

Revised on: 26.02.2020

Sulfuric acid 95 - 97 % p.A.

Created on: 26.02.2020

## 1. Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

**Article number:** LC-7099

**Trade name:** Sulfuric acid 95 - 97 % p.A.

**REACH Registration Number:** A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

**CAS-No.:** 7664-93-9

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

**Identified uses:**

- Reagent for analysis, Chemical production

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

**Manufacturer/Supplier:**

neoFroxx GmbH  
Marie-Curie-Str. 3  
D-64683 Einhausen  
[info@neofroxx.com](mailto:info@neofroxx.com)

**Further information obtainable from:**

Dep. Quality Control

### 1.4. Emergency telephone number

+49 (6251) 989 24 - 0 (during normal business hours)

## 2. Hazards identification

### 2.1. Classification of the substance or mixture

**Classification (REGULATION (EC) No 1272/2008):**

Corrosive to metals, Category 1, H290

Skin corrosion, Category 1A, H314

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2. Label elements

**Labelling (REGULATION (EC) No 1272/2008):**

**Hazard pictograms:**



**Signal word:** Danger

**Hazard statements:**

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

**Precautionary statements:**

**Prevention:**

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

**Response:**

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

**Index-No.:** 016-020-00-8

## 2.3. Other hazards

None known.

## 3. Composition / information on ingredients

### 3.1. Substance

Formula  $H_2SO_4$   $H_2O_4S$  (Hill)

Index-No. 016-020-00-8

EC-No. 231-639-5

Molar mass 98,08 g/mol

**Hazardous components (REGULATION (EC) No 1272/2008):**

**Chemical name (Concentration):**

sulphuric acid ( $\geq 50\%$  -  $\leq 100\%$ )

**CAS-No.:** 7664-93-9

**Registration number:** 01-2119458838-20- XXXX

**Classification:**

Corrosive to metals, Category 1, H290

Skin corrosion, Category 1A, H314

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 3.2. Mixture

Not applicable

## 4. First aid measures

### 4.1. Description of first aid measures

**General advice:**

First aider needs to protect himself.

**After inhalation:** fresh air. Call in physician.

**In case of skin contact:** Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician immediately.

**After eye contact:** rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

**After swallowing:** make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

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

Risk of blindness!

Irritation and corrosion, Cough, Shortness of breath.

Nausea, Vomiting, Diarrhoea, pain

### 4.3. Indication of any immediate medical attention and special treatment needed

No information available.

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## 5. Firefighting measures

### 5.1. Extinguishing media

**Suitable extinguishing media:**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media:**

For this substance/mixture no limitations of extinguishing agents are given.

### 5.2. Special hazards arising from the substance or mixture

Not combustible.

Ambient fire may liberate hazardous vapours.

**Fire may cause evolution of:**

Sulphur oxides

### 5.3. Advice for firefighters

**Special protective equipment for firefighters:**

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

**Further information:**

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

**Advice for non-emergency personnel:** Do not breathe vapours, aerosols. Avoid substance contact.

Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

**Advice for emergency responders:**

Protective equipment see section 8.

### 6.2. Environmental precautions

Do not let product enter drains.

### 6.3. Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10).

Take up with liquid-absorbent and neutralising material. Dispose of properly. Clean up affected area.

### 6.4. Reference to other sections

Indications about waste treatment see section 13.

## 7. Handling and storage

### 7.1. Precautions for safe handling

**Advice on safe handling:**

Observe label precautions.

**Hygiene measures:**

Change contaminated clothing and immerse in water. Preventive skin protection Wash hands and face after working with substance.

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7.2. Conditions for safe storage, including any incompatibilities

**Requirements for storage areas and containers:**

No metal containers.

**Storage conditions:**

Tightly closed.

**Recommended storage temperature:** see product label.

7.3. Specific end use(s)

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

## 8. Exposure controls / personal protection

8.1. Control parameters

**Derived No Effect Level (DNEL)**

sulphuric acid (7664-93-9)

Worker DNEL, acute            Local effects    inhalation            0,1 mg/m<sup>3</sup>Worker DNEL, longterm      Local effects    inhalation            0,05 mg/m<sup>3</sup>**Predicted No Effect Concentration (PNEC)**

sulphuric acid (7664-93-9)

PNEC Fresh water                            0,0025 mg/l

PNEC Fresh water sediment                0,002 mg/kg

PNEC Marine water                            0,00025 mg/l

PNEC Marine sediment                      0,002 mg/kg

PNEC Sewage treatment plant              8,8 mg/l

8.2. Exposure controls

**Engineering measures:**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

**Individual protection measures:**

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

**Eye/face protection:**

Tightly fitting safety goggles

**Hand protection:****full contact:**

Glove material: Viton (R)

Glove thickness: 0,70 mm

Break through time: &gt; 480 min

**splash contact:**

Glove material: butyl-rubber

Glove thickness: 0,7 mm

Break through time: &gt; 120 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 890 Vitoject® (full contact), KCL 898 Butoject® (splash contact).

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The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet (>,<) supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

**Other protective equipment:**

Acid-resistant protective clothing

**Respiratory protection:**

required when vapours/aerosols are generated.

