

Sulfuric acid solution

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Corrosive to metals Category 1
H290 May be corrosive to metals.

2.2. Label elements

REGULATION (EC) No 1272/2008

Hazard pictograms

:



Signal word

: Warning

Hazard statements

: H290

May be corrosive to metals.

Precautionary statements

: P234
P280

Keep only in original container.
Wear protective gloves/ eye protection/
face protection.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Chemical name	CAS-No. Index-No. REACH Registration Number EC-No.	Classification 1272/2008	Concentration	Remarks
sulphuric acid	7664-93-9 016-020-00-8 231-639-5	Skin Corr. 1A; H314	> 0,1 % - < 1 %	Skin Corr. 1A; H314: >= 15 % Eye Irrit. 2; H319:5 - < 15 %

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| Skin Irrit. 2; H315:5 - < 15 % |

Remaining components of this product are non-hazardous and/or are present at concentrations below reportable limits.

Occupational Exposure Limit(s), if available, are listed in Section 8.
For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice:

First aider needs to protect himself. Move out of dangerous area. Immediately take off contaminated clothing and rinse body with plenty of water.

Inhalation:

Remove to fresh air. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician.

Skin contact:

Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician if irritation develops or persists.

Eye contact:

Immediately flush eye(s) with plenty of water. Protect unharmed eye. Call a physician immediately.

Ingestion:

Clean mouth with water and drink afterwards plenty of water. Call a physician immediately. Do NOT induce vomiting.

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

See Section 11 for more detailed information on health effects and symptoms.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water spray
Foam
Carbon dioxide (CO₂)
Dry powder

Extinguishing media which shall not be used for safety reasons:

High volume water jet

5.2. Special hazards arising from the substance or mixture

In case of fire hazardous decomposition products may be produced such as:
Sulphur oxides

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protective equipment. Unprotected persons must be kept away. Evacuate personnel to safe areas. Do not breathe vapours or spray mist. Avoid contact with skin and eyes.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Discharge into the environment must be avoided. Do not flush into surface water or sanitary sewer system.

6.3. Methods and materials for containment and cleaning up

Use chemical neutralising agents
Soak up with inert absorbent material.
Pick for disposal in tightly closed containers

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6.4. Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:

Do not breathe vapours or spray mist. Avoid contact with skin and eyes.

Advice on protection against fire and explosion:

Normal measures for preventive fire protection.

Hygiene measures:

Take off all contaminated clothing immediately. Remove and wash contaminated clothing before re-use. Keep working clothes separately. Wash hands before breaks and at the end of workday. When using do not eat or drink.

7.2. Conditions for safe storage, including any incompatibilities

Further information on storage conditions:

Store in original container. Keep containers tightly closed in a cool, well-ventilated place.

7.3. Specific end use(s)

no additional data available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:

Components	Basis / Value type	Value / Form of exposure	Exceeding Factor	Remarks
sulphuric acid	EU ELV TWA	0,05 mg/m ³ Mist		Indicative
sulphuric acid	EH40 WEL TWA	0,05 mg/m ³		

TWA - Time weighted average

DNEL/ PNEC-Values

Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks
sulphuric acid	Workers / Acute local effects		0,1 mg/m ³	Inhalation	
sulphuric acid	Workers / Long-term local effects		0,05 mg/m ³	Inhalation	

Component	Environmental compartment / Value	Remarks
sulphuric acid	Sewage treatment plant: 8,8 mg/l	
sulphuric acid	Fresh water: 0,025 mg/l	
sulphuric acid	Marine water: 0,25 mg/l	
sulphuric acid	Fresh water sediment: 0,002 mg/l	
sulphuric acid	Marine sediment: 0,002 mg/l	

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8.2. Exposure controls

Occupational exposure controls

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.

Engineering measures

Use with local exhaust ventilation.

Personal protective equipment

Respiratory protection:

In the case of vapour formation use a respirator with an approved filter.

Hand protection:

Glove material: Viton®

Break through time: > 480 min

Glove thickness: 0,7 mm

Vitoject® 890

Remarks:Supplementary note: The specifications are based on information and tests from similar substances by analogy.

Due to varying conditions (e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.

Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer recommends to use the chemical protective glove in practice not longer than 50% of the recommended permeation time.

Manufacturer's directions for use should be observed because of great diversity of types .

Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

Eye protection:

Safety goggles

Skin and body protection:

Wear suitable protective equipment.

