

EU SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH)

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Electrolyte AE 30

Material number 22.030

1. Product and Company Information

Identification of the substance or preparation

Name of product: Electrolyte AE 30

Use of the substance / preparation

Electrolytic marking / Application for black oxide steels, Copper Nickel, Nickel & alloys, Nickel plate (Steel & Alu), Lead & alloys, Discaloy, Inconel 718 & 750

Company / undertaking identification

Company name: SCHILLING Marking Systems GmbH

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Dept. responsible for information:

Herr Andreas Schilling,

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Emergency telephone

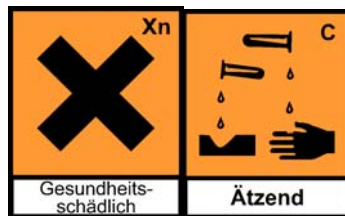
**Advisory office for poisoning phenomena, Berlin,
Beratungsstelle für Vergiftungserscheinungen, Berlin,
Telephone: +49 (0)30 19240**

US and Canada Chemtrec Phone Number: +1 (800) 424-9300

2. Hazards identification

Classification

Product is classified and labelled in accordance with Directive 1999/45/EC as amended.



R 22 Harmful if swallowed.

R 34 Causes burns.

Critical hazard to man and environment:

Cleaning work: Product may release corrosive gases/vapours.

3. Composition / information on ingredients

Chemical characterization (preparation)

A mixture of water, mineral acids and complexing agent

Dangerous ingredients:

INDEX	CAS-No.	EINECS	Chemical name	Content %	Classification
009-009-00-4	1341-49-7	215-676-4	Ammonium bifluoride	1-5	T-C; R 25-34
017-014-00-8	12125-02-9	235-186-4	Ammonium chloride	5-10	Xn; R 22-36

Additional information: Labelling for contents according to regulation (EC) No 648/2004, annex 7:
Contains anionic tenside < 5%.

4. First aid measures

General information: Remove contaminated clothing.
Following inhalation: Remove person to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. If irritation develops and persists, seek medical attention.
After skin contact: Immediately clean with water and soap. Remove contaminated clothing. Launder clothing before reuse. 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 and drink large quantities of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head lower than hips to prevent aspiration. Immediately get medical attention.
Information to physician: Institute basic life support measures. Product is an acid with a pH of 2.0-3.5. Systemic symptoms from acute overexposure to this product are likely related to this property. Check and maintain patient acid-base and electrolyte balance.

5. Fire Fighting Measures

Suitable extinguishing media: Product is non-combustible. Extinguishing materials should therefore be selected according to surroundings.
Special exposure hazards arising from the preparation itself, combustion products, resulting gases: On heating or in case of fire toxic gases may form. In the event of a fire, the following may be produced when the water evaporates: Ammoniac, hydrogen chloride gas, oxides of nitrogen (NOx), hydrofluoric acid.
Special protective equipment for fire-fighters: Wear a self-contained breathing apparatus and chemical resistant suit.
Additional information: Do not allow fire water to penetrate into surface or ground water.

6. Accidental release measures

Personal precautions: Provide good ventilation. Do not breathe vapour or spray. Avoid contact with the substance. Wear suitable protective clothing.
Environmental precautions: Do not allow to penetrate into soil, waterbodies or drains.
Methods for cleaning up: Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents) and place in closed containers for disposal. Use soda or another alkaline detergent for removal of residues. Larger spills may be neutralised with dilute alkaline solutions of soda ash (Sodium Carbonate) or lime (Calcium oxide).

7. Handling and storage

Handling

Information for safe handling:
Provide adequate ventilation, and local exhaust as needed.

Do not breathe vapour or spray. Avoid contact with skin and eyes.

Storage

Requirements for storerooms and containers:

Store containers tightly closed in a cool, dry, well ventilated area at temperatures not below 0°C. Protect from frost.

Storage class: 8B

8. Exposure controls / Personal protection equipment

Exposure limit values

CAS-No.	Chemical name	Type	Value
1341-49-7	Ammonium bifluoride	Germany MAK/TRGS 900 EU-directive 2000/39/EG	1 mg/m ³ with reference to the inhalable fraction 8 hours limit value: 2,5 mg/m ³
12125-02-9	Ammonium chloride	Germany	Mass concentration: TA Luft: 20 mg/m ³

Exposure controls

Provide good ventilation and/or an exhaust system in the work area.
See also information in chapter 7, section storage.

Occupational exposure controls

Respiratory protection: Respiratory protection must be worn whenever the TRGS and German levels have been exceeded. Respirators and components require approval according to standards and regulations of **CEN (EC)** or **NIOSH/MSHA (US)**.

Combination filter B-P2 according to EN 141.

Hand protection: Protective gloves according to EN 374.

