

**Electrolyte AE 3**

Article number 22.003

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Trade name: Electrolyte AE 3

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

General use: Electrolytic/electro-chem metal marking for chem. Nickel

**1.3 Details of the supplier of the safety data sheet**

Company name: Schilling Marking Systems GmbH

Street/POB-No.: In Grubenäcker 1

Postal Code, city: 78532 Tuttlingen

Germany

WWW: [www.schilling-marking.de](http://www.schilling-marking.de)E-mail: [info@schilling-marking.de](mailto:info@schilling-marking.de)

Telephone: +49 (0)7461 9472-0

Telefax: +49 (0)7461 9472-28

Dept. responsible for information:

Herr Andreas Schilling,

Telephone: +49 (0)7461 9472-0

Email: [info@schilling-marking.de](mailto:info@schilling-marking.de)**1.4 Emergency telephone number**

GIZ-Nord, Germany Telephone: +49 (0)551-19240

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to EC regulation 1272/2008 (CLP)**

Eye Dam. 1; H318 Causes serious eye damage.

**Classification according to Directive 67/548/EEC or 1999/45/EC**

This preparation is classified as not hazardous.

**2.2 Label elements****Labelling (CLP)**

Signal word:

**Danger**

Hazard statements:

H318 Causes serious eye damage.

Safety precautions:

P102 Keep out of reach of children.

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

P305+P351+P338

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

P310

Immediately call a POISON CENTER/doctor.

**Labelling (67/548/EEC or 1999/45/EC)**

R phrase(s):

not applicable

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S phrase(s): S 2 Keep out of the reach of children.  
S 24/25 Avoid contact with skin and eyes.

**Special labelling**

Text for labelling: Contains Lactic acid.

**2.3 Other hazards**

Electrolytic vapours may form during the electrochemical process.  
May be harmful if inhaled.  
A corrosive effect cannot be ruled out because of the pH value.

**SECTION 3: Composition / information on ingredients**

3.1 Substances: not applicable

**3.2 Mixtures**

Chemical characterization: Mixture of water/mineral salt and complexing agent

Hazardous ingredients:

Ingredient	Designation	Content	Classification
EINECS 201-196-2 CAS 79-33-4	Lactic acid	1 - 5 %	EU: Xi; R41. Xi; R38. CLP: Skin Irrit. 2; H315. Eye Dam. 1; H318.

**SECTION 4: First aid measures****4.1 Description of first aid measures**

In case of inhalation: Provide fresh air. In case of respiratory difficulties seek medical attention.  
In case of skin contact: Change contaminated clothing. Remove residues with water.  
In case of skin reactions, consult a physician.  
After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.  
After swallowing: Rinse mouth immediately and drink plenty of water. If you feel unwell, seek medical advice.  
Do not induce vomiting.  
Never give anything by mouth to an unconscious person.

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

After contact with skin: May cause irritations.  
After eye contact: Reddening, pain.

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

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

Suitable extinguishing media:

Product is non-combustible. Extinguishing materials should therefore be selected according to surroundings.

**5.2 Special hazards arising from the substance or mixture**

In the event of a fire, the following may be produced when the water evaporates: Carbon monoxide and carbon dioxide.

### 5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear self-contained breathing apparatus.

Additional information: Hazchem-Code: -

Do not allow fire water to penetrate into surface or ground water.

## SECTION 6: Accidental release measures

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

Provide adequate ventilation.  
Avoid contact with skin and eyes.  
Wear protective equipment.

### 6.2 Environmental precautions

Do not allow to penetrate into soil, waterbodies or drains.

### 6.3 Methods and material for containment and cleaning up

Soak up with absorbent materials such as sand, siliceous earth, acid- or universal binder.  
Store in special closed containers and dispose of according to ordinance. Final cleaning.

### 6.4 Reference to other sections

Refer additionally to chapter 8 and 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed.  
Avoid contact with skin and eyes. Do not breathe vapour/aerosol.  
Wear protective equipment.  
Do not mix with other chemicals.

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

Requirements for storerooms and containers:  
Keep container tightly closed and dry.  
Store at room temperature.

Storage class: 12 = Non-combustible liquids

### 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Additional information: Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

Provide good ventilation and/or an exhaust system in the work area.

### Personal protection equipment

#### Occupational exposure controls

Respiratory protection: If vapours form, use respiratory protection.  
Combination filter/Use filter type A-P2 according to EN 14387.

