

**Safety data sheet
according to 1907/2006/EC, Article 31**

revised on: 02.08.2023

Version number 10 (replaces version 9)

Creation Date: 04.11.2015

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

- **1.1 Product identifier**
- **Trade name: Concentrated sulfuric acid. volumetric solution 0.05 mol / l**
- **Article number:** 875
- **CAS Number:** -
- **Registration number** This product is a mixture. For relevant UK REACH registration numbers see section 3.
- **UFI:** U630-W09S-M00Y-9QC5
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Life cycle stages**
 - F Formulation or re-packing
 - IS Use at industrial Sites
- **Product category** PC21 Laboratory chemicals
- **Application of the substance / the mixture**
 - Industrial use
 - Laboratory chemicals
 - Chemical analytics
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 - Th. Geyer GmbH & Co. KG
 - Dornierstr. 4 – 6
 - D-71272 Renningen
- Tel.: +49(0)7159-1637-0, Fax:+49 (0)7159/18417
www.thgeyer.de
sicherheitsdatenblaetter@thgeyer.de
- **Further information obtainable from:** Product management department
- **1.4 Emergency telephone number:**
 - National Poisons Information Service
 - City Hospital
 - Dudley Road
 - Birmingham B18 7QH
 - Tel.:Emergency: (00 44) 87 06 00 62 66
 - 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 Regulation (EC) No 1272/2008**



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

(Contd. on page 2)

E

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 02.08.2023

Version number 10 (replaces version 9)

Creation Date: 04.11.2015

Trade name: Concentrated sulfuric acid. volumetric solution 0.05 mol / l

(Contd. of page 1)

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the GB CLP regulation.
- **Hazard pictograms**



GHS07

- **Signal word** Warning
- **Hazard-determining components of labelling:**
Sulphuric acid
- **Hazard statements**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
- **Precautionary statements**
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
- **Additional information:**
Product contains: Reportable explosives precursors. Making available, introduction, possession and use according to Regulation (EU) 2019/1148, Article 9.
- **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:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

| | | |
|--------------------------------|---|--------|
| CAS: 7664-93-9 | Sulphuric acid | 5-<10% |
| EINECS: 231-639-5 | Met. Corr. 1, H290; Skin Corr. 1B, H314; Eye Dam. 1, H318 | |
| Reg.nr.: 01-2119458838-20-XXXX | | |

- **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:**
First aider needs to protect himself.
Immediately remove any clothing soiled by the product.
- **After inhalation:**
Remove person from danger zone.
Supply fresh air.
Administer glucocorticoid dose aerosol in case of lung irritation.
Seek medical treatment.
In case of unconsciousness place patient stably in side position for transportation.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 02.08.2023

Version number 10 (replaces version 9)

Creation Date: 04.11.2015

Trade name: Concentrated sulfuric acid. volumetric solution 0.05 mol / l

(Contd. of page 2)

- **After skin contact:**

Wash with plenty of soap and water, take off dirty clothes and shoes.

Consult a doctor if symptoms persist.

Take into account possible simultaneous inhalation.

- **After eye contact:**

Protect unharmed eye.

Rinse opened eye for several minutes under running water. Then consult a doctor.

Remove any contact lenses if possible.

Continue rinsing.

- **After swallowing:**

Rinse mouth thoroughly with water.

Drink plenty of water and provide fresh air. Call for a doctor immediately.

Do not induce vomiting.

A person vomiting while laying on their back should be turned onto their side.

- **Information for doctor:** Please observe safety data sheet/label.

- **4.2 Most important symptoms and effects, both acute and delayed**

Cramp

Gastric or intestinal disorders

Nausea

- **Hazards** Danger of gastric perforation.

- **4.3 Indication of any immediate medical attention and special treatment needed**

In case of lung irritation, administer glucocorticoid dose aerosol.

Monitor circulation.

Symptomatic treatment.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**

- **Suitable extinguishing agents:**

Use fire extinguishing methods suitable to surrounding conditions.

Use carbon dioxide, extinguishing powder, water spray or alcohol-resistant foam.

- **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 dioxide (SO₂)

Under certain fire conditions, traces of other toxic gases cannot be excluded.

- **5.3 Advice for firefighters**

- **Protective equipment:**

Wear self-contained respiratory protective device.

Do not inhale explosion gases or combustion gases.

Wear fully protective suit.

- **Additional information**

Cool endangered receptacles with water spray.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**

Avoid inhalation of vapours, gas or dust.

Ensure adequate ventilation.

Particular danger of slipping on leaked/spilled product.