Glove material: Nitrile rubber - Layer thickness: ≥ 0.35 mm

Possible alternatives: Natural rubber (Caoutchouc), butyl rubber, fluorrubber.

Breakthrough time: > 480 min.

Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed safety glasses according to EN 166.

Skin protection: Wear suitable protective clothing.

General protection and hygiene measures: Avoid contact with eyes. Avoid prolonged or repeated contact with skin.

Remove contaminated clothing. Do not breathe vapour or spray.

Wash hands before breaks and at the end of work.

Have eye wash bottle or eye rinse ready at work place.

9. Physical and Chemical Properties

Appearance

Physical state: liquid
Colour: clear
Odour: characteristic

Important health, safety and environmental information

Boiling temperature / boiling range: approx. 100°C (212°F)
Melting point / melting range: approx. 0°C (32°F)
Flash point / flash point range: not combustible
pH value: at 20°C: 2.0 – 3.5
Solubility in water: at 20°C: infinitely soluble

10. Stability and reactivity

Conditions to avoid: Protect from excessive heat.

Materials to avoid: Strong bases, alkalis, reducing agents, combustibles and oxidizing agents and compounds.

Hazardous decomposition products: On heating or in case of fire toxic gases may form. Can be released in case of fire: acidic vapours like ammoniac, hydrogen chloride, oxides of nitrogen (NO_x), hydrofluoric acid.

Polymerization: Will not occur.

Additional information: Product is stable under normal storage conditions.

11. Toxicological Information

Toxicological Tests:

Following inhalation: Irritant.

After swallowing: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.
Risk of foam aspiration when vomiting.

After skin contact: Irritant.

After eye contact: Irritant. Risk of serious damage to eyes.

General remarks

The following applies to Ammonium chloride in general:
LD50 Oral - rat - 1.650 mg/kg.

The following applies to Ammonium bifluoride in general:
No data available.

12. Ecological Information

Ecotoxicity

Aquatic toxicity: Harmful effects on water organisms by modification of pH-value.
Information about Ammonium chloride:
Forms corrosive mixtures with water even if diluted.
Fish toxicity: LC50 - Cyprinus carpio (carp) - 209,00 mg/l - 96 h
LC50 - Oncorhynchus mykiss (rainbow trout) - 3,98 mg/l - 96 h
NOEC - Oncorhynchus mykiss (rainbow trout) - 57 mg/l - 96 h
Information about Ammonium bifluoride:
No data available.

Water Hazard Class: 1 = mild water pollutant

Further details: The surfactant contained in this preparation complies with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents.

Additional ecological information

AOX reference: Product does not contain organically bound halogen (AOX).

General information: Do not allow to enter ground water, sewage or drains.

13. Disposal Considerations

Product

Waste key number 110106* = acids not otherwise specified
* = Evidence for disposal must be provided.

Recommendation: Waste disposal according to official state regulations.

Contaminated packaging

Waste key number 150102 = plastic packaging

Recommendation: Waste disposal according to official state regulations.
Handle contaminated packaging in the same way as the substance itself.

14. Transport Information

Overland transport (ADR/RID)

Warning board: ADR/RID: Kemmler-number 80, UN number 3264
Product designation: UN 3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
contains Ammonium bifluoride
Class 8

ADR/RID Class 8
Packaging group III
Label 8
Special provisions 274
Limited quantities LQ19
EQ E1
Contaminated packaging: Instructions P001 IBC03 LP01 R001
Special provisions for packing together MP19
Portable Tanks: Instructions T7
Portable Tanks: Special provisions TP1 TP28
Tank coding L4BN
Tunnel restriction code: E



Transport by sea (IMDG)

UN number: 3264
Proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
contains Ammonium bifluoride
Class 8, Code -,•

IMDG: III
Packing Group: III
EmS: F-A, S-B
Special provisions 223, 274, 944
Limited quantities 4 L
Contaminated packaging: Instructions P001, LP01
Contaminated packaging: Provisions -
IBC: Instructions IBC03
IBC: Provisions -
Tank instructions: IMO -
Tank instructions: UN T7
Tank instructions Provisions TP1, TP28
Stowage and segregation Category A. Clear of living quarters.
Properties and observations Causes burns to skin, eyes and mucous membranes.

Air transport (IATA)

UN/ID number: 3264
Proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
contains Ammonium bifluoride
Class 8
Corrosive

ICAO/IATA: III
Hazard Corrosive
PG III
EQ E1
Passenger Ltd.Qty.: Y818 - Maximum quantity: 1 L
Passenger: 818 - Maximum quantity: 4 L
Cargo: 820 - Maximum quantity: 60 L
Special Provisioning A3
ERG 8L

15. Regulatory Information

Classification

Code letter and hazard symbol:

