

**Electrolyte AE 29**

Material number 22.029

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

Trade name: Electrolyte AE 29

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

General use Electrolytic marking technology

**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

E-mail: info@schilling-marking.de

Telephone: +49 (0)7461 9472-17

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Dept. responsible for information:

Herr Andreas Schilling,

Telephone: +49 (0)7461 9472-15, Email: info@schilling-marking.de

**1.4 Emergency telephone number****Beratungsstelle für Vergiftungserscheinungen, Berlin,****Telephone: +49 (0)30 19240****SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Directive 67/548/EEC or 1999/45/EC**

Xn; R22 Harmful if swallowed.

Sens.; R43 May cause sensitization by skin contact.

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

Xn

harmful

R phrase(s):	R 22	Harmful if swallowed.
	R 43	May cause sensitization by skin contact.
S phrase(s):	S 2	Keep out of the reach of children.
	S 13	Keep away from food, drink and animal feeding stuffs.
	S 24	Avoid contact with skin.
	S 37	Wear suitable gloves.
	S 46	If swallowed, seek medical advice immediately and show this container or label.
	S 64	If swallowed, rinse mouth with water (only if the person is conscious).

Text for labelling Contains Sodium nitrite.  
Contains Mixture of 5-chlorine-2-methyl-2H-isothiazol-3-on and  
2-methylen-2H-isothiazol-3-on (3:1): May produce an allergic reaction.

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**2.3 Other hazards**

Electrolytic vapours may form during the electrochemical process.

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

3.1 Substances: not applicable

**3.2 Mixtures**

Chemical characterization (preparation):

Aqueous solution of anorganic salts and organic compounds.

Hazardous ingredients:

Ingredient	Chemical name	Content	Classification
EINECS 200-661-7 CAS 67-63-0	Isopropyl alcohol	1-5 %	EU: F; R11. Xi; R36. R67. CLP: Flam. Liq. 2; H225. Eye Irrit. 2; H319. STOT SE 3; H336.
EINECS 231-555-9 CAS 7632-00-0	Sodium nitrite	1 %	EU: O; R8. T; R25. N; R50. CLP: Ox. Sol. 3; H272. Acute Tox. 3; H301. Aquatic Acute 1; H400.
EINECS - CAS 55965-84-9	Mixture of 5-Chloro- 2-methyl- 2H- isothiazolin- 3-one and 2-methyl- 2H- isothiazol- 3-one (3:1) [EC-No. 247-500- 7 + 220-239-6]	0,0015-0,06 %	EU: C; R34. Sens.; R43. N; R50-53. T; R23/24/25. CLP: Acute Tox. 3; H301. Acute Tox. 3; H311. Acute Tox. 3; H331. Skin Corr. 1B; H314. Skin Sens. 1; H317. Aquatic Acute 1; H400. Aquatic Chronic 1; H410.

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

- After inhalation: Provide fresh air. In case of respiratory difficulties seek medical attention.
- In case of skin contact: Change contaminated clothing.  
After contact with skin, wash immediately with soap and plenty of 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. In case of troubles or persistent symptoms, consult an ophthalmologist.
- After swallowing: Rinse mouth immediately and drink plenty of water.  
Induce vomiting when the affected person is not unconscious.  
Seek medical attention.

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

No data available

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

No special measures are required.

## 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: Chlorine decomposition products (in traces), sodium compounds, nitrogen oxides (NO<sub>x</sub>), 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

Avoid contact with the substance. Provide adequate ventilation.

### 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

not applicable

## 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 the substance. Do not breathe vapour/aerosol.  
Do not mix with other chemicals.

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

Requirements for storerooms and containers:

Keep container tightly closed.

Hints on joint storage

Keep away from food, drink and animal feeding stuffs.

