

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 28.11.2022


Version number 6 (replaces version 5)

Revision: 28.11.2022

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

- **1.1 Product identifier**
- **Trade name: SHERADAN**
- **Article number: 709050**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against:**  
No further relevant information available.
- **Application of the substance / the mixture:** Polishing electrolyte for metal surfaces
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
SHERA Werkstoff-Technologie GmbH & Co. KG  
Espohlstraße 53  
D-49448 Lemförde  
GERMANY  
sdb@shera.de  
+ 49 (0) 54 43 – 99 33 – 0
- **Further information obtainable from:** Department of product security.
- **1.4 Emergency telephone number:**  
Giftinformationszentrum-Nord +49 (0) 551-19240  
(Information in german or english)

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008:**  
Acute Tox. 4 H302 Harmful if swallowed.  
Skin Corr. 1A H314 Causes severe skin burns and eye damage.  
Eye Dam. 1 H318 Causes serious eye damage.  
STOT RE 2 H373 May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral.
- **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:**  


GHS05    GHS07    GHS08
- **Signal word:** Danger
- **Hazard-determining components of labelling:**  
ethanediol  
sulphuric acid  
methanesulphonic acid
- **Hazard statements:**  
H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H373 May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral.
- **Precautionary statements:**  
P260 Do not breathe mist / vapours / spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing 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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- P304+P340 IF INHALED: Remove person to fresh air and keep 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.  
 P337+P313 If eye irritation persists: Get medical advice/attention.  
 P363 Wash contaminated clothing before reuse.  
 P501 Dispose of contents / container in accordance with local / regional / national / international regulations.

- **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: 107-21-1 EINECS: 203-473-3 Index number: 603-027-00-1 Reg.nr.: 01-2119456816-28	ethanediol STOT RE 2, H373; Acute Tox. 4, H302	25-<100%
CAS: 7664-93-9 EINECS: 231-639-5 Index number: 016-020-00-8 Reg.nr.: 01-2119458838-20	sulphuric acid Met. Corr.1, H290; Skin Corr. 1A, H314 Specific concentration limits: Skin Corr. 1A; H314: C ≥ 15 % Skin Irrit. 2; H315: 5 % ≤ C < 15 % Eye Irrit. 2; H319: 5 % ≤ C < 15 %	≥5-<10%
CAS: 75-75-2 EINECS: 200-898-6 Index number: 607-145-00-4 Reg.nr.: 01-2119491166-34	methanesulphonic acid Met. Corr.1, H290; Skin Corr. 1B, H314; Acute Tox. 4, H302; Acute Tox. 4, H312; STOT SE 3, H335	1-<10%

- **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:**  
In case of troubles or persistent symptoms, consult a medical.  
Immediately remove any clothing soiled by the product.  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**  
Supply fresh air.  
Take affected persons into fresh air and keep quiet.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**  
After contact with skin, wash immediately with plenty of water and soap.  
If skin irritation continues, consult a doctor.  
Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
Call for a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.

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- **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:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
Sulphur dioxide (SO<sub>2</sub>).  
Carbon monoxide (CO).  
Carbon dioxide (CO<sub>2</sub>).
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Do not breathe vapour or spray.  
Wear protective equipment. Keep unprotected persons away.  
Avoid contact with skin and eyes.
- **6.2 Environmental precautions**  
Do not allow to penetrate the ground / soil.  
Do not allow to enter sewers / surface or ground water.
- **6.3 Methods and material for containment and cleaning up**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **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**  
Do not breathe vapours.  
Do not breathe spray.  
Avoid contact with skin and eyes.  
The usual precautionary measures are to be adhered to 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:**  
Keep container tightly closed.  
Keep container in a well-ventilated, cool and dry place.  
Store only in the original receptacle.
- **Information about storage in one common storage facility:**  
Store away from oxidising agents.  
Do not store together with:

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- Explosive materials.
- Peroxides.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Storage class:** No information available.
- **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:**

###### **107-21-1 ethanediol**

WEL (Great Britain)	Short-term value: 104** mg/m <sup>3</sup> , 40** ppm Long-term value: 10* 52** mg/m <sup>3</sup> , 20** ppm Sk *particulate **vapour
AGW (Germany)	Long-term value: 26 mg/m <sup>3</sup> , 10 ppm 2(l);DFG, EU, H, Y, 11
IOELV (EU)	Short-term value: 104 mg/m <sup>3</sup> , 40 ppm Long-term value: 52 mg/m <sup>3</sup> , 20 ppm Skin

