

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH), changed with 2015/830 / EC



## Elektrolyte Greinox 1000

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

Information on the product / trade name:  
**identified uses**

**Elektrolyte Greinox 1000**

for Surface treatment  
only for industrial use

REACH Registration Number:

A registration number for this substance is not available as the substance or its use is exempted from registration under Article 2 of REACH Regulation (EC) No 1907/2006, which does not require registration or is planned for a later date.

Information on the manufacturer / supplier:

**Kai Greising e. K. Clean Marker**  
**Industriestraße 29/2**  
**73340 Amstetten**  
**Germany**  
**phone: 0049-7331-3058-0**  
**fax: 0049-7331-981722**

Emergency phone number

**Poison emergency center Freiburg**  
**phone: 0049-761-19240**

---

### SECTION 2: Hazards identification:

#### 2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Corrosive to metals, Category 1, H290

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

Classification (67/548/EEC or 1999/45/EC). In accordance with EC directives or respective national laws, the product does not need to be classified nor labelled.

#### 2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word  
Warning

Hazard statements: H290 May be corrosive to metals.

#### Precautionary statements

##### **Precautionary statements - prevention**

P234 Keep only in original container.

##### **Precautionary statements - response**

P390 Absorb spillage to prevent material damage.

##### **Precautionary statements - storage**

P406 Store in corrosive resistant container with a resistant inner liner.

#### 2.3 Other hazards

During the electrochemical process, electrolyte vapors may form

---

### SECTION 3: Composition/information on ingredients

Chemical nature:

Aqueous solution

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH), changed with 2015/830 / EC



## Elektrolyte Greinox 1000

### 3.1 Substance

Not applicable

### 3.2 Mixture

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

Chemical Name (Concentration)

phosphoric acid (< 10 %)

CAS-No.

Registration number

Classification

7664-38-2

01-2119485924-24-XXXX

Corrosive to metals, Category 1, H290

Skin corrosion, Category 1B, H314

PBT/vPvB: Not applicable for inorganic substances

---

## **SECTION 4: First aid measures**

### 4.1 Description of first aid measures

After inhalation: fresh air.

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

After eye contact: rinse out with plenty of water.

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

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

irritant effects

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

No information available.

---

## **SECTION 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 vapors.

Fire may cause evolution of:

Oxides of phosphorus

### 5.3 Advice for firefighters

Special protective equipment for firefighters

In the event of fire, wear self-contained breathing apparatus.

Further information

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

---

## **SECTION 6: Accidental release measures**

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

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Evacuate the danger area, observe emergency procedures, consult an expert.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH), changed with 2015/830 / EC



## Elektrolyte Greinox 1000

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 neutralizing material. Dispose of properly. Clean up affected area.

### 6.4 Reference to other sections

Indications about waste treatment see section 13.

---

## **SECTION 7: Handling and storage**

### 7.1 Precautions for safe handling

Protective measures

Avoid contact with skin and eyes. Wear protective equipment (refer to Section 8 of this safety datasheet). Do not wear contact lenses when handling this product. It is also advisable to have individual pocket eyewash. Keep mist and spray levels to a minimum. Handling systems should preferably be closed. When handling bulks usual precautions should be paid to the risks outlined in the Council Directive 90/269/EEC.

Advice on general occupational hygiene

Avoid inhalation of mists and sprays, ingestion and contact with skin and eyes. General occupational hygiene measures are required to ensure safe handling of the substance. These measures involve good personal and housekeeping practices (i.e. regular cleaning with suitable cleaning devices), no drinking, eating and smoking at the workplace. Shower and change clothes at end of work shift. Do not wear contaminated clothing at home.

### 7.2 Conditions for safe storage, including any incompatibilities

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.

---

## **SECTION 8: Exposure controls/personal protection**

### 8.1 Control parameters

Components with workplace control parameters

Components

phosphoric acid (7664-38-2)

Basis	Value	Threshold limits	Remarks
ECLTV	Short Term	2 mg/m <sup>3</sup>	
	Exposure Limit (STEL):		
	Time Weighted Average (TWA):	1 mg/m <sup>3</sup>	
EH40 WEL	Short Term Exposure	2 mg/m <sup>3</sup>	
	Limit (STEL):		
	Time Weighted Average (TWA):	1 mg/m <sup>3</sup>	
	Derived No Effect Level (DNEL)		

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH), changed with 2015/830 / EC



## Elektrolyte Greinox 1000

phosphoric acid (7664-38-2)

Worker DNEL, acute Local effects inhalation 2 mg/m<sup>3</sup>

Worker DNEL, longterm Local effects inhalation 1 mg/m<sup>3</sup>

Consumer DNEL, Longterm Local effects inhalation 0.73 mg/m<sup>3</sup>

Recommended monitoring procedures

Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

Predicted No Effect Concentration (PNEC)

phosphoric acid (7664-38-2)

PNEC no data available

### 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 Use safety goggle with side protection

Hand protection

Full contact:

Glove material: Nitrile rubber  
Glove thickness: 0.11 mm  
Break through time: > 480 min

splash contact:

Glove material: Nitrile rubber  
Glove thickness: 0.11 mm  
Break through time: > 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374,

The breakthrough times stated above were determined 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.

