doctor immediately.

After eye contact

Flush eyes with large amounts of water for 20 minutes, holding lids apart. Summon a doctor immediately.

After ingestion

Drink water in small gulps. Do not induce vomiting (risk of perforation!). Summon a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

No data available.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media**

Product itself is non-combustible; adapt fire extinguishing measures to surrounding areas.

Unsuitable extinguishing media

Water

5.2 Special hazards arising from the substance or mixture

In case of fires, hazardous combustion gases are formed: Sulphur oxides

5.3 Advice for firefighters

Cool endangered containers with water spray jet. Use self-contained breathing apparatus. Wear protective clothing. Fire residues and contaminated firefighting water must be disposed off in accordance with the local regulations. Suppress gases/vapours/mists with water spray jet.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

Do not inhale vapours. Ensure adequate ventilation. Evacuate endangered area; Refer to protective measures listed in sections 7 and 8.

For emergency responders

No data available. Personal protective equipment (PPE) - see Section 8.

6.2 Environmental precautions

Do not allow to enter drains.

6.3 Methods and material for containment and cleaning up

Pick up with absorbent material (e.g., acid binder). Send in suitable containers for recovery or disposal.

6.4 Reference to other sections

No data available.

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

Product inherent handling risks must be minimised taking the appropriate measures for protection and preventive actions. The working process should be designed to rule out the release of hazardous substances or skin contact as far as possible by the state of the art. Avoid contact with skin and eyes.

General protective and hygiene measures

The consequent use of carefully chosen, appropriate personal protection equipment is recommended. The protective measures must be chosen considering the specific conditions in the factory and workplace conditions. Information about suitable, workplace specific, personal protective equipment can be requested by the user at the supplier/manufacturer of the protection equipment. Do not inhale vapours. Avoid contact with eyes and skin. Remove contaminated clothing. After worktime and during work intervals the affected skin areas must be thoroughly cleaned.

Advice on protection against fire and explosion

No special measures necessary.

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7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container hermetically closed in a dry, cool and well-ventilated place. Provide acid-resistant floor.

Advice on storage assembly

Do not store together with: inflammatory substances; explosive substances; Cyanide; Ammonia; Alkali metals; Keep away from water.

7.3 Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

No	Substance name	CAS no.	EC no.
1	sulphuric-acid	7664-93-9	231-639-5
List of approved workplace exposure limits (WELs) / EH40			
Sulphuric acid			
	TWA	1	mg/m ³

DNEL und PNEC values

DNEL values (worker)

No	Substance name	CAS / EC no		
	Route of exposure	Exposure time	Effect	Value
1	sulphuric-acid	7664-93-9 231-639-5		
	inhalational	Short term (acute)	local	0,1 mg/m ³
	inhalational	Long term (chronic)	local	0,05 mg/m ³

PNEC values

No	Substance name	CAS / EC no		
	ecological compartment	Type	Value	
1	sulphuric-acid	7664-93-9 231-639-5		
	water	fresh water	0,0025	mg/l
	water	marine water	0,00025	mg/l
	sewage treatment plant	-	8,8	mg/l

8.2 Exposure controls

Appropriate engineering controls

No data available.

Personal protective equipment

Respiratory protection

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

Eye / face protection

Tightly fitting safety glasses (EN 166).

Hand protection

Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product. Check in any case suitability of protective glove for the specific workplace conditions (e.g. mechanical resistance, product compatibility, antistatic properties). The glove manufacturer's instructions and information regarding storage, care and replacement; Replace immediately protective gloves if worn or damaged. Make sure that operations are designed so that it is not necessary to wear continuously protective gloves.