###### **7664-93-9 sulphuric acid**

WEL (Great Britain)	Long-term value: 0.05* mg/m <sup>3</sup> *mist: defined as thoracic fraction
MAK (Germany)	Long-term value: 0.1E 0.2* mg/m <sup>3</sup> *instantaneous value

###### **75-75-2 methanesulphonic acid**

AGW (Germany)	Long-term value: 0.7 mg/m <sup>3</sup> 1(l);AGS, Y, 11
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- **Additional information:** The lists valid during the making were used as basis.

#### · 8.2 Exposure controls

- **Appropriate engineering controls** No further data; see item 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**  
When using do not eat, drink or smoke.  
The usual precautionary measures are to be adhered to when handling chemicals.  
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:**

- Suitable respiratory protective device recommended.
- 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.

#### · **Hand protection**



Protective gloves

The glove material has to be impermeable and resistant to the product. Due to missing tests no recommendation to the glove material can be given for the product. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

#### · **Material of gloves:**

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.

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- **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.

- **Eye/face protection**



Tightly sealed goggles

- **Body protection:** Protective work clothing.

### SECTION 9: Physical and chemical properties

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

- **General Information**

· <b>Physical state</b>	Fluid
· <b>Colour:</b>	Colourless
· <b>Odour:</b>	Odourless
· <b>Melting point/freezing point:</b>	Undetermined.
· <b>Boiling point or initial boiling point and boiling range</b>	Undetermined.
· <b>Flammability</b>	Not applicable.
· <b>Lower and upper explosion limit</b>	
· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.
· <b>Flash point:</b>	Not applicable.
· <b>Decomposition temperature:</b>	Not determined.
· <b>pH at 20 °C</b>	Strongly sour
· <b>Viscosity:</b>	
· <b>Kinematic viscosity</b>	Not determined.
· <b>Dynamic:</b>	Not determined.
· <b>Solubility</b>	
· <b>water:</b>	Fully miscible.
· <b>Partition coefficient n-octanol/water (log value)</b>	Not determined.
· <b>Vapour pressure:</b>	Not determined.
· <b>Density and/or relative density</b>	
· <b>Density at 20 °C:</b>	1.17 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.

- **9.2 Other information**

· <b>Appearance:</b>	
· <b>Form:</b>	Fluid
· <b>Important information on protection of health and environment, and on safety.</b>	
· <b>Auto-ignition temperature:</b>	Product is not selfigniting.
· <b>Explosive properties:</b>	Product does not present an explosion hazard.
· <b>Solvent content:</b>	
· <b>VOC (EC):</b>	0.00 %
· <b>Change in condition:</b>	
· <b>Evaporation rate</b>	Not determined.

- **Information with regard to physical hazard classes**

· <b>Explosives</b>	Void.
· <b>Flammable gases</b>	Void.
· <b>Aerosols</b>	Void.

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· 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 data available.
- **10.2 Chemical stability** No decomposition if used according to specifications.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid**  
While diluting please pour in the water before the product.  
While diluting in water heating occurs always.  
Reacts with alkali and metals.
- **10.5 Incompatible materials**  
Metal.  
Water.  
Oxidizing agents, strong.
- **10.6 Hazardous decomposition products**  
Can be released in case of fire:  
Sulphur oxides (SO<sub>x</sub>).

### SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity:** Harmful if swallowed.

· **LD/LC50 values relevant for classification:**

**107-21-1 ethanediol**

Oral	LD50	>300-<2,000 mg/kg (Rat)
Dermal	LD50	9,530 mg/kg (Rabbit)

**7664-93-9 sulphuric acid**

Oral	LD50	2,410 mg/kg (Rat)
Inhalative	LC50/2 h	510 mg/l (Rat)

**75-75-2 methanesulphonic acid**

Oral	LD50	649 mg/kg (Rat)
Dermal	LD50	>1,000 mg/kg (Rabbit)

- **Skin corrosion/irritation** Causes severe skin burns and eye damage.
- **Serious eye damage/irritation** Causes serious eye damage.
- **STOT-repeated exposure**  
May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral.

