

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

1.1 Product identifier

Trade name: Electrolyte AE 4

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

General use: Electrolytic/electro-chem metal marking for corrosive steels and Titanium (pH-neutral)

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 9472-0
Telefax: +49 (0)7461 9472-28
Dept. responsible for information:
Herr Andreas Schilling,
Telephone: +49 (0)7461 9472-0
Email: info@schilling-marking.de

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)

This mixture is classified as not hazardous.

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

This preparation is classified as not hazardous.

2.2 Label elements

Labelling (CLP)

Hazard statements: not applicable

Safety precautions: not applicable

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

R phrase(s): not applicable

S phrase(s): not applicable

2.3 Other hazards

Electrolytic vapours may form during the electrochemical process.
May be harmful if inhaled.

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SECTION 3: Composition / information on ingredients

3.1 Substances: not applicable

3.2 Mixtures

Chemical characterization: Aqueous solution of anorganic salts and organic compounds.

Hazardous ingredients:

Ingredient	Designation	Content	Classification
EINECS 229-347-8 CAS 6484-52-2	Ammonium nitrate	1 - 5 %	EU: O; R8. Xi; R36. CLP: Ox. Sol. 3; H272. Eye Irrit. 2; H319.
REACH 01-2119487950-27-xxxx EINECS 235-186-4 CAS 12125-02-9	Ammonium chloride	1 - 5 %	EU: Xn; R22. Xi; R36. CLP: Acute Tox. 4; H302. Eye Irrit. 2; H319.

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.
After contact with skin, wash immediately with 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.
If you feel unwell, seek medical advice.
Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

no data available

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 mixtureFires in the immediate vicinity may cause the development of dangerous vapours.
In case of fire may be liberated: Chlorine decomposition products, nitrogen oxides (NOx).**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.

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SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Avoid contact with the substance. Provide adequate ventilation. Do not breathe vapour/aerosol. Wear suitable protective clothing.

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. Do not allow to dry.

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 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:

Do not store together with strong acids or alkalis. Keep away from food and drink.

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**

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
12125-02-9	Ammonium chloride	Great Britain: WEL-STEL	20 mg/m ³ Smoke
		Great Britain: WEL-TWA	10 mg/m ³ Smoke
		Ireland: 15 minutes	20 mg/m ³
		Ireland: 8 hours	10 mg/m ³

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. Use filter type A-P3 according to EN 14387.

Hand protection:

Protective gloves according to EN 374. Glove material: Butyl caoutchouc (butyl rubber) Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

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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.
Do not breathe vapour/aerosol. Avoid contact with skin and eyes.
When using do not eat, drink or smoke.

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: 5.5 - 6.5

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

SECTION 10: Stability and reactivity**10.1 Reactivity**

Refer to 10.3

10.2 Chemical stability

Product is stable under normal storage conditions.

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.

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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, nitrogen oxides (NOx).

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: Lack of data.
- Eye damage/irritation: Lack of data.
- 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 eye contact: May cause irritations.

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 potentialPartition 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 into ground-water, surface water or drains.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number: 11 01 99 = 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)

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.
Handle contaminated packages in the same way as the substance itself.
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: 1 (Slight)

Fire: 0 (Minimal)

Reactivity: 0 (Minimal)

HMIS Version III Rating:

Health: 1 (Slight)

Flammability: 0 (Minimal)

Physical Hazard: 0 (Minimal)

Personal Protection: X = Consult your supervisor

JT Baker Storage Color Code: Green (General Storage)

HEALTH	1
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:

H272 = May intensify fire; oxidiser.

H302 = Harmful if swallowed.

H319 = Causes serious eye irritation.

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

R 8 = Contact with combustible material may cause fire.

R 22 = Harmful if swallowed.

R 36 = Irritating to eyes.

Reason of change:

Changes in section 1: Intended use

Changes in section 2: GHS classification, labelling

Changes in section 3: Change of composition

General revision

Date of first version:

19.06.2008

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.