

Date of issue 2024-06-06

Versie 2

Section 1: IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE MANUFACTURER

1.1. Product identification

Product code LR03

Product name Alkaline Battery

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

Recommended uses N/A

Restrictions on use N/A

1.3. Details of the supplier of the safety data sheet

Supplier Intronics B.V
P.O. box 123, 3770 AC Barneveld
the Netherlands

For more information, please contact:

Technical support: +31 342 407 050

1.4 Emergency contact:

National Poisons Information Center / University Medical Center Utrecht
PO Box 85500, 3508 GA Utrecht, The Netherlands
+31 88 75 585 61
productnotificatie(at)umcutrecht.nl
<http://www.productnotification.nl/>

Section 2: HAZARD IDENTIFICATION

2.1. Classification of the substance or mixture

Emergency overview: This product is a battery. Intended use of the product should not result in exposure to the chemical substance. In case of rupture the below hazards exist.

Classification according to GHS

Acute toxicity, oral (4)

Skin corrosion/irritation (2)

Serious eye damage/eye irritation (2A)

Specific target organ toxicity, single exposure; Respiratory tract irritation (3)

Hazardous to the aquatic environment, long-term hazard (2)

2.2. Label elements

Product identification

Hazard pictograms:



Signal word

Warning

Hazard statements:

- H302 Harmful if swallowed
- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H335 May cause respiratory irritation
- H411 Toxic to aquatic life with long lasting effects

Precautionary statements:

Prevention:

- P261 Avoid breathing dust, fume, gas, mist, vapours, spray
- P264 Wash skin and clothing thoroughly after handling
- P270 Do not eat, drink or smoke when using this product
- P271 Use only outdoors or in a well-ventilated area
- P273 Avoid release to the environment
- P280 Wear protective gloves, protective clothing, eye protection, face protection

Response:

- P301+P312 IF SWALLOWED: Call a poison center if you feel unwell
- P330 Rinse mouth
- P302+P352 IF ON SKIN: Wash with plenty water
- P321 Specific treatment (See additional emergency instructions)
- P333+P313 If skin irritation or rash occurs: Get medical advice
- P362+P364 Take off contaminated clothing and wash it before reuse
- 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
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing
- P312 Call a poison center, if you feel unwell
- P391 Collect spillage.

Storage:

- P403+P233 Store in well-ventilated place. Keep container tightly closed
- P405 Store locked up

Disposal:

- P501 Send contents to approved waste treatment plants.

2.3. Other hazards

- | | |
|---------------------------------------|----------------|
| Physical and chemical hazards: | See Section 10 |
| Human health hazards: | See Section 11 |
| Environmental hazards: | See Section 12 |

Section 3: COMPOSITION AND INFORMATION ON INGREDIENTS**3.1 Mixtures**

Weight	Chemical Composition	CAS No.	EC#
35	Manganese dioxide	1313-13-9	215-202-6
18	Potassium hydroxide	1310-58-3	215-181-3
16	Zinc	7440-66-6	231-175-3
15	Iron	7439-89-6	231-096-4
6	Copper	7440-50-8	231-159-6
5	Graphite	7782-42-5	231-955-3
5	Water	7732-18-5	231-791-2

Section 4: FIRST AID MEASURES**4.1. Description of first aid measures**

Inhalation	Remove victim to fresh area. Administer artificial respiration if breathing is difficult. Seek medical attention.
Skin contact	Remove contaminated clothing and shoes. Immediately wash with water and soap and rinse thoroughly. Wash clothing and shoes before reuse. If irritation occurs, get medical attention.
Eye contact	Flush eyes with plenty of water for several minutes while holding eyelids open. Get medical attention if irritation persists.
Swallowing	Do not induce vomiting. Get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

No data available.

4.3. Personal protective equipment for first-aid responders

No data available.

4.4 Indication of immediate medical attention and special treatment needed

Treat symptomatically.

Section 5: FIRE-FIGHTING MEASURES**5.1. Extinguishing media**

Suitable extinguishing media	Use extinguishing agent suitable for local conditions and surrounding environment. Such as dry powder, CO ₂
Unsuitable extinguishing material	No data available

5.2. Specific Hazards arising from the chemical

Special hazards arising from the substance or mixture.
Battery may burst and release hazardous decomposition products when exposed to a fire situation.
Some may burn but none ignite readily. Containers may explode when heated. Some may be transported hot.