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- **11.2 Information on other hazards**

- **Endocrine disrupting properties**

None of the ingredients is listed.

### SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:**

- **107-21-1 ethanediol**

EC50 &gt;10,000 mg/kg (Algae)

EC50/48 h 41,100 mg/l (Daphnia (Daphnia magna))

- **7664-93-9 sulphuric acid**

EC50/24 h 29 mg/l (Daphnia)

- **75-75-2 methanesulphonic acid**

EC50 70 mg/l (Daphnia) (OECD 202)

- **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:**

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.

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:**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **Waste disposal key:**

The waste disposal code as prescribed in the European Waste Catalogue (EWC) depends on the waste producer and can thus vary for a product. The waste disposal code should thus be obtained separately from the waste producer in each case.

- **Uncleaned packaging:**

- **Recommendation:** Disposal must be made according to official regulations.

### SECTION 14: Transport information

- **14.1 UN number or ID number**

- **ADR, IMDG, IATA**

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<ul style="list-style-type: none"> <li>· <b>14.2 UN proper shipping name</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul>	<p>3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (SULPHURIC ACID)</p> <p>CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (SULPHURIC ACID)</p>
<ul style="list-style-type: none"> <li>· <b>14.3 Transport hazard class(es)</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>	
	
<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	<p>8 Corrosive substances.</p> <p>8</p>
<ul style="list-style-type: none"> <li>· <b>14.4 Packing group</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>	<p>II</p>
<ul style="list-style-type: none"> <li>· <b>14.5 Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> </ul>	<p>No.</p>
<ul style="list-style-type: none"> <li>· <b>14.6 Special precautions for user</b></li> <li>· <b>Hazard identification number (Kemler code):</b></li> <li>· <b>EMS Number:</b></li> <li>· <b>Segregation groups</b></li> <li>· <b>Stowage Category</b></li> <li>· <b>Stowage Code</b></li> <li>· <b>Segregation Code</b></li> </ul>	<p>Warning: Corrosive substances.</p> <p>80</p> <p>F-A,S-B</p> <p>(SGG1) Acids</p> <p>B</p> <p>SW2 Clear of living quarters.</p> <p>SG36 Stow "separated from" SGG18-alkalis.</p> <p>SG49 Stow "separated from" SGG6-cyanides</p>
<ul style="list-style-type: none"> <li>· <b>14.7 Maritime transport in bulk according to IMO instruments</b></li> </ul>	<p>Not applicable.</p>
<ul style="list-style-type: none"> <li>· <b>Transport/Additional information:</b></li> </ul>	
<ul style="list-style-type: none"> <li>· <b>ADR</b></li> <li>· <b>Limited quantities (LQ):</b></li> <li>· <b>Excepted quantities (EQ):</b></li> <li>· <b>Transport category:</b></li> <li>· <b>Tunnel restriction code:</b></li> </ul>	<p>1L</p> <p>Code: E2</p> <p>Maximum net quantity per inner packaging: 30 ml</p> <p>Maximum net quantity per outer packaging: 500 ml</p> <p>2</p> <p>E</p>
<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> <li>· <b>Limited quantities (LQ):</b></li> <li>· <b>Excepted quantities (EQ):</b></li> </ul>	<p>1L</p> <p>Code: E2</p> <p>Maximum net quantity per inner packaging: 30 ml</p> <p>Maximum net quantity per outer packaging: 500 ml</p>
<ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>	<p>UN 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (SULPHURIC ACID), 8, II</p>

#### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.

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- **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 the state of knowledge and experience pertaining on the date of issue. The information is not to be taken as a guarantee of product properties and do not constitute the basis for a contractual legal relationship. The details must not be changed or transferred to other products. Duplication in an unchanged state is permissible.

- **Relevant phrases**

H290 May be corrosive to metals.  
H302 Harmful if swallowed.  
H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H335 May cause respiratory irritation.  
H373 May cause damage to organs through prolonged or repeated exposure.

- **Department issuing SDS:** Department of product security.

- **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)  
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  
Acute Tox. 4: Acute toxicity – Category 4  
Skin Corr. 1A: Skin corrosion/irritation – Category 1A  
Skin Corr. 1B: Skin corrosion/irritation – Category 1B  
Eye Dam. 1: Serious eye damage/eye irritation – Category 1  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

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