

SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006

Electrolyte

Delivering quality



Version number: 1

Issued: 2015-12-17

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name Electrolyte

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

Use Electrolyte for industrial Ni-Cd-batteries.

1.3 Details of the supplier of the safety data sheet

Supplier Alcad Limited

Street address Strandgatan 35
Box 504
S-572 25 Oskarshamn
Sweden

Telephone +46 491 68 100

Fax +46 491 68 110

Emergency phone number +46 491 68075

1.4 Emergency telephone number

Available outside office hours Yes

Emergency phone number 911 / 112

Other

Chemtrec US service within the USA: + 800 424 93 00 / outside US: + 1 202 483 7616

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008, Annex VI

Classification Skin corrosion, hazard category 1A
Corrosive to metals, hazard category 1
Acute toxicity, oral, hazard category 4

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Hazard statements H290, H302, H314

2.2 Label elements

GHS labeling of the substance (in accordance with Regulation (EC) No 1272/2008, Annex VI)

Pictogram



Signal word

Danger

Hazard statements

H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.

Precaution statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.
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 or /doctor/physician

2.3 Other hazards

Not applicable

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical name	CAS No. EC No. REACH No.	Concentration	Classification	H-phrase
Potassium hydroxide	1310-58-3 215-181-3 01-2119487136-33-	18 - 30%	Skin Corr. 1A, Met. Corr. 1, Acute Tox. 4 - oral	H290, H302, H314
Lithium hydroxide	1310-65-2 215-183-4 01-2119560576-31-	1 - 2,5%	Skin Corr. 1A, Met. Corr. 1, Acute Tox. 4 - oral	H290, H302, H314

Product based on

Water solution including the above hazardous substances

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Substance additional information

For the full text of the H phrases mentioned in this Section, see Section 16.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures

Take off all contaminated clothing immediately.

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Contact your doctor immediately.

Skin contact

Wash off immediately with plenty of water for at least 15 minutes. Immediate medical treatment necessary as untreated skin corrosions are slow and bad healing wounds.

Eye contact

In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Contact your doctor immediately. Continue rinsing eyes during transport to hospital.

Ingestion

Do not induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Contact your doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

See section 11 for more detailed information about health effects and symptoms.

Ingestion

If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. The product itself does not burn.

Unsuitable extinguishing media

No information available

5.2 Special hazards arising from the substance or mixture

Contact with certain metals e.g. zinc, lead, tin, aluminium and magnesium and their alloys can generate hydrogen gas (explosive with air). Contaminated surfaces will be extremely slippery.

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5.3 Advice for firefighters

Special protective equipment for fire-fighters

Special protective equipment for firefighters: In the event of fire, wear self contained breathing apparatus. Wear suitable protective clothing.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use protective equipment as specified in section 8 of SDS. Keep unauthorized people away. Spill area may be slippery. Avoid contact with the skin and the eyes. Do not breathe vapours or spray mist.

6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. If the product contaminates watercourses, lakes, soil or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Absorb in inert material (vermiculite, dry sand or soil) and collect. Keep in suitable and closed containers for disposal.

6.4 Reference to other sections

Personal protection see section 8 and for disposal see section 13.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Preventive handling precautions

Keep container tightly closed. Use protective equipment as specified in section 8 of SDS. Avoid contact with the skin and the eyes. Do not breathe vapours or spray mist. Ensure that eyewash stations and safety showers are close to the workstation location.

General hygiene

Keep away from food, drink and animal feeding stuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: Keep in an area equipped with alkali resistant flooring Store in original container.

Advice on protection against fire and explosion: /*S only*/The product is not flammable. Normal measures for preventive fire protection. Gives off hydrogen by reaction with metals. risk of explosion

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Further information on storage conditions: Keep container tightly closed. Store in well-ventilated place.

Advice on common storage: Keep away from food, drink and animal feeding stuffs. Do not store together with acids and ammonium salts.

7.3 Specific end use(s)

Used as electrolyte for industrial Ni-Cd-batteries.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

National occupational exposure limits	Ingredient	CAS no.	EC No.	Exposure limit mg/m ³ -ppm		Short-term exposure limit mg/m ³ -ppm		Remark	Source	Year
	Potassium hydroxide	1310-58-3	215-181-3	-	-	2	-	-	EH40/2005 Workplace exposure limits	-
	Lithium hydroxide	1310-65-2	215-183-4	-	-	1	-	-	EH40/2005 Workplace exposure limits	-

8.2 Exposure controls

Technical precaution measures	Ensure that eyewash stations and safety showers are close to the workstation location.
Eye / face protection	Wear eye/face protection.
Safety gloves	Wear chemical-resistant protective gloves. Potassium hydroxide-resistant gloves. If signs of wear and tear are noticed then the gloves should be replaced. .
Other skin protection	Alkali-proof protective suit.
Respiratory protection	Use approved respirator if air contamination exceeds acceptable level. If it is suspected that fumes are still present wear an appropriate mask or self-contained breathing apparatus. Recommended Filter type: Particle filter: P3
Environmental exposure controls	Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. If the product contaminates watercourses, lakes, soil or drains inform respective authorities.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

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Appearance, colour	clear
Appearance, physical state	liquid
Auto-ignition temperature	Not applicable
Decomposition temperature	Not applicable
Evaporation rate	Not applicable
Explosive properties	Not applicable
Flammability (solid, gas)	Will not flash.
Flash point	Not applicable
Initial boiling point and boiling range	ca. 105 ° C
Melting point / freezing point	ca. 3 ° C
Odour	Odorless
Odour treshold	Not applicable
Oxidising properties	will not oxidize
Partition coefficient: n-octanol / water	Not applicable
pH value	>13
Relative density	1200 - 1300 kg/m ³
Solubility	Not applicable
Upper / lower flammability or explosive limits	Not applicable
Vapour density	Not applicable
Vapour pressure	no data available
Viscosity	no data available

9.2 Other information

No supplementary information available.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

Contact with certain metals e.g. zinc, lead, tin, aluminium and magnesium and their alloys can generate hydrogen gas (explosive with air).

