

EU SAFETY DATA SHEET

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

Date of print: 20.03.2008

Revision date: 17.03.2008

Date of first version: 17.03.2008

Electrolyte E-T

Material number E-T

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1. Identification of the substance/preparation and of the company/undertaking

Identification of the substance or preparation

Name of product: Electrolyte E-T

Use of the substance / preparation

electrolytic/electrochemical metal inscription

Company / undertaking identification

Company name: Bymat GmbH

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Emergency telephone Telephone: +49 (0)2165-8728-0

2. Hazards identification

Classification

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



Irritant

R 43

May cause sensitization by skin contact.

Critical hazard to man and environment:

Vapours of electrolytes may form during signature processes under direct current voltage.

3. Composition/information on ingredients

Chemical characterization (preparation)

Aqueous solution of anorganic salts and organic compounds.

Dangerous ingredients:

CAS-No.	EINECS / ELINCS	Chemical name	Content	Classification
6484-52-2	229-347-8	Ammonium nitrate	1-5 %	O; R 8, 9
12125-02-9	235-186-4	Ammonium chloride	1-5 %	Xn; R 22, 36
55965-84-9	-	Mixture of 5-chlorine-2-methyl-2H-isothiazol-3-on and 2-methylen-isothiazol-3-on (3:1)	0,0015-0,06 %	T, N; R 23/24/25, 34, 43, 50/53

4. First aid measures

Following inhalation: Provide fresh air. In case of respiratory difficulties seek medical attention.

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- After 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 large quantities of water.
If you feel unwell, seek medical advice.

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:

Fires in the immediate vicinity may cause the development of dangerous vapours.

Can be released in case of fire: Chlorine decomposition products, nitrogen oxides (NOx).

Special protective equipment for fire-fighters:

Wear self-contained breathing apparatus.

Additional information:

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

6. Accidental release measures

Personal precautions: Avoid contact with the substance. Provide adequate ventilation.

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

Methods for 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.

7. Handling and storage

Handling

Information for safe handling:

Provide adequate ventilation, and local exhaust as needed.

Avoid contact with the substance. Do not breathe vapour or spray.

Do not mix with other chemicals.

Storage

Requirements for storerooms and containers:

Keep container tightly closed.

Storage class:

12

8. Exposure controls / Personal protection equipment

Exposure limit values

CAS-No.	chemical name	type	value
12125-02-9	Ammonium chloride	WEL-TWA	(fume) 10 mg/m ³
		WEL-STEL	(fume) 20 mg/m ³
55965-84-9	Mixture of 5-chlorine-2-methyl-2H-isothiazol-3-on and 2-methylen-isothiazol-3-on (3:1)	WEL (= German AGW)	0,05 mg/m ³

Exposure controls

See information in chapter 7, section storage.

Occupational exposure controls

Respiratory protection: If vapours form, use respiratory protection. Combination filter according to EN 141.

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Hand protection: Protective gloves according to EN 374.
Glove material: Butyl rubber - Breakthrough time: >480 min.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

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

General protection and hygiene measures:
Change contaminated clothing.
Wash hands before breaks and at the end of work.

9. Physical and chemical properties

Appearance

Physical state: liquid
Colour: colourless
Odour: characteristic

Important health, safety and environmental information

Flash point / flash point range: not combustible
Density: at 20 °C: 1,03 g/ml
pH value: 5,5-6,5
Solubility in water: at 20 °C: fully miscible

10. Stability and reactivity

Conditions to avoid: Do not mix with other chemicals.

Materials to avoid: strong acids and alkalis

Hazardous decomposition products:
Can be released in case of fire: Chlorine decomposition products, nitrogen oxides (NO_x).

Additional information: Product is stable under normal conditions.

11. Toxicological information

Toxicological Tests:

After skin contact: May cause sensitization by skin contact.

After eye contact: May cause irritations.

12. Ecological information

Ecotoxicity

Aquatotoxicity: Information about Mixture of 5-chlorine-2-methyl-2H-isothiazol-3-on and 2-methylen-isothiazol-3-on (3:1) (Biocide):
Daphnia toxicity: EC50 Daphnia magna: 0,16 mg/l/48 h.
Fish toxicity: LC50 trout: 0,19 - 0,28 mg/l/96 h.
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Water Hazard Class: 1 = mild water pollutant

Additional ecological information

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

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13. Disposal considerations

Product

Waste key number 110198* = 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. 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.
Cleaned containers may be recycled.

14. Transport information

Overland transport (ADR/RID)

Product designation: Not restricted

Transport by sea (IMDG)

Proper shipping name: Not restricted

Air transport (IATA)

Proper shipping name: Not restricted

Additional information

Not a hazardous material with respect to transportation regulations.

15. Regulatory information

Classification

Code letter and hazard symbol:

Xi Irritant

R phrase(s): R 43 May cause sensitization by skin contact.

S phrase(s): S 2 Keep out of the reach of children.

S 24 Avoid contact with skin.

S 37 Wear suitable gloves.

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

National regulations

National regulations - Germany

Storage class: 12

Water Hazard Class: 1 = mild water pollutant

Informations on working limitations:

Observe employment restrictions concerning young persons.

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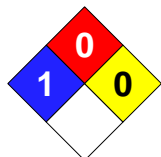
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National regulations - USA

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

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
	X

16. Other information

Further remarks

R phrase(s):

R 8 = Contact with combustible material may cause fire.

R 9 = Explosive when mixed with combustible material.

R 22 = Harmful if swallowed.

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

R 34 = Causes burns.

R 36 = Irritating to eyes.

R 43 = May cause sensitization by skin contact.

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

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.