Wear as appropriate:

acid-proof protective clothing

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Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: liquid
Colour	: colourless
Odour	: odourless
molecular weight	: 98,08 g/mol
Melting point/range	: ca. 0 °C
Boiling point/boiling range	: ca. 100 °C at 1.013 hPa
Upper explosion limit	: Not applicable
Lower explosion limit	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No decomposition if used as directed.
pH	: acidic
Viscosity, kinematic	: No data available
Water solubility	: completely miscible
Partition coefficient: n-octanol/water	: No data available
Density	: ca. 1,010 g/cm ³ at 20 °C

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Relative vapour density : No data available

9.2 Other Information

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Corrosive to metals : Corrosive to metals

Evaporation rate : No data available

Viscosity, dynamic : No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

No decomposition if used as directed.

10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.
Corrosive in contact with metals

10.4. Conditions to avoid

Protect from extreme heat and cold.

10.5. Incompatible materials

Keep away from metals.

10.6. Hazardous decomposition products

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In case of fire hazardous decomposition products may be produced such as:
Sulphur oxides

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:

No data available

Acute dermal toxicity:

No data available

Acute inhalation toxicity:

No data available

Skin irritation:

No data available

Eye irritation:

No data available

Respiratory or skin sensitisation:

No data available

Carcinogenicity:

Note: Not classified due to data which are conclusive although insufficient for classification.

Germ cell mutagenicity:

Note: Not classified due to data which are conclusive although insufficient for classification.

Reproductive toxicity:

Remarks: Not classified due to data which are conclusive although insufficient for classification.

Aspiration hazard:

No data available

11.2. Information on other hazards

Endocrine disrupting properties

No data available

Other information:

No data available

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SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish:

No data available

Toxicity to aquatic plants:

No data available

Toxicity to aquatic invertebrates:

No data available

12.2. Persistence and degradability

Biodegradability:

The methods for determining biodegradability are 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

No data available

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:

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Dispose according to legal requirements.

Packaging:

Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

Further information:

Provisions relating to waste:

EC Directive 2006/12/EC; 2008/98/EEC

Regulation No. 1013/2006

For personal protection see section 8.

SECTION 14: Transport information

14.1 UN number

ADR/RID:3264

IMDG:3264

IATA:3264

14.2 UN proper shipping name

ADR/RID:CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(SULPHURIC ACID, SOLUTION)

IMDG:CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(SULPHURIC ACID,SOLUTION)

IATA:Corrosive liquid, acidic, inorganic, n.o.s.(Sulphuric acid, Solution)

14.3 Transport hazard class(es)

ADR/RID: 8

IMDG: 8

IATA: 8

14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

14.5 Environmental hazards

ADR/RID:no

Marine pollutant: no

14.6 Special precautions for user

IMDG Code segregation group (SGG1) – ACIDS,

14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15: Regulatory information

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

Basis	Value	Remarks
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Directive 2012/18/EC		Not applicable
Substances of very high concern (SVHC)		This product does not contain substances of very high concern according to Regulation (EC) No Article 57 above the respective regulatory 1907/2006 (REACH), concentration limit of $\geq 0.1\%$ (w/w).

Poison Control Center

Country	Phone Number
Austria	+4314064343
Belgium	070 245245
Bulgaria	(+)35929154233
Croatia	(+3851)23-48-342
Cyprus	+357 2240 5611
Czech Republic	+420224919293; +420224915402
Denmark	82121212
Estonia	16662; (+372)6269390
Finland	9471977
France	+33(0)145425959
Greece	+30 210 779 3777
Hungary	(+36-80)201-199
Iceland	5432222
Ireland	+353(1)8092166
Italy	0382 24444
Germany	Berlin : 030/19240
	Bonn : 0228/19240
	Erfurt : 0361/730730
	Freiburg : 0761/19240

Country	Phone Number
Liechtenstein	+41 442515151
Lithuania	+370532362052
Luxembourg	070245245; (+352)80002-5500
Malta	+356 2395 2000
Netherlands	030-2748888
Norway	22591300
Poland	+48 42 25 38 400
Portugal	800250250
Romania	+40 21 318 3606
Slovakia (NTIC)	+421 2 54 774 166
Slovenia	+386 1 400 6051
Spain	+34915620420
Sweden	112 (begär Giftinformation); +46104566786
Switzerland	145
United Kingdom	(+44) 844 892 0111

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	Göttingen : 0551/19240
	Homburg : 06841/19240
	Mainz : 06131/19240
	Munich : 089/19240
Latvia	+37167042473

Other inventory information

US. Toxic Substances Control Act
On TSCA Inventory

Australia. Inventory of Industrial Chemicals (AIIC), as amended
On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)
All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List
On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)
On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand
On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI)
On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

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SECTION 16: Other information

Text of H-statements referred to under heading 3

sulphuric acid : H314 Causes severe skin burns and eye damage.

Further information

All directives and regulations refer to amended versions.
Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:

EC European Community
CAS Chemical Abstracts Service
DNEL Derived no effect level
PNEC Predicted no effect level
vPvB Very persistent and very bioaccumulative substance
PBT Persistent, bioaccumulative and toxic substance

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user.

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