5.3. Specific protective actions for firefighters

Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.

Section 6: ACCIDENTAL RELEASE MEASURES**6.1. Personal precautions, protective equipment, and emergency procedures**

Wear protection equipment. Keep unprotected persons away. Ensure adequate ventilation. Remove ignition sources, evacuate area. Sweep up using a method that does not generate dust. Collect as much of the spilled material as possible, place the spilled material into a suitable disposal container. Keep spilled material out of sewers, ditches and bodies of water.

6.2. Environmental precautions

Do not allow material to be released to the environment without proper governmental permits.

6.3. Methods and material for containment and cleaning up

For all waste handling must refer to United Nations, National and Local Regulations for disposal.

6.4. Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Section 7: HANDLING AND STORAGE**7.1. Precautions for safe handling**

Avoid short circuiting the battery. Avoid mechanical damage of the battery. Do not open or disassemble. Batteries may explode or cause burns, if dissambled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity. Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in al well-ventilated area. Prevent concentration in hollows and sumps.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated place. Keep away from heat, avoiding the long time of sunlight.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

CAS No.	ACGIH	NIOSH	OSHA
1313-13-9	N/A	N/A	N/A
1310-58-3	TLV-Peak 2mg/m ³	REL-Peak 2mg/m ³	N/A
7440-66-6	N/A	N/A	N/A
7439-89-6	N/A	N/A	N/A
7440-50-8	TLV-TWA 0.2mg/m ³ TLV-TWA 1mg/m ³	REL-TWA 1mg/m ³ REL-TWA 0.1mg/m ³	PEL-TWA 0.1mg/m ³ PEL-TWA 1mg/m ³
7782-42-5	TLV-TWA 2mg/m ³	REL-TWA 2.5mg/m ³	PEL-TWA 15mppcf PEL-TWA 20mppcf
7732-18-5	N/A	N/A	N/A

8.2. Measures to control exposure

Eye / face protection

Wear safety goggles or eye protection combined with respiratory protection.

Hand protection

Wear appropriate gloves to reduce skin contact.

Skin and body protection

Working environment required, wear suitable protective clothing to minimize contact with skin. The type of protective equipment must be according to the concentration and the content of certain hazardous substances in the workplace.

Respiratory protection

Wear suitable protective mask. For a large number of battery leakages, wear chemical protective clothing, including self-contained breathing apparatus.

Appropriate engineering controls:

The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and at the end of work.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information about basic physical and chemical properties

Properties	Value
Physical state:	Cylindrical
Colour:	Blue and silver
Odour:	Not available
Melting point / freezing point:	Not available
Boiling point or initial boiling point and boiling range:	Not available
Flammability:	Not available
Lower and upper explosion limit/flammability limit:	Not available
Flash point:	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
pH	Not available
Kinematic viscosity:	Not available
Solubility	Not available
Partition coefficient (n-octanol/water):	Not available
Vapour pressure:	Not available
Density and/or relative density:	Not available
Relative vapour density:	Not available
Particle characteristics:	Not available

Other information:

Voltage:	1.5V
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Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

Flames, sparks, and other sources of ignition, incompatible materials.

10.5. Incompatible materials

Oxidizing agents, acid base

10.6. Hazardous decomposition products

Carbon monoxide, carbon dioxide

Section 11: TOXICOLOGICAL INFORMATION

Acute Toxicity:

CAS No.	LC50/LD50
1313-13-9	No data available
1310-58-3	LD50 Rat (oral): 284mg/kg
7440-66-6	LD50 Rat (oral): >2000mg/kg
7439-89-6	No data available
7440-50-8	No data available
7782-42-5	No data available
7732-18-5	No data available

Skin corrosion / irritation	No data available
Serious eye damage / eye irritation	No data available
Respiratory or skin sensitization	No data available
Germ cell mutagenicity	No data available
Carcinogenicity	No data available
Reproductive toxicity	No data available
Specific target organ toxicity-Single exposure	No data available
Specific target organ toxicity-Repeated exposure	No data available
Aspiration hazard	No data available
Information on the likely routes of exposure	No data available
Eye	No data available
Skin	No data available
Ingestion	No data available
Inhalation	No data available

Section 12: ECOLOGICAL INFORMATION

12.1. Ecological Toxicity

CAS# 7440-66-6

ErC50: 0.15mg/L – Algae (*Pseudokirchneriella subcapitata*) – 72h

12.2. Persistence and degradability No data available

12.3. Bioaccumulation Potential No data available

12.4. Mobility in soil No data available

12.7. Other adverse effects No data available

Section 13: DISPOSAL CONSIDERATIONS

13.1. Disposal methods

Recommendation Consult state, local or national regulations to ensure proper disposal.