10.2 Chemical stability

Stable under normal usage and storage conditions.

10.3 Possibility of hazardous reactions

Contact with certain metals e.g. zinc, lead, tin, aluminium and magnesium and their alloys can generate hydrogen gas (explosive with air). risk of explosion Exothermic reaction with water. Exothermic reaction with acids.

10.4 Conditions to avoid

Avoid heat, flames and other sources of ignition.

10.5 Incompatible materials

acids, ammonium salts and Base metals.

10.6 Hazardous decomposition products

None known.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Oral

Ingestion can cause serious corrosive injuries with burning pain, vomiting, stomach pains, possibly severe general effects (shock) and kidney damage. Even small amounts may cause serious damage. Risk of permanent injuries.

Inhalation

Inhalation can cause: May cause burning pain in the nose and throat. Sneezes, cough and breathing difficulties.
Risk of lung damage in high concentrations.

Irritation

In case of skin contact, corrosive injuries with pain, redness and wounds can occur.

Corrosive effects

Splashes in the eyes may cause pain and burns. Risk of permanent damage to vision. .

Sensitisation

Not sensitising.

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Germ cell mutagenicity	No data available
Mutagenicity	No data available
Carcinogenicity	No data available
Repeated dose toxicity	Not applicable
Reproductive toxicity	No data available
LD50 Oral	Potassium hydroxide LD50: 273 mg/kg (rat). Lithium hydroxide LD50: 210 mg/kg (rat).
LC50 Inhalation	Lithium hydroxide LC50 (4 h): 0,96 mg/l (rat).

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Acute fish toxicity	Potassium hydroxide LC50 (96 h): 80 mg/l (Gambusia affinis). LC50 (24 h): 165 mg/l (Poecilia reticulata).
Acute toxicity	Bacteria EC50 (15 min): 22 mg/l (photobacterium phosphoreum).

12.2 Persistence and degradability

The methods for determining biodegradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Not considered bio-accumulative.

Potassium hydroxide
Log Pow: <0

12.4 Mobility in soil

Mobility Adsorption to soil ground is not expected. The product is soluble in water.

12.5 Results of PBT and vPvB assessment

This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This preparation contains no

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substance considered to be very persistent nor very bioaccumulating (vPvB).

12.6 Other adverse effects

Do not flush into surface water or sanitary sewer system. Harmful effects due to pH-change. Neutralization is normally necessary before waste water is discharged into water treatment plants.

Other

Information given is based on product data.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Disposal considerations

Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not let product enter drains. Contact waste disposal services.

Packaging

Empty the packaging thoroughly. Empty containers can be reused. Packaging that can't be cleaned are taken care of in the same manner as the product.

Other

Waste code (EWC)

16 06 06 - separately collected electrolyte from batteries and accumulators.

The waste code (EWC) is a recommendation. In the event of non-compliant handling, the end user is personally responsible for a suitable EWC code.

SECTION 14. TRANSPORT INFORMATION

14.1 UN number

1814

14.2 UN proper shipping name

Name POTASSIUM HYDROXIDE SOLUTION

IMDG proper shipping name POTASSIUM HYDROXIDE SOLUTION

14.3 Transport hazard class(es)

Label 8

ADR / RID Class 8

ADR / RID Classification code C5

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ADR / RID hazard identification number	80
IMDG Class	8
IMDG EmS	F-A, S-B
IATA Class	8

14.4 Packing group

II

14.5 Environmental hazards

Not applicable

14.6 Special precautions for user

Tunnel restriction code: 2 (E)

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No 1907/2006 of the European Parliament and of the Council, (REACH).
Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). Annex II SDS.
European Parliament and Council Regulation (EC) No. 1272/2008, CLP.

National regulations

EH40/2005 Workplace exposure limits.
Waste Ordinance (2011:927).
MSBFS 2015:1 Regulations regarding the transport of hazardous goods by road and off road (ADR-S)

15.2 Chemical safety assessment

No chemical safety assessment has been performed.

SECTION 16. OTHER INFORMATION

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References to key literature and data sources

Regulation (EC) No 1907/2006 of the European Parliament and of the Council, (REACH).
Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). Annex II SDS.
European Parliament and Council Regulation (EC) No. 1272/2008, CLP.
EH40/2005 Workplace exposure limits.
Waste Ordinance (2011:927).
MSBFS 2015:1 Regulations regarding the transport of hazardous goods by road and off road (ADR-S)
<http://prevent.se>
C&L Inventory Database

Phrase meaning

Acute Tox. 4 - oral - Acute toxicity, oral, hazard category 4
Met. Corr. 1 - Corrosive to metals, hazard category 1
Skin Corr. 1A - Skin corrosion, hazard category 1A
H290 - May be corrosive to metals.
H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.

Other

Additional information

Read this Safety Data Sheet carefully and become aware of hazards implied and the Safety information

Manufacturer's notes

All information in this safety data sheet is based on our current knowledge.