1. Product and company identification

Product identifier

Trade name: Oxylyte USD electrolyte Solution

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

General use: Electrolyte
For industrial purposes only.

Details of the supplier of the safety data sheet

Company name: Hamilton Bonaduz AG
Street/POB-No.: Via Crusch 8
Postal Code, city: 7402 Bonaduz
Switzerland
WWW: www.hamiltoncompany.com
Telephone: +41 58 610 10 10
Department responsible for information:
After-sales service
E-mail: techsupport.pa.ch@hamilton.ch

Emergency phone number

GIZ-Nord, Göttingen, Germany,
Telephone: +49 551-19240

2. Hazards identification

Emergency overview

Appearance: Physical state at 68 °F and 101.3 kPa: liquid
Color: colorless
Odor: characteristic

Classification: Skin Irritation - Category 2; Eye Irritation - Category 2A;

Hazard symbols:

Signal word: **Warning**

Hazard statements: Causes skin irritation.
Causes serious eye irritation.

Precautionary statements:

Wash hands and face thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN: Wash with plenty of water/soap.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.

Regulatory status

This material is considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200).

Hazards not otherwise classified

A corrosive effect cannot be ruled out because of the pH value.
see section 11: Toxicological information

3. Composition / Information on ingredients

Chemical characterization: Aqueous solution of inorganic salts and organic compounds.

Relevant ingredients:

CAS No.	Designation	Concentration	Classification
CAS 67-63-0	Isopropyl alcohol	< 5 %	Flammable Liquid - Category 2. Eye Irritation - Category 2A. Specific Target Organ Toxicity (Single Exposure) - Category 3.
CAS 1310-58-3	Potassium hydroxide	< 1 %	Corrosive to Metals - Category 1. Acute Toxicity - oral - Category 4. Skin Corrosion - Category 1A.

4. First aid measures

General information: In all cases of doubt, or when symptoms persist, seek medical advice.

In case of inhalation: Provide fresh air. If you feel unwell, seek medical advice.

Following skin contact: After contact with skin, wash immediately with plenty of water.
Remove contaminated clothing. 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. Subsequently seek the immediate attention of an ophthalmologist.

After swallowing: Do not induce vomiting. Consult physician immediately.
Rinse mouth and drink large quantities of water.
Put victim at rest, cover with a blanket and keep warm.

Most important symptoms/effects, acute and delayed

Causes skin irritation. Causes serious eye irritation.

Information to physician

Treat symptomatically.

5. Fire fighting measures

Flash point/flash point range:
No data available

Auto-ignition temperature: No data available

Suitable extinguishing media:
Product is non-combustible. Extinguishing materials should therefore be selected according to surroundings.

Specific hazards arising from the chemical

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

Protective equipment and precautions for firefighters:
In case of surrounding fires: Wear self-contained breathing apparatus.

6. Accidental release measures

Personal precautions: Avoid contact with the substance. Wear appropriate protective equipment. Do not breathe vapors. Provide adequate ventilation.

Environmental precautions:

Do not allow to penetrate into soil, waterbodies or drains.
If necessary notify appropriate authorities.

Methods for clean-up: Soak up with absorbent materials such as sand, siliceus earth, acid- or universal binder. Store in special closed containers and dispose of according to ordinance. Wash spill area with plenty of water.

Additional information: Render harmless: Neutralize with dilute sulphuric acid.

7. Handling and storage

Handling

Advices on safe handling: Wear appropriate protective equipment. Do not breathe vapors. Avoid contact with skin and eyes.

Storage

Requirements for storerooms and containers:

Keep container tightly closed.
storage temperature: 59 °F up to 77 °F
Unsuitable materials: Aluminium, tin, zinc.

Hints on joint storage: Keep away from strong acids and strong alkaline material.

8. Exposure controls / personal protection

Exposure guidelines

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
67-63-0	Isopropyl alcohol	USA: ACGIH: STEL	984 mg/m³; 400 ppm
		USA: ACGIH: TWA	492 mg/m³; 200 ppm
		USA: NIOSH: STEL	1225 mg/m³; 500 ppm
		USA: NIOSH: TWA	980 mg/m³; 400 ppm
		USA: OSHA: TWA	980 mg/m³; 400 ppm
1310-58-3	Potassium hydroxide	USA: ACGIH: Ceiling	2 mg/m³
		USA: NIOSH: Ceiling	2 mg/m³

Biological limit values:

CAS No.	Designation	Type	Limit value	Parameter	Sampling
67-63-0	Isopropyl alcohol	USA: ACGIH-BEI, urine	40 mg/L	Acetone in urine	end of shift at end of workweek

Engineering controls

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

Personal protection equipment (PPE)

Eye/face protection: Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010.

Skin protection: Wear suitable protective clothing.

Protective gloves according to OSHA Standard - 29 CFR: 1910.138.
Glove material: Nitrile rubber (0,11 mm).
Breakthrough time: >480 min.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Respiratory protection: Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded. Use filter type A (= against vapors of organic substances) according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2.

General hygiene considerations:

Remove contaminated clothing.
Wash hands before breaks and after work.
Have eye wash bottle or eye rinse ready at work place.