Storage class:

12= Non-combustible liquids

### 7.3 Specific end use(s)

No data available

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### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

CAS No.	Chemical name	Type	Limit value
67-63-0	Isopropyl alcohol	Great Britain: WEL-TWA	999 mg/m <sup>3</sup> ; 400 ppm
		Great Britain: WEL-STEL	1250 mg/m <sup>3</sup> ; 500 ppm

#### 8.2 Exposure controls

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

#### Occupational exposure controls

- Respiratory protection: Respiratory protection must be worn whenever the WEL levels have been exceeded. Use filter type A (= against vapours of organic substances) according to EN 14387.
- Hand protection: Protective gloves according to EN 374.  
Glove material: Butyl caoutchouc (butyl rubber)-Breakthrough time: >480 min.  
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
- Eye protection: Tightly sealed goggles according to EN 166.
- General protection and hygiene measures:  
Change contaminated clothing.  
When using do not eat, drink or smoke.  
Wash hands before breaks and after work.

### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

- Physical state: liquid
- Colour: colourless
- Odour: characteristic
- Flash point / flash point range: not combustible
- Density: at 20 °C: 1,03 g/mL
- pH value: 6,5-7,5
- Water solubility: at 20 °C: fully miscible

#### 9.2 Other information

No data available

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

No data available

#### 10.2 Chemical stability

Product is stable under normal storage conditions.

#### 10.3 Possibility of hazardous reactions

No data available

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### 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: Chlorine decomposition products (in traces), sodium compounds, nitrogen oxides (NO<sub>x</sub>), carbon monoxide and carbon dioxide.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

After swallowing: harmful  
In case of skin contact: May cause sensitization by skin contact.  
After eye contact: May cause irritations.

#### General remarks

Information about Sodium nitrite:  
LD50, Rat oral: 85 mg/kg; LDLo human: 4 - 6 g. Toxic if swallowed.  
After resorption of toxic quantities: Nausea, vomiting, blood pressure drop, respiratory complaints, collapse, unconsciousness, narcosis, cyanosis (blue coloured blood), methaemoglobinaemia.

## SECTION 12: Ecological information

### 12.1 Toxicity

Aquatic toxicity: Information about Mixture of 5-chlorine-2-methyl-2H-isothiazol-3-on and 2-methylen-2H-isothiazol-3-on (3:1) (Biocide):  
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
Algae toxicity:  
EC50 *Pseudokirchneriella subcapitata*: 0,018 mg/L/72h.  
EC50 *Selenastrum capricornutum*: 0,025 mg/L/96h.  
Bacterial toxicity:  
EC50 *Pseudomonas putida*: 5,7 mg/L/16h.  
Daphnia toxicity:  
EC50 *Daphnia magna*: 0,12 mg/L/48 h.  
Fish toxicity:  
LC50 trout: 0,19 - 0,28 mg/L/96 h.  
Water Hazard Class: 1 = slightly hazardous to water

### 12.2. Persistence and degradability

Further details: No data available

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

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**12.5 Results of PBT and vPvB assessment**

No data available

**12.6 Other adverse effects**

General information: Do not allow to enter into ground-water, surface water or 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: Special waste. 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**

not applicable

**14.2 UN proper shipping name**

ADR/RID, IMDG, IATA: Not restricted

**14.3 Transport hazard class(es)**

not applicable

**14.4 Packing group**

not applicable

**14.5 Environmental hazards**

Marine pollutant - IMDG: 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 - Germany**

Storage class: 12= Non-combustible liquids

Water Hazard Class: 1 = slightly hazardous to water

Informations on working limitations:

Observe employment restrictions concerning young persons.

Observe employment restrictions for expectant or nursing mothers.

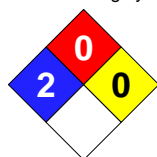
**National regulations - EC member states**

Volatile organic compounds (VOC):

approx. 1,8 % by weight

**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

HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0
	X

**15.2 Chemical Safety Assessment**

No data available

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

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

R 8 = Contact with combustible material may cause fire.

R 11 = Highly flammable.

R 22 = Harmful if swallowed.

R 23/24/25 = Toxic by inhalation, in contact with skin and if swallowed.

R 25 = Toxic if swallowed.

R 34 = Causes burns.

R 36 = Irritating to eyes.

R 43 = May cause sensitization by skin contact.

R 50 = Very toxic to aquatic organisms.

R 50/53 = Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 67 = Vapours may cause drowsiness and dizziness.

Reason of change: Changes in section 2: GHS

General revision

**Group that issues data sheet**

Contact person: see chapter 1, department responsible for information.

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.