Other protective equipment protective clothing

Respiratory protection

required when vapours/aerosols are generated.

Recommended Filter type: Filter P 1 (acc. to DIN 3181) for solid particles of inert substances

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.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH), changed with 2015/830 / EC



## Elektrolyte Greinox 1000

Environmental exposure controls  
Do not let product enter drains.

### **SECTION 9: Physical and chemical properties**

Form	liquid
Colour	red
Odour	odourless
Odour Threshold	Not applicable
pH	acidic
Melting point	No information available.
Boiling point	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapour pressure	No information available.
Relative vapour density	No information available.
Density	~ 1 g/cm <sup>3</sup>
Relative density	No information available.
Water solubility	soluble
Partition coefficient: n-octanol/water	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none

#### **9.2 Other data**

Corrosion May be corrosive to metals.

### **SECTION 10: Stability and reactivity**

#### **10.1 Reactivity**

corrosive to metals

#### **10.2 Chemical stability**

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

#### **10.3 Possibility of hazardous reactions**

Risk of ignition or formation of inflammable gases or vapors with:

Metals, metal alloys

Possible formation of:

Hydrogen

Violent reactions possible with:

bases, metallic oxides

#### **10.4 Conditions to avoid**

no information available

#### **10.5 Incompatible materials**

Aluminium, iron/iron-containing compounds, Mild steel

#### **10.6 Hazardous decomposition products**

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH), changed with 2015/830 / EC



## Elektrolyte Greinox 1000

in the event of fire: See section 5.

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

##### **Skin corrosion/irritation**

Shall not be classified as corrosive/irritant to skin.

##### **Serious eye damage/eye irritation**

Shall not be classified as seriously damaging to the eye or eye irritant.

##### **Respiratory or skin sensitisation**

Shall not be classified as a respiratory or skin sensitiser.

##### **Summary of evaluation of the CMR properties**

Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant

##### **• Specific target organ toxicity - single exposure**

Shall not be classified as a specific target organ toxicant (single exposure).

##### **• Specific target organ toxicity - repeated exposure**

Shall not be classified as a specific target organ toxicant (repeated exposure).

##### **Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

#### **Symptoms related to the physical, chemical and toxicological characteristics**

##### **• If swallowed**

data are not available

##### **• If in eyes**

causes slight to moderate irritation

##### **• If inhaled**

data are not available

##### **• If on skin**

causes slight to moderate irritation

#### 11.2 Further information

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

Handle in accordance with good industrial hygiene and safety practice.

Components

phosphoric acid

Acute dermal toxicity

LD50 Rabbit: 2,740 mg/kg

(IUCLID)

Skin irritation

Rabbit

Result: Causes burns.

(IUCLID)

Eye irritation

Rabbit

Result: Causes burns.



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH), changed with 2015/830 / EC



## Elektrolyte Greinox 1000

(IUCLID)

Sensitisation  
Patch test: human  
Result: negative  
(IUCLID)

Germ cell mutagenicity  
Genotoxicity in vitro  
Ames test  
Result: negative  
(IUCLID)

### **SECTION 12: Ecological information**

#### **12.1 Toxicity**

acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

#### **Aquatic toxicity (acute)**

#### **Aquatic toxicity (acute) of components of the mixture.**

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
orthophosphoric acid	7664-38-2	EC50	>100 mg/l	aquatic invertebrates	48 hours
orthophosphoric acid	7664-38-2	ErC50	>100 mg/l	algae	72 hours

#### **12.2 Process of degradability**

The substance is readily biodegradable.

#### **12.3 Bioaccumulative potential**

Data are not available.

#### **12.4 Mobility in soil**

Data are not available

#### **12.5 Results of PBT and vPvB assessment**

Data are not available.

#### **12.6 Other adverse effects**

Slightly hazardous to water. Substance(s) in the mixture do(es) not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII, or a PBT/vPvB assessment was not conducted.

#### **Additional ecological information**

Depending on the concentration, phosphorus compounds may contribute to the eutrophication of water supplies.

Discharge into the environment must be avoided.