Avoid contact with eyes and skin.

Wear protective equipment. Keep unprotected persons away.

- **6.2 Environmental precautions:** Do not allow to enter sewers/surface or ground water.

- **6.3 Methods and material for containment and cleaning up:**

Cover the sewerage system.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 02.08.2023

Version number 10 (replaces version 9)

Creation Date: 04.11.2015

Trade name: Concentrated sulfuric acid. volumetric solution 0.05 mol / l

(Contd. of page 3)

Prevent spreading over an area (e.g. by damming or oil booms).
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 Dispose contaminated material as waste according to section 13.
 Ensure adequate ventilation.
 Post-cleanse.

• **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**

Keep away from heat and direct sunlight.
 Apply the general protective and hygienic measures when handling chemicals.
 Ensure good ventilation/exhaustion at the workplace.
 Prevent formation of aerosols.

• **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:**

Provide acid-resistant floor.
 Prevent any seepage into the ground.
 Store only in the original receptacle.

• **Information about storage in one common storage facility:**

Store away from foodstuffs.
 Store away from metals.
 Store away from oxidising agents.

• **Further information about storage conditions:**

Store in dry conditions.
 Keep container tightly sealed.

• **Storage class:** 8 B

• **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 ³ *mist: defined as thoracic fraction |
|-----|---|

• **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:**

Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing
 Wash hands before breaks and at the end of work.
 Avoid contact with the eyes and skin.

• **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device. If air-purifying respiratory protection is required according to the risk assessment, wear a respirator with full-face mask with combination filter (US) or with filter type ABEK (EN 14387) filter cartridge. If the respirator is the only protective measure, an ambient air self-contained

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 02.08.2023

Version number 10 (replaces version 9)

Creation Date: 04.11.2015

Trade name: Concentrated sulfuric acid. volumetric solution 0.05 mol / l

(Contd. of page 4)

breathing apparatus with a full face mask must be worn. Respirators and components must be approved to appropriate government standards (for example, NIOSH (US) or CEN (EU)). Translated with www.DeepL.com/Translator (free version)

• **Hand protection**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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

• **Material of gloves**

Nitrile rubber, NBR

Material thickness > 0.11 mm

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.

Level 6 for applications > 480 min

• **Eye/face protection**

Face protection



Tightly sealed goggles

• **Body protection:**



Protective work clothing (e. g. safety shoes EN ISO 20345, long-sleeved protective working garments).

SECTION 9: Physical and chemical properties

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

• **General Information**

• **Physical state**

Fluid

• **Colour:**

Colourless

• **Odour:**

Odourless

• **Melting point/freezing point:**

<0 °C

• **Boiling point or initial boiling point and boiling range**

>100 °C

• **Flammability**

Not applicable.

• **Lower and upper explosion limit**

• **Lower:**

Not determined.

• **Upper:**

Not determined.

• **Flash point:**

Not applicable.

• **Decomposition temperature:**

Not determined.

• **pH at 20 °C**

~1

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 02.08.2023

Version number 10 (replaces version 9)

Creation Date: 04.11.2015

Trade name: Concentrated sulfuric acid. volumetric solution 0.05 mol / l

(Contd. of page 5)

| | |
|--|------------------------|
| · Viscosity: | |
| · Kinematic viscosity | Not determined. |
| · Dynamic: | Not determined. |
| · Solubility | |
| · water: | Fully miscible. |
| · Partition coefficient n-octanol/water (log value) | Not determined. |
| · Vapour pressure: | Not determined. |
| · Density and/or relative density | |
| · Density at 20 °C: | 1.04 g/cm ³ |
| | Not determined. |
| · Relative density | Not determined. |
| · Vapour density | Not determined. |

| | |
|--|---|
| · 9.2 Other information | |
| · Appearance: | |
| · Form: | Fluid |
| · Important information on protection of health and environment, and on safety. | |
| · Ignition temperature: | Product is not selfigniting. |
| · Explosive properties: | Product does not present an explosion hazard. |
| · Solvent content: | |
| · Water: | ≥90.0 % |
| · VOC (EC) | 0.00 % |
| · Change in condition | |
| · Evaporation rate | Not determined. |

| | |
|--|------|
| · Information with regard to physical hazard classes | |
| · Explosives | Void |
| · Flammable gases | Void |
| · Aerosols | Void |
| · Oxidising gases | Void |
| · Gases under pressure | Void |
| · Flammable liquids | Void |
| · Flammable solids | Void |
| · Self-reactive substances and mixtures | Void |
| · Pyrophoric liquids | Void |
| · Pyrophoric solids | Void |
| · Self-heating substances and mixtures | Void |
| · Substances and mixtures, which emit flammable gases in contact with water | Void |
| · Oxidising liquids | Void |
| · Oxidising solids | Void |
| · Organic peroxides | Void |
| · Corrosive to metals | Void |
| · Desensitised explosives | Void |

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability** Stable when stored and handled properly.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** Reacts with alkali (lyes).
- **10.4 Conditions to avoid**
Protect from moisture.