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Hand protection:	Protective gloves according to EN 374. Glove material: Nitrile rubber Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
Eye protection:	Tightly sealed goggles according to EN 166.
Body protection:	Wear suitable protective clothing.
General protection and hygiene measures:	Change contaminated clothing. Wash hands before breaks and after work. Avoid contact with skin and eyes. When using do not eat, drink or smoke. Work place should be equipped with a shower and an eye rinsing apparatus.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance:	Physical state: liquid Colour: colourless
Odour:	characteristic
Odour threshold:	no data available
pH value:	1.5 - 2.5
Melting point/freezing point:	no data available
Initial boiling point and boiling range:	no data available
Flash point/flash point range:	not combustible
Evaporation rate:	no data available
Flammability:	no data available
Explosive properties:	no data available
Explosion limits:	no data available
Vapour pressure:	no data available
Vapour density:	no data available
Density:	at 20 °C: 1.03 g/mL
Water solubility:	at 20 °C: completely miscible
Partition coefficient: n-octanol/water:	no data available
Auto-ignition temperature:	no data available
Thermal decomposition:	no data available
Viscosity, dynamic:	no data available
Explosive properties:	no data available
Oxidizing characteristics:	no data available

### 9.2 Other information

Additional information:	no data available
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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Refer to 10.3

### 10.2 Chemical stability

Product is stable under normal storage conditions.

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**10.3 Possibility of hazardous reactions**

No hazardous reaction when handled and stored according to provisions.

**10.4 Conditions to avoid**

Do not mix with other chemicals.

**10.5 Incompatible materials**

Strong acids and alkalis

**10.6 Hazardous decomposition products**

In the event of a fire, the following may be produced when the water evaporates: Carbon monoxide and carbon dioxide.

Thermal decomposition: no data available

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

Toxicological effects: Acute toxicity (oral): Lack of data.  
Acute toxicity (dermal): Lack of data.  
Acute toxicity (inhalative): Lack of data.  
Skin corrosion/irritation: Based on available data, the classification criteria are not met.  
Eye damage/irritation: Eye Dam. 1; H318 = Causes serious eye damage.  
Sensitisation to the respiratory tract: Lack of data.  
Skin sensitisation: Lack of data.  
Germ cell mutagenicity/Genotoxicity: Lack of data.  
Carcinogenicity: Lack of data.  
Reproductive toxicity: Lack of data.  
Effects on or via lactation: Lack of data.  
Specific target organ toxicity (single exposure): Lack of data.  
Specific target organ toxicity (repeated exposure): Lack of data.  
Aspiration hazard: Lack of data.

**Symptoms**

After contact with skin: May cause irritations.  
After eye contact: Reddening, pain.

**SECTION 12: Ecological information**

**12.1 Toxicity**

Further details: no data available

**12.2. Persistence and degradability**

Further details: no data available

**12.3 Bioaccumulative potential**

Partition coefficient: n-octanol/water:  
no data available

**12.4 Mobility in soil**

no data available

## 12.5 Results of PBT and vPvB assessment

no data available

## 12.6 Other adverse effects

General information: Do not allow to enter undiluted resp. in large quantities into surface water or into drains.

# SECTION 13: Disposal considerations

## 13.1 Waste treatment methods

### Product

Waste key number: 11 01 98\* = Wastes from chemical surface treatment and coating of metals and other materials (eg. galvanic processes, zinc coating processes, pickling processes, etching, phosphatising, alkaline degreasing, anodising)  
\* = Evidence for disposal must be provided.

Recommendation: Dispose of waste according to applicable legislation.

### Contaminated packaging

Waste key number: 15 01 02 = Plastic packaging

Recommendation: Dispose of waste according to applicable legislation.  
Non-contaminated packages may be recycled.

# SECTION 14: Transport information

## 14.1 UN number

ADR/RID, IMDG, IATA: not applicable

## 14.2 UN proper shipping name

ADR/RID, IMDG, IATA: Not restricted

## 14.3 Transport hazard class(es)

ADR/RID, IMDG, IATA: not applicable

## 14.4 Packing group

ADR/RID, IMDG, IATA: not applicable

## 14.5 Environmental hazards

Marine pollutant: No

## 14.6 Special precautions for user

No dangerous good in sense of these transport regulations.

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

no data available

# SECTION 15: Regulatory information

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

### National regulations - Great Britain

Hazchem-Code: -

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**National regulations - USA**

Hazard rating systems:



NFPA Hazard Rating:

Health: 2 (Moderate)

Fire: 0 (Minimal)

Reactivity: 0 (Minimal)

HMIS Version III Rating:

Health: 2 (Moderate)

Flammability: 0 (Minimal)

Physical Hazard: 0 (Minimal)

Personal Protection: X = Consult your supervisor

JT Baker Storage Color Code: Green (General Storage)

HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0
	X

**15.2 Chemical Safety Assessment**

For this mixture a chemical safety assessment is not required.

**SECTION 16: Other information****Further information**

Wording of the H-phrases under paragraph 2 and 3:

H315 = Causes skin irritation.

H318 = Causes serious eye damage.

Wording of the R-phrases under paragraph 2 and 3:

R 38 = Irritating to skin.

R 41 = Risk of serious damage to eyes.

Reason of change:

Changes in section 1: Article number

Changes in section 2: Text for labelling

Changes in section 4, 6, 7, 8, 13: General revision

Changes in section 15: National regulations USA

General revision

Date of first version:

20.06.2008

**Department issuing data sheet**

Contact person: see section 1: Dept. responsible for information

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.