13.2 Uncleaned packaging

Recommendation Disposal must be made according to official regulations.

Section 14: INFORMATION REGARDING TRANSPORT

14.1 UN / ID No	IATA-Un number:	N/A
	IMDG-Un number:	N/A
14.2 Proper shipping name	IATA-Technical name:	N/A
	IMDG-Technical name:	N/A
14.3 Transport hazard class(es)	IATA-Class:	Not subjected for transport of dangerous goods
	IMDG-Class:	Not subjected for transport of dangerous goods
14.4 Packing group	IATA-Packing group:	N/A
	IMDG-Packing group:	N/A
14.5 Environmental hazards		
Marine pollution		No
14.6 Special precautions for user		No information available

Transport information: Alkaline Battery LR03 AAA 1.5V is exempt from dangerous goods.

It is considered non-dangerous goods by the International Civil Aviation Organization (ICAO), the International Air Transport Association (IATA) DGR 65th, IATA Special Provisions A123, International Maritime Dangerous Goods Regulations (IMDG) (41-22), or the <<Recommendations On The Transport Of Dangerous Goods-Model Regulations>> (23rd).

S.P.A123 This entry applies to Batteries, electric storage, not otherwise listed in Subsection 4.2-List of Dangerous Goods. Examples of such batteries are: alkali-manganese, zinc-carbon and nickel-cadmium batteries. Any electrical battery or battery powered device, equipment or vehicle having the potential of a dangerous evolution of heat must be prepared for transport so as to prevent

- (a) a short-circuit (e.g. in the case of batteries, by the effective insulation of exposed terminals; or, in the case of equipment, by disconnection of the battery and protection of exposed terminals); and
- (b) accidental activation

The words "Not Restricted" and the Special Provision number must be included in the description of the substance on the Air Waybill as required by 8.2.6, when an Air Waybill is issued.

Transport Fashion: By air, by sea, by railway, by road.

Section 15: REGULATORY INFORMATION

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

CAS No.	TSCA	IECSC	DSL/NDSL	EINECS/ELINCS/NLP
1313-13-9	Listed	Listed	Listed DSL	Listed
1310-58-3	Listed	Listed	Listed DSL	Listed
7440-66-6	Listed	Listed	Listed DSL	Listed
7439-89-6	Listed	Listed	Listed DSL	Listed
7440-50-8	Listed	Listed	Listed DSL	Listed
7782-42-5	Listed	Listed	Listed DSL	Listed
7732-18-5	Listed	Listed	Listed DSL	Listed

Section 16: OTHER INFORMATION

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards exist.

Other information:

ACGIH:	American Conference of Governmental Industrial Hygienists
BCF:	Bioconcentration Factor.
BOD:	Biochemical Oxygen Demand.
CAS:	Chemical Abstracts Service
DNEL:	Derived No Effect Level.
DSL:	The Domestic Substances List of Canada.
EC:	European Commission
EC50:	Median effective concentration
IARC:	International Agency for Research on Cancer
IATA:	International Air Transport Association.
IECSC:	Inventory of Existing Chemical Substances in China
IMDG:	International Maritime Code for Dangerous Goods.
LC50:	Lethal concentration, 50 percent kill.
LD50:	Lethal dose, 50 percent kill.
NDSL:	The Non-domestic Substances List of Canada.
NOEC:	No Observed Effect Concentration
NIOSH:	US National Institute for Occupational Safety and Health
NTP:	US National Toxicology Program
OSHA:	US Occupational Safety and Health
PC-STEL:	Permissible concentration-short time exposure limit
PC-TWA:	Permissible concentration-time weighted average
PEL:	Permissible Exposure Level
REL:	Recommended Exposure Limit
RTECS:	Registry of Toxic Effects of Chemical Substances
STEL:	Short Term Exposure limit.
TDG:	Recommendations on the TRANSPORT OF DANGEROUS GOODS Model Regulations

TLV: Threshold Limit Value.
TOC: Total Organoc Carbon
TSCA: Toxic Substances Control Act of USA
TWA: Time-weighted average

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Disclaimer

The information in this MSDS is prepared to the best of our