Other

acid-proof protective clothing

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Environmental exposure controls

No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form/Colour	
liquid	
colourless	
Odour	
odourless	
Odour threshold	
No data available	
pH value	
No data available	
Boiling point / boiling range	
Value	310 - 335 °C
Source	CSR
Melting point / melting range	
Value	-1,11 - 3,0 °C
Source	CSR
Decomposition point / decomposition range	
No data available	
Flash point	
Not applicable	
Ignition temperature	
Not applicable	
Auto-ignition temperature	
No data available	
Oxidising properties	
No data available	
Explosive properties	
The product does not have explosive properties.	
Flammability (solid, gas)	
No data available	
Lower flammability or explosive limits	
No data available	
Upper flammability or explosive limits	
No data available	
Vapour pressure	
Value	1,3 mbar
Reference temperature	148,5 °C
Source	CSR

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Vapour density	
No data available	
Evaporation rate	
No data available	
Relative density	
No data available	
Density	
Value	1,81 - 1,83 g/cm ³
Reference temperature	20 °C
Source	CSR
Solubility in water	
Remarks	Completely miscible
Solubility(ies)	
No data available	
Partition coefficient: n-octanol/water	
No data available	
Viscosity	
Value	22,5 mPa*s
Reference temperature	20 °C
Source	CSR

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available.

10.2 Chemical stability

No data available.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

Heat

10.5 Incompatible materials

Cyanide; Ammonia; Alkali metals; Water

10.6 Hazardous decomposition products

None if stored, handled and transported properly.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity	
LD50	2140 mg/kg
Species	rat
Method	OECD 401
Source	CSR
Acute dermal toxicity	
No data available	
Acute inhalational toxicity	
LC50	375 mg/m ³
Species	rat
Method	OECD 403
Source	CSR

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Skin corrosion/irritation	
Source	CSR
Evaluation	corrosive
Serious eye damage/irritation	
Source	CSR
Evaluation	corrosive
Respiratory or skin sensitisation	
Route of exposure	Skin
Source	CSR
Evaluation	non-sensitizing
Germ cell mutagenicity	
Source	CSR
Evaluation	negative
Reproduction toxicity	
No data available	
Carcinogenicity	
Source	CSR
Evaluation	negative
STOT-single exposure	
No data available	
STOT-repeated exposure	
No data available	
Aspiration hazard	
No data available	
Delayed and immediate effects as well as chronic effects from short and long-term exposure	
This product has a strong corrosive effect on skin, eyes and mucous membranes and causes badly healing wounds and ulcers, in severe cases, deep tissue destruction. In case of swallowing strong corrosive effect on mouth and throat tract and danger of perforation of gullet and stomach.	

SECTION 12: Ecological information

12.1 Toxicity

Fish toxicity		
LC50	16	mg/l
Duration of exposure	96	h
Species	Lepomis macrochirus	
Source	CSR	
Daphnia toxicity		
EC50	100	mg/l
Duration of exposure	48	h
Species	Daphnia magna	
Method	OECD 202	
Source	CSR	
Algae toxicity		
EC50	100	mg/l
Duration of exposure	72	h
Species	Desmodesmus subspicatus	
Method	OECD 201	
Source	CSR	

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Bacteria toxicity

No data available

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

Other adverse effects

Adverse effect due to pH-shifting.

12.7 Other information

Other information

The product should not be allowed to enter drains or water courses.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging

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

SECTION 14: Transport information

14.1 Transport ADR/RID/ADN

Class	8
Classification code	C1
Packing group	II
Hazard identification no.	80
UN number	UN1830
Technical name	SULPHURIC ACID
Tunnel restriction code	E
Label	8

14.2 Transport IMDG

Class	8
Packing group	II
UN number	UN1830
Proper shipping name	SULPHURIC ACID
EmS	F-A+S-B
Label	8

14.3 Transport ICAO-TI / IATA

Class	8
Packing group	II
UN number	UN1830
Proper shipping name	Sulphuric acid
Label	8

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14.4 Other information

No data available.

14.6 Special precautions for user

No data available.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

SECTION 15: Regulatory information

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

EU regulations

Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances

Remarks

Annex I, part 1 + 2: not mentioned. With regard to possibly appropriate decomposition products see Chapter 10.

15.2 Chemical safety assessment

No data available.

SECTION 16: Other information

Sources of key data used to compile the data sheet:

EC Directive 67/548/EC resp. 99/45/EC as amended in each case.

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

EC Directives 2000/39/EC, 2006/15/EC, 2009/161/EC

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

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

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

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

R35

Causes severe burns.

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

B

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

Department issuing safety data sheet

UMCO Umwelt Consult GmbH - D-21107 Hamburg, Georg-Wilhelm-Strasse 183, Tel.: +49(40)79 02 36 300, Fax: +49(40)79 02 36 357, e-mail: umco@umco.de

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.