(Contd. on page 7)

E

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 02.08.2023

Version number 10 (replaces version 9)

Creation Date: 04.11.2015

Trade name: Concentrated sulfuric acid. volumetric solution 0.05 mol / l

(Contd. of page 6)

Heat, flames and sparks.

- **10.5 Incompatible materials:** Avoid contact with other chemicals.
- **10.6 Hazardous decomposition products:** In case of fire: see section 5.

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.
- **Skin corrosion/irritation** Causes skin irritation.
- **Serious eye damage/irritation** Causes serious eye irritation.
- **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.
- **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.
- **11.2 Information on other hazards**

• Endocrine disrupting properties

None of the ingredients is listed.

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** No further relevant information available.
- **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.
Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
Observe local (country-specific) regulations and laws.
This product and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Chemicals must be disposed of in accordance with the respective national regulations.

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 02.08.2023

Version number 10 (replaces version 9)

Creation Date: 04.11.2015



Trade name: Concentrated sulfuric acid. volumetric solution 0.05 mol / l

(Contd. of page 7)

| | |
|-----------------------------------|--|
| · European waste catalogue | |
| 06 00 00 | WASTES FROM INORGANIC CHEMICAL PROCESSES |
| 06 01 00 | wastes from the manufacture, formulation, supply and use (MFSU) of acids |
| 06 01 01* | sulphuric acid and sulphurous acid |
| HP8 | Corrosive |

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

| | |
|--|---|
| · 14.1 UN number or ID number · ADR, IMDG, IATA | UN2796 |
| · 14.2 UN proper shipping name · ADR · IMDG, IATA | 2796 SULPHURIC ACID SULPHURIC ACID |
| · 14.3 Transport hazard class(es) · ADR | |
|  | |
| · Class · Label | 8 (C1) Corrosive substances. 8 |
| · IMDG, IATA | |
|  | |
| · Class · Label | 8 Corrosive substances. 8 |
| · 14.4 Packing group · ADR, IMDG, IATA | II |
| · 14.5 Environmental hazards: | Not applicable. |
| · 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Segregation groups · Stowage Category | Warning: Corrosive substances. 80 F-A,S-B (SGG1) Acids B |
| · 14.7 Maritime transport in bulk according to IMO instruments | Not applicable. |
| · Transport/Additional information: | |
| · ADR · Limited quantities (LQ) · Excepted quantities (EQ) | 1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml |

(Contd. on page 9)

E

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 02.08.2023

Version number 10 (replaces version 9)

Creation Date: 04.11.2015

Trade name: Concentrated sulfuric acid. volumetric solution 0.05 mol / l

(Contd. of page 8)

| | |
|-----------------------------------|---|
| · Transport category | 2 |
| · Tunnel restriction code | E |
| <hr/> | |
| · IMDG | |
| · Limited quantities (LQ) | 1L |
| · Excepted quantities (EQ) | Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml |
| · UN "Model Regulation": | UN 2796 SULPHURIC ACID, 8, II |

SECTION 15: Regulatory information

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

· Inventory of Hazardous Chemicals

CAS: 7664-93-9 | Sulphuric acid

· Directive 2012/18/EU

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

· REGULATION (EU) 2019/1148

· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

· Regulation (EC) No 273/2004 on drug precursors

CAS: 7664-93-9 | Sulphuric acid

3

· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

CAS: 7664-93-9 | Sulphuric acid

3

· National regulations:

· Information about limitation of use:

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

· **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.

The application, use and processing of our products are beyond our control and are therefore exclusively your responsibility.

· Relevant phrases

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

· **Department issuing SDS:** Product management

(Contd. on page 10)

E

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 02.08.2023

Version number 10 (replaces version 9)

Creation Date: 04.11.2015

Trade name: Concentrated sulfuric acid. volumetric solution 0.05 mol / l

(Contd. of page 9)

- **Contact:** Product management

- **Version number of previous version:** 9

- **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)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

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

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

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

- *** Data compared to the previous version altered.**

E