**Recommended Filter type:** filter ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

**Environmental exposure controls:**

Do not let product enter drains.

## 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Form: liquid

Colour: colourless

Odour: odourless

Odour Threshold: No information available.

pH: < 0.3 at 49 g/l 25 °C

Melting point: ca. -20°C

Boiling point/boiling range: 335°C at 1.013 hPa

Flash point: Not applicable

Evaporation rate: No information available.

Flammability (solid, gas): No information available.

Lower explosion limit: Not applicable

Upper explosion limit: Not applicable

Vapour pressure: ca.0,0001 hPa at 20 °C

Relative vapour density: ca.3,4

Density 1,84 g/cm<sup>3</sup> at 20 °C

Relative density: No information available.

Water solubility: at 20 °C soluble, (caution! development of heat)

Partition coefficient: n octanol/water: No information available.

Auto-ignition temperature: No information available.

Decomposition temperature: Not applicable

Viscosity, dynamic: ca. 24 mPa.s at 20°C

Explosive properties: Not classified as explosive.

Oxidizing properties: Oxidizing potential

### 9.2. Other data

Ignition temperature: Not applicable

Corrosion May: be corrosive to metals.

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## 10. Stability and reactivity

### 10.1. Reactivity

strong oxidising agent

### 10.2. Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

### 10.3. Possibility of hazardous reactions

**A risk of explosion and/or of toxic gas formation exists with the following substances:**

**Violent reactions possible with:**

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 information available

### 10.5. Incompatible materials

animal/vegetable tissues, Metals.

Contact with metals liberates hydrogen gas.

### 10.6. Hazardous decomposition products

**in the event of fire:** See section 5.

## 11. Toxicological information

### 11.1. Information on toxicological effects

**Acute oral toxicity:**

This information is not available.

**Acute inhalation toxicity:**

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages: damage of respiratory tract

**Acute dermal toxicity:**

This information is not available.

**Skin irritation:**

Causes severe burns.

**Eye irritation:**

Causes serious eye damage.

Risk of blindness!

**Sensitisation:**

This information is not available.

**Germ cell mutagenicity:**

This information is not available.

**Carcinogenicity:**

This information is not available.

**Reproductive toxicity:**

This information is not available.

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**Teratogenicity:**

This information is not available.

**Specific target organ toxicity - single exposure:**

This information is not available.

**Specific target organ toxicity - repeated exposure:**

This information is not available.

**Aspiration hazard:**

This information is not available.

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11.2. Further information

**After inhalation of aerosols:** damage to the affected mucous membranes. After skin contact: severe burns with formation of scabs. After eye contact: burns, corneal lesions. After swallowing: severe pain (risk of perforation!), nausea, vomiting and diarrhoea. After a latency period of several weeks possibly pyloric stenosis.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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## 12. Ecological information

12.1. Toxicity

No information available.

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6. Other adverse effects

**Additional ecological information:**

**Biological effects:**

Forms corrosive mixtures with water even if diluted. Harmful effect due to pH shift. Endangers drinking-water supplies if allowed to enter soil or water.

Discharge into the environment must be avoided.

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## 13. Disposal considerations

13.1. Waste treatment methods

**Recommendation:**

Chemicals must be disposed of in compliance with the respective national regulations.

**Recommendation:**

Disposal must be made according to official regulations.

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

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



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## 14. Transport information

### Land transport (ADR/RID):

14.1 UN number	UN 1830
14.2 Proper shipping name	SULPHURIC ACID
14.3 Class	8
14.4 Packing group	II
14.5 Environmentally hazardous	--
14.6 Special precautions for user	yes
Tunnel restriction code	E

### Inland waterway transport (ADN):

Not relevant

### Air transport (IATA):

14.1 UN number	UN 1830
14.2 Proper shipping name	SULPHURIC ACID
14.3 Class	8
14.4 Packing group	II
14.5 Environmentally hazardous	--
14.6 Special precautions for user	no

### Sea transport (IMDG):

14.1 UN number	UN 1830
14.2 Proper shipping name	SULPHURIC ACID
14.3 Class	8
14.4 Packing group	II
14.5 Environmentally hazardous	--
14.6 Special precautions for user	yes
EmS	F-A S-B

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

Not relevant

## 15. Regulatory information

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

### EU regulations

**Major Accident Hazard:** SEVESO III

**Legislation:** Not applicable

### Occupational restrictions:

Take note of Dir 94/33/EC on the protection of young people at work.

### Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:

not regulated

### Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC:

not regulated

### Substances of very high concern (SVHC):

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of  $\geq 0.1$  % (w/w).

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**National legislation:**

**Storage class:** 8B

## 15.2. Chemical safety assessment

For this product a chemical safety assessment was not carried out.

## 16. Other information

### Full text of H-Statements referred to under sections 2 and 3.:

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

### Training advice:

Provide adequate information, instruction and training for operators.

### Labelling:

**Signal word:** Danger

### Hazard statements:

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

### Precautionary statements:

Prevention

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

Response

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

### Training advice:

Provide adequate information, instruction and training for operators.

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.

### Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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 Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

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