#### **Components**

phosphoric acid

Toxicity to fish

LC50 *Gambusia affinis* (Mosquito fish): 138 mg/l; 96 h

(External MSDS)

Toxicity to bacteria

EC50 activated sludge: 270 mg/l

(IUCLID)

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH), changed with 2015/830 / EC



## Elektrolyte Greinox 1000

Biodegradability  
Does not cause biological oxygen deficit.

### **SECTION 13: Disposal considerations**

#### **13.1 Waste treatment methods**

This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

##### **Sewage disposal-relevant information**

Do not empty into drains.

##### **Waste treatment of containers/packaging**

It is a dangerous waste; only packaging which are approved (e.g. acc. to ADR) may be used.

#### **13.2 Relevant provisions relating to waste**

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

#### **13.3 Remarks**

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions

### **SECTION 14: Transport information**

<b>14.1</b> UN number	<b>1805</b>
<b>14.2</b> UN proper shipping name	<b>PHOSPHORIC ACID, SOLUTION</b>
Hazardous ingredients	Orthophosphoric acid
<b>14.3</b> Transport hazard class(es)	
Class	8 (corrosive substances)
<b>14.4</b> Packing group	III (substance presenting low danger)
<b>14.5</b> Environmental hazards	none (non-environmentally hazardous acc. to the dangerous goods regulations)

#### **14.6 Special precautions for user**

Provisions for dangerous goods (ADR) should be complied within the premises.

#### **14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code**

The cargo is not intended to be carried in bulk.

#### **14.8 Information for each of the UN Model Regulations**

##### **• Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)**

UN number	1805
Proper shipping name	PHOSPHORIC ACID, SOLUTION
Particulars in the transport document	UN1805, PHOSPHORIC ACID, SOLUTION, mixture, 8, III, (E)
Class	8
Classification code	C1
Packing group	III
Danger label(s)	8





# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH), changed with 2015/830 / EC



## Elektrolyte Greinox 1000

Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
Transport category (TC)	3
Tunnel restriction code (TRC)	E
Hazard identification No	80

### • Transport of dangerous goods by air transport ICAO-TI und IATA-DGR:

UN number	UN 1805
Proper shipping name	PHOSPHORIC ACID, SOLUTION
Particulars in the transport document	UN1805, PHOSPHORIC ACID, SOLUTION, mixture, 8, III, (E)
Class	8
Packing group	III
Danger label(s)	8



### • International Maritime Dangerous Goods Code (IMDG)

UN number	UN 1805
Proper shipping name	PHOSPHORIC ACID SOLUTION
Particulars in the shipper's declaration	UN1805, PHOSPHORIC ACID, SOLUTION, mixture, 8, III
Class	8
Packing group	III
Danger label(s)	8



Special provisions (SP)	223
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-A, S-B
Stowage category	A
Segregation group	1 - Acids

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code  
Not relevant

## SECTION 16: Other Information

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

#### Relevant provisions of the European Union (EU)

- **Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)**  
None of the ingredients are listed.
- **Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)**  
None of the ingredients are listed.
- **Regulation 850/2004/EC on persistent organic pollutants (POP)**  
None of the ingredients are listed.
- **Restrictions according to REACH, Annex XVII**

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH), changed with 2015/830 / EC



## Elektrolyte Greinox 1000

None of the ingredients are listed.

• **List of substances subject to authorization (REACH, Annex XIV)**

None of the ingredients are listed.

• **Limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products (2004/42/EC, Deco-Paint Directive)**

VOC content 0 %

• **Directive on industrial emissions (VOCs, 2010/75/EU)**

VOC content 0 %

**Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II**

None of the ingredients are listed.

**Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)**

None of the ingredients are listed.

**Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)**

None of the ingredients are listed.

### 15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

## SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
2000/39/EU	Commission Directive establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH), changed with 2015/830 / EC



## Elektrolyte Greinox 1000

EH40/2005	EH40/2005 Workplace exposure limits, Table 1: List of approved workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-">http://www.nationalarchives.gov.uk/doc/open-government-</a>
EmS	Emergency Schedule
GHS	"Globally Harmonized System of Classification and Labelling of
IMDG	International Maritime Dangerous Goods Code
index No	the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant)
Met. Corr.	corrosive to metals
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	corrosive to skin
Skin Irrit.	irritant to skin
VOC	Volatile Organic Compounds
vPvB	very Persistent and very Bioaccumulative

### Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)

### List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H290	may be corrosive to metals
H314	causes severe skin burns and eye damage

### Training advice

Provide adequate information, instruction and training for operators.

### Disclaimer

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. It does not represent a guarantee of any properties of the product