Environmental exposure controls

Refer to 6.: Section "Environmental precautions".

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance:	Physical state at 68 °F and 101.3 kPa: liquid Color: colorless
Odor:	characteristic
Odor threshold:	No data available
pH:	at 68 °F: 13
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	approx. 212 °F
Flash point/flash point range:	No data available
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Density:	1.1 g/mL
Water solubility:	at 68 °F: soluble, miscible
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Thermal decomposition:	No data available
Additional information:	No data available

10. Stability and reactivity

Reactivity: Refer to subsection "Possilbility of hazardous reactions".

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions:

Reacts with aluminium and zinc. Formation of hydrogen!
Reacts with ammonium compounds: Formation of ammonia.

Conditions to avoid: No data available

Incompatible materials: Incompatible with animal and vegetable tissues, metals

Thermal decomposition: No data available

11. Toxicological information

Toxicological tests

Toxicological effects: The statements are derived from the properties of the single components. No toxicological data is available for the product as such.

Acute toxicity (oral): Lack of data.

Acute toxicity (dermal): Lack of data.

Acute toxicity (inhalative): Lack of data.

Skin corrosion/irritation: Skin Irritation - Category 2 = Causes skin irritation.

Serious eye damage/irritation: Eye Irritation - Category 2A = 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.

Other information: A corrosive effect cannot be ruled out because of the pH value.

Information about Potassium hydroxide:
LD50 Rat, oral: 273 mg/kg.

Symptoms

In case of ingestion:
Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

12. Ecological information

Ecotoxicity

Aquatic toxicity: Harmful effects on water organisms by modification of pH-value. Forms corrosive mixtures with water even if diluted.

Mobility in soil

No data available

Persistence and degradability

Further details: No data available

Additional ecological information

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

13. Disposal considerations

Product

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

Package

Recommendation: Dispose of waste according to applicable legislation. Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

14. Transport information

14.2 UN proper shipping name

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

Transport hazard class(es)

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

Packing group

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

Environmental hazards

Marine pollutant: no

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

No data available

USA: Department of Transportation (DOT)

Proper shipping name: Not restricted

Sea transport (IMDG)

Proper shipping name: Not restricted
Marine pollutant: no

Air transport (IATA)

Proper shipping name: Not restricted

Further information

No dangerous good in sense of these transport regulations.

15. Regulatory information

National regulations - U.S. Federal Regulations

Isopropyl alcohol:
TSCA Inventory: listed
TSCA HPVC: not listed
Carcinogen Status:
IARC Rating: Group 3
OSHA Carcinogen: not listed
NTP Rating: not listed
NIOSH Recommendations:
Occupational Health Guideline: 0359

Potassium hydroxide:
TSCA Inventory: listed
TSCA HPVC: not listed
Clean Water Act:
Hazardous Substances: RQ 1000 lbs.
Other Environmental Laws:
CERCLA: RQ 1000 lbs.
NIOSH Recommendations:
Occupational Health Guideline: 0523

National regulations - U.S. State Regulations

Isopropyl alcohol:
Idaho Air Pollutant List:
Title 585: AAC: 49 -- EL: 65.3 -- WEL: 980 -Title 586: -
Massachusetts Haz. Substance codes: 2,4,5,6 F9
Minnesota Haz. Substance:
Codes: ANO -- Ratings: 7.84 -- Status: Title III. TRI.
New Jersey RTK Hazardous Substance:
DOT: 1219 - Sub No.: 1076 - TPQ: -
Pennsylvania Haz. Substance code: E
Washington Air Contaminant:
TWA: 400 ppm - 980 mg -- STEL: 500 ppm - 1225 mg

Potassium hydroxide:
California Proposition 65 code: not listed
Delaware Air Quality Management List:
DRQ: 1000 - RQ State: Federal Regulations Apply
Idaho Air Pollutant List:
Title 585: AAC: 0.1 - EL: 0.133 - OEL: 2 - Title 586: -
Massachusetts Haz. Substance codes: 4,5 F8
New York List of Hazardous Substances:
RQ-Air: 1000 - RQ-Land: 100 - Note: No Note Associated with this chemical.
Pennsylvania Haz. Substance code: E
Washington Air Contaminant:
Ceiling: 2 mg

National regulations - Great Britain

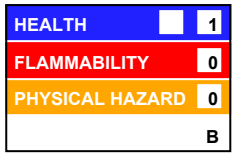
Hazchem-Code: -

16. Other information

Text for labeling: Contains < 5 % Isopropyl alcohol, < 1 % Potassium hydroxide. Safety data sheet available on request.

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: B



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
OEL: Occupational Exposure Limit Value
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
EN: European Standard
IATA: International Air Transport Association
IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IMDG Code: International Maritime Dangerous Goods Code
LD50: Lethal dose 50%
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
RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
STOT SE: Specific target organ toxicity - single exposure
TLV: Threshold Limit Value
vPvB: Very persistent and very bioaccumulative
WEL: Workplace Exposure Limit

Reason of change: General revision
Changes in section 1: Poisons information service (Denmark, France, Spain, Russia)

Date of first version: 7/18/2011

Department issuing data sheet

Contact person: see section 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.