

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 30.03.2020

Version number 2

Revision: 30.03.2020

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

- **1.1 Product identifier**
 - Trade name: **Elektrolyt: Schwefelsäure 5 mol/l**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against:**
 - **Product category:** PC21 Laboratory chemicals
 - **Process category:** PROC15 Use as laboratory reagent
 - **Application of the substance / the preparation:** Laboratory chemical
- **1.3 Details of the supplier of the safety data sheet**
 - **Manufacturer/Supplier:**
Xylem Analytics Germany GmbH
Sensortechnik Meinsberg
Meinsberg, Kurt-Schwabe-Straße 6
D-04736 Waldheim
Germany
Tel. +49 34327 623-0
 - **Further information obtainable from:** Email: info@meinsberg.de
- **1.4 Emergency telephone number:** Chemtrec: (USA & Canada) 800-424-9300 (International) 001 703-527-3887

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
 - **Classification according to Regulation (EC) No 1272/2008:**



GHS05 corrosion

Met. Corr. 1 H290 May be corrosive to metals.
Skin Corr. 1A H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.

- **2.2 Label elements:**
 - **Labelling according to Regulation (EC) No 1272/2008:**
The product is classified and labelled according to the CLP regulation.
 - **Hazard pictograms:** GHS05
 - **Signal word:** Danger
 - **Hazard-determining components of labelling:**
sulphuric acid
 - **Hazard statements:**
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
 - **Precautionary statements:**
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): Take off immediately all contaminated clothing. Rinse skin with water or shower.

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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+P311 IF exposed or concerned: Call a POISON CENTER/doctor.

· **2.3 Other hazards** No further relevant information available.

SECTION 3: Composition/information on ingredients

· 3.2 Mixture

· Description:

Mixture, consisting of the following components:

Water, sulfuric acid

· Dangerous components:

CAS: 7664-93-9	sulphuric acid	⚠ Skin Corr. 1A, H314	20 – < 50%
EINECS: 231-639-5			
Index number: 016-020-00-8			

· **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

· After inhalation:

Take affected persons into fresh air and keep quiet.

Call a doctor immediately.

· After skin contact:

Wash with plenty of water.

Take off contaminated clothing.

Call a doctor immediately.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· After swallowing:

Make victim drink water immediately (2 glasses at most).

Do not induce vomiting (risk of perforation)

Call a doctor immediately.

Do not attempt to neutralize.

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed** No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

· **Suitable extinguishing agents:** The product is not flammable. Extinguishing agent to suit environment.

· 5.2 Special hazards arising from the substance or mixture

In case of fire, the following can be released:

Sulphur oxides (SOx)

· 5.3 Advice for firefighters

· **Protective equipment:** Wear self-contained respiratory protective device.

· Additional information

Suppress gases/fumes/haze 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 contact with skin and eyes.

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Wear personal protective equipment (see section 8).

Ensure adequate ventilation

- **6.2 Environmental precautions:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Wash off residuals with water.

Dispose contaminated material as waste according to section 13.

- **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** Wear personal protective equipment (see section 8)

- **Information about fire - and explosion protection:** No special measures required.

- **7.2 Conditions for safe storage, including any incompatibilities**

- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.

- **Information about storage in one common storage facility:** Do not store together with alkalis (caustic solutions).

- **Further information about storage conditions:** Keep container tightly sealed.

- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

7664-93-9 sulphuric acid
IOELV Long-term value: 0.05 mg/m ³

- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Avoid contact with the eyes and skin.

Do not inhale gases / fumes / aerosols.

Take off contaminated clothing and wash it before reuse.

Wash hands before breaks and at the end of work.

- **Respiratory protection:**

Only required when fog or aerosols are generated or when the workplace is not sufficiently ventilated.

Filter P2

- **Protection of hands:** Protective gloves

- **Material of gloves**

Fluorocarbon rubber (Viton)

Recommended thickness of the material: ≥ 0.7 mm

- **Eye protection:** Tightly sealed goggles

- **Body protection:** Acid resistant protective clothing

- **Limitation and supervision of exposure into the environment**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

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Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties	
· General Information	
· Appearance:	
· Form:	Fluid
· Colour:	Colourless
· Odour:	Odourless
· pH-value at 20 °C:	< 1
· Change in condition	
· Melting point/freezing point:	Undetermined.
· Initial boiling point and boiling range:	112 °C
· Flash point:	Not applicable.
· Auto-ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product does not present an explosion hazard.
· Vapour pressure at 20 °C:	14 hPa
· Density at 20 °C:	1.32 g/cm ³
· Solubility in / Miscibility with	
· water:	Fully miscible.
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
 - **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**
 - Exotherm reaction with bases.
 - Reacts with metals forming hydrogen.
- **10.4 Conditions to avoid** Do not heat.
- **10.5 Incompatible materials:** Metals
- **10.6 Hazardous decomposition products:** In case of fire, see section 5.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
 - **Acute toxicity** Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:		
7664-93-9 sulphuric acid		
Oral	LD50	2140 mg/kg (Rat) (RTECS)
Inhalative	LC50	510 mg/m ³ , 2 h (Rat) (RTECS)

- **Primary irritant effect:**
 - **Skin corrosion/irritation**
 - Causes severe skin burns and eye damage.

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- **Serious eye damage/irritation**
Serious eye damage. Risk of blindness!
Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Acute effects (acute toxicity, irritation and corrosivity):**
If ingested, severe burns of the mouth and throat, as well as a danger of the perforation of the oesophagus and the stomach.
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
 - **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.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

7664-93-9 sulphuric acid

EC50 29 mg/l, 24 h (Daphnia magna)

LC50 16 – 29 mg/l, 96 h (Lepomis macrochirus)

- **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.
 - **Additional ecological information:**
 - **General notes:** Detrimental effect due to shift of pH value.
- **12.5 Results of PBT and vPvB assessment** Not applicable.
- **12.6 Other adverse effects**
 - **General notes:**
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.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Disposal must comply with the relevant local regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose the special waste.

· Uncleaned packaging:

· Recommendation:

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning. 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.

SECTION 14: Transport information

· 14.1 UN-Number

· ADR/RID, IMDG, IATA

UN2796

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· 14.2 UN proper shipping name · ADR/RID, IMDG, IATA	SULPHURIC ACID
· 14.3 Transport hazard class(es) · ADR/RID, IMDG, IATA	
	
· Class · Label	8 Corrosive substances. 8
· 14.4 Packing group · ADR/RID, IMDG, IATA	II
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Segregation groups · Stowage Category	Not applicable. Warning: Corrosive substances. 80 F-A,S-B Acids B
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· ADR/RID · Limited quantities (LQ) · Transport category · Tunnel restriction code	1L 2 E
· 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**
· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

- **Relevant phrases**
H314 Causes severe skin burns and eye damage.
- **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)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organisation
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
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
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)

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LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Met. Corr.1: Corrosive to metals – Category 1
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Eye Dam. 1: Serious eye damage/eye irritation – Category 1

EU
