

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

1.1 Product identifier

Trade name: Elektrolyt AE 20

UFI: VQ00-7098-E00Q-4X2W

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

General use: Electrolytic/electrochemical 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.deE-mail: info@schilling-marking.de

Telephone: +49 (0)7461 9472-0

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Department responsible for information:

Frau Bianca Schilling,

Telephone: +49 (0)7461 9472-0

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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)

Skin Irrit. 2; H315 Causes skin irritation.

Eye Dam. 1; H318 Causes serious eye damage.

2.2 Label elements

Labelling (CLP)



Signal word:

Danger

Hazard statements:

H315

Causes skin irritation.

H318

Causes serious eye damage.

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according to Regulation (EC) No 1907/2006 (REACH) and Regulation (EU)
2020/878

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Precautionary statements:

- P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P264 Wash hands and face thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye 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.

Special labelling

Text for labelling: Contains Sodium etasulfate, 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.
Special danger of slipping by leaking/spilling product.

Endocrine disrupting properties, Results of PBT and vPvB assessment:

No data available

SECTION 3: Composition/information on ingredients

3.1 Substances: not applicable

3.2 Mixtures

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

Hazardous ingredients:

Identifiers	Designation Classification	Content
EC No. 204-812-8 CAS 126-92-1	Sodium etasulfate Skin Irrit. 2; H315. Eye Dam. 1; H318. Specific concentration limits (SCL): Eye Dam. 1; H318: $C \geq 20 \%$ / Eye Irrit. 2; H319: $10 \% \leq C < 20 \%$	< 5 %
EC No. 201-196-2 CAS 79-33-4	Lactic acid Skin Corr. 1C; H314. Eye Dam. 1; H318. (EUH071).	< 5 %

Full text of H- and EUH-statements: see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: First aider: Pay attention to self-protection!
If medical advice is needed, have product container or label at hand.
Take off immediately all contaminated clothing and wash it before reuse.

In case of inhalation: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek medical attention if problems persist.

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- Following skin contact: Immediately clean with water and soap followed by thorough rinsing. 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. Remove contact lenses, if present and easy to do. Continue rinsing. Seek the attention of an ophthalmologist immediately.
- After swallowing: Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Do not induce vomiting. Immediately get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

- Causes serious eye damage.
- Causes skin irritation.

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.

Extinguishing media which must not be used for safety reasons:

- Full water jet

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: sodium compounds, Carbon monoxide and carbon dioxide.

5.3 Advice for firefighters

Special protective equipment for firefighters:

- Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information:

- Use fine water spray to cool endangered containers.
- Do not allow water used to extinguish fire to enter drains, ground or waterways.
- Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

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

- Do not breathe mist/vapours/spray. Avoid contact with the substance.
- If possible, eliminate leakage. Provide adequate ventilation.
- Wear appropriate protective equipment. Take off immediately all contaminated clothing and wash it before reuse. Keep unprotected people away.

6.2 Environmental precautions

- Do not allow to enter into ground-water, surface water or drains.
- If necessary, notify appropriate authorities.

6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents) and place in closed containers for disposal.
Never return spills in original containers for re-use.

Additional information: Special danger of slipping by leaking/spilling product.

6.4 Reference to other sections

Refer additionally to section 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. Do not breathe mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wear appropriate protective equipment.
Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Take off immediately all contaminated clothing and wash it before reuse.
Work place should be equipped with a shower and an eye rinsing apparatus.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Keep container tightly closed and in a well-ventilated place.
Keep container dry. Keep only in the original container.
Protect from heat and direct sunlight.
Store containers in upright position.
Store at room temperature.

Hints on joint storage: Keep away from food, drink and animal feedingstuffs.
Do not store together with: Strong acids and alkalis.
Do not mix with other chemicals.

Storage class: 12 = Non-combustible liquids that cannot be assigned to any of the above storage classes

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 for good ventilation or exhaust system or work with completely self-contained equipment.

Personal protection equipment

Occupational exposure controls

- Respiratory protection: In case of inadequate ventilation wear respiratory protection. If vapours form, use respiratory protection.
The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product.
Recommendation Combination filter/Use filter type A-P2 according to EN 14387.
- Hand protection: Protective gloves according to DIN EN ISO 374-1.
Glove material: Nitrile rubber
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
- Eye protection: Tightly sealed goggles according to DIN EN ISO 16321-1.
- Body protection: Wear suitable protective clothing.
- General protection and hygiene measures:
Do not breathe mist/vapours/spray. Do not get in eyes, on skin, or on clothing.
Take off immediately all contaminated clothing and wash it before reuse.
Do not eat, drink or smoke when using this product.
Wash hands thoroughly after handling.
Work place should be equipped with a shower and an eye rinsing apparatus.

