

SAFETY DATA SHEETaccording to Regulation (EC) No. 1907/2006 (REACH) and
Regulation (EU) No 2015/830

Revision date: 2/7/2015

Version: 6

Language: en-GB,IE

Date of print: 14/10/2015

Electrolyte EC-S

Article number 2101 EC-S, 2105 EC-S, 2111 EC-S, 2115 EC-S

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

Trade name: Electrolyte EC-S

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

General use: Electrolytic/electro-chem metal marking for steels and chrome-plated parts (pH-neutral)

1.3 Details of the supplier of the safety data sheet

Company name: Bymat GmbH
Street/POB-No.: Neusser Straße 106
Postal Code, city: 41363 Jüchen
Germany
WWW: www.bymat.de
E-mail: info@bymat.de
Telephone: +49 (0)21 65 / 87 28 0
Telefax: +49 (0)21 65 /87 28 28
Dept. responsible for information:
Herr Björn Byhahn,
Telephone: +49 (0) 21 65 / 87 28 0
Email: info@bymat.de

1.4 Emergency telephone number

Bymat GmbH, Björn Byhahn, Telephone: +49 (0)21 65 / 87 28 0

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****Classification according to EC regulation 1272/2008 (CLP)**

Eye Irrit. 2; H319 Causes serious eye irritation.

2.2 Label elements**Labelling (CLP)**Signal word: **Warning**

Hazard statements: H319 Causes serious eye irritation.

Precautionary statements: 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.

P337+P313 If eye irritation persists: Get medical advice/attention.

2.3 Other hazards

Electrolytic vapours may form during the electrochemical process.

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SECTION 3: Composition / information on ingredients

3.1 Substances: not applicable

3.2 Mixtures

Chemical characterisation: mixture of water/mineral salt and complexing agent, nitrite-free

Hazardous ingredients:

| Ingredient | Designation | Content | Classification |
|--|-------------------------|---------|--|
| EC No. 229-347-8 CAS 6484-52-2 | Ammonium nitrate | < 10 % | Ox. Sol. 3; H272. Eye Irrit. 2; H319. |
| REACH 01-2119457026-42-xxxx EC No. 201-069-1 CAS 5949-29-1 | Citric acid monohydrate | < 10 % | Eye Irrit. 2; H319. |
| EC No. 200-661-7 CAS 67-63-0 | Isopropyl alcohol | < 10 % | Flam. Liq. 2; H225. Eye Irrit. 2; H319. STOT SE 3; H336. |

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

SECTION 4: First aid measures

4.1 Description of first aid measures

In case of inhalation: Provide fresh air. Seek medical attention if irritation persists.
In case of irregular breathing or respiratory arrest provide artificial respiration.

Following skin contact: After contact with skin, wash immediately with soap and plenty of water.
Remove contaminated clothing immediately and dispose of safely. Consult a doctor if skin irritation persists.

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: Do NOT induce vomiting. Rinse mouth and drink large quantities of water.
Never give anything by mouth to an unconscious person.
Consult doctor afterwards.

4.2 Most important symptoms and effects, both acute and delayed

After eye contact: Reddening, pain.

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 mixture

Fires in the immediate vicinity may cause the development of dangerous vapours.
In case of fire may be liberated: Nitrogen oxides (NOx), carbon monoxide and carbon dioxide.

5.3 Advice for firefighters

Special protective equipment for firefighters: Wear self-contained breathing apparatus and protective clothing to protect skin and eyes.

Additional information: Hazchem-Code: -

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes.
Wear suitable protective clothing. Do not breathe vapours. 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

Take up mechanically, placing in appropriate containers for disposal.
Thoroughly clean surrounding area.

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: Handle and open container with care.
Provide adequate ventilation, and local exhaust as needed.
Do not breathe vapour/aerosol. Wear protective equipment.
Avoid contact with skin and eyes.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers: Keep container tightly closed in a cool, well-ventilated place.
Hints on joint storage: Do not mix chemical with any other chemicals except water.
Keep away from food, drink and animal feedingstuffs.
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 |
|---------|-------------------|-------------------------|----------------------------------|
| 67-63-0 | Isopropyl alcohol | Great Britain: WEL-STEL | 1250 mg/m ³ ; 500 ppm |
| | | Great Britain: WEL-TWA | 999 mg/m ³ ; 400 ppm |
| | | Ireland: 15 minutes | 400 ppm |
| | | Ireland: 8 hours | 200 ppm |

8.2 Exposure controls

Provide adequate ventilation, and local exhaust as needed.

Personal protection equipment

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

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Eye protection: Tightly sealed goggles according to EN 166.
General protection and hygiene measures:
Avoid contact with skin and eyes. Do not breathe vapours.
Work place should be equipped with a shower and an eye rinsing apparatus.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|--|-------------------------------|
| Appearance: | Form: liquid Colour: clear |
| Odour: | weak |
| Odour threshold: | no data available |
| pH value: | at 20 °C: 6.5 - 7.0 |
| Melting point/freezing point: | -7 - 0 °C |
| Initial boiling point and boiling range: | no data available |
| Flash point/flash point range: | no data available |
| Evaporation rate: | no data available |
| Flammability: | no data available |
| Explosion limits: | no data available |
| Vapour pressure: | no data available |
| Vapour density: | no data available |
| Density: | at 20 °C: approx. 1.2 g/mL |
| Water solubility: | at 20 °C: complete soluble |
| Partition coefficient: n-octanol/water: | no data available |
| Auto-ignition temperature: | no data available |
| Thermal decomposition: | no data available |
| Viscosity, kinematic: | 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

see 10.3

10.2 Chemical stability

Product is stable under normal storage conditions.

10.3 Possibility of hazardous reactions

No dangerous reactions with proper and specified storage and handling

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Do not mix chemical with any other chemicals except water.

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10.6 Hazardous decomposition products

In case of fire may be liberated: Nitrogen oxides (NOx), carbon monoxide and carbon dioxide.

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: Eye Irrit. 2; H319 = Causes serious eye irritation.
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: Reddening, pain.

SECTION 12: Ecological information

12.1 Toxicity

Further details: no data available

12.2. Persistence and degradability

Further details: Information about Isopropyl alcohol: Easily bio-degradable.

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 Other adverse effects

AOX reference: Product does not contain organically bound halogen (AOX).
General information: Do not allow to enter into ground-water, surface water or drains.

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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

* = Evidence for disposal must be provided.

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.

Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1 UN number

ADR/RID, IMDG, IATA-DGR:

not applicable

14.2 UN proper shipping name

ADR/RID, IMDG, IATA-DGR:

Not restricted

14.3 Transport hazard class(es)

ADR/RID, IMDG, IATA-DGR:

not applicable

14.4 Packing group

ADR/RID, IMDG, IATA-DGR:

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:

-
No data available

National regulations - EC member states

Volatile organic compounds (VOC):

< 10 % by weight

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Labelling of packaging with <= 125mL content

Signal word: **Warning**
Hazard statements: not applicable
Precautionary statements: P102 Keep out of reach of children.

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:

H225 = Highly flammable liquid and vapour.

H272 = May intensify fire; oxidiser.

H319 = Causes serious eye irritation.

H336 = May cause drowsiness or dizziness.

Reason of change: General revision (Regulation (EU) No 2015/830)

Date of first version: 28/4/2008

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.