Environmental exposure controls

- Do not allow to enter into ground-water, surface water or drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state at 20 °C and 101.3 kPa	liquid
Colour:	Colourless
Odour:	Characteristic
Odour threshold:	("analog Elektrolyt AE3, 31.01.2018 KM")
Melting point/freezing point:	No data available
Boiling point:	No data available
Flammability:	No data available
Lower and upper explosion limit:	No data available
Flash point:	Not combustible
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH:	1,2 - 2,0
Kinematic viscosity:	No data available
Water solubility:	at 20 °C: Completely miscible
Partition coefficient n-octanol/water (log value):	No data available
Vapour pressure:	No data available
Density:	No data available
Relative vapour density:	No data available
Particle characteristics:	Not applicable

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9.2 Other information

Explosive properties: No data available
Oxidizing characteristics: No data available
Auto-ignition temperature: No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Refer to subsection "Possibility of hazardous reactions".

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4 Conditions to avoid

Keep away from heat sources, sparks and open flames.
Protect from direct sunlight.

10.5 Incompatible materials

Strong acids and alkalis.

10.6 Hazardous decomposition products

No hazardous decomposition products when regulations for storage and handling are observed.

Thermal decomposition: No data available

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicological effects:

- Acute toxicity (oral): Lack of data.
- Acute toxicity (dermal): Lack of data.
- Acute toxicity (inhalative): Lack of data.
- Skin corrosion/irritation: Skin Irrit. 2; H315 = Causes skin irritation.
- Serious 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.

11.2 Information on other hazards

Endocrine disrupting properties:

No data available

Symptoms

In case of inhalation: Electrolytic vapours may form during the electrochemical process.
May be harmful if inhaled.
After contact with skin: A corrosive effect cannot be ruled out because of the pH value.
After eye contact: Upon direct contact with eyes may cause burning, tearing, redness.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: Harmful effects by modification of pH-value.

Water Hazard Class: 1 = slightly hazardous to water (Self-classification (mixture; calculation rule).)

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 Endocrine disrupting properties

No data available

12.7 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* = other wastes containing hazardous substances
* = Evidence for disposal must be provided.

Recommendation: Dispose of waste according to applicable legislation.
Do not dispose of with household waste.

Package

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.

Section 14. Transport information

14.1 UN number or ID number

ADR/RID, ADN, IMDG, IATA-DGR:
not applicable

14.2 UN proper shipping name

ADR/RID, ADN, IMDG, IATA-DGR:
Not restricted

14.3 Transport hazard class(es)

ADR/RID, ADN, IMDG, IATA-DGR:
not applicable

14.4 Packing group

ADR/RID, ADN, IMDG, IATA-DGR:
not applicable

14.5 Environmental hazards

Dangerous for the environment:
Substance/mixture is not environmentally
hazardous according to the criteria of the UN
model regulations.

Marine pollutant - IMDG: no

14.6 Special precautions for user

No dangerous good in sense of these transport regulations.

14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations - Germany**

Storage class: 12 = Non-combustible liquids that cannot be assigned to any of the above storage classes

Water Hazard Class: 1 = slightly hazardous to water (Self-classification (mixture; calculation rule).)

Technical guidance air: 5.2.2

Information on working limitations:

Observe employment restrictions for young people.

Further regulations, limitations and legal requirements:

No data available

National regulations - EC member states**Labelling of packaging with <= 125mL content**Signal word: **Danger**

Hazard statements: H318 Causes serious eye damage.

Precautionary statements:

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P280 Wear protective gloves/protective clothing/eye 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.

Further regulations, limitations and legal requirements:

Use restriction according to REACH annex XVII, no.: 3, 75

15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment is not required.

SECTION 16: Other informationClassification procedure: Physical hazards: on basis of test data
Health hazards, environmental hazards: calculation method

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

H314 = Causes severe skin burns and eye damage.

H315 = Causes skin irritation.

H318 = Causes serious eye damage.

EUH071 = Corrosive to the respiratory tract.

Reason of change: General revision

Date of first version: 31.1.2018

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Department issuing data sheet:

see section 1: Department responsible for information

Abbreviations and acronyms:

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
AS/NZS: Australian Standards/New Zealand Standards
CAS: Chemical Abstracts Service
CFR: Code of Federal Regulations
CLP: Classification, Labelling and Packaging
DMEL: Derived minimal effect level
DNEL: Derived no-effect level
EC: European Community
EmS: Emergency Response Procedures for Ships Carrying Dangerous Goods
EN: European Standard
EQ: Excepted quantities
EU: European Union
Eye Dam.: Eye damage
Eye Irrit.: Eye irritation
IATA: International Air Transport Association
IATA-DGR: International Air Transport Association – Dangerous Goods Regulations
IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IMDG Code: International Maritime Dangerous Goods Code
IMO: International Maritime Organization
MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
OSHA: Occupational Safety and Health Administration
PBT: Persistent, bioaccumulative and toxic
PNEC: Predicted no-effect concentration
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
Skin Corr.: Skin corrosion
Skin Irrit.: Skin irritation
TRGS: Technical Rules for Hazardous Substances
vPvB: Very persistent and very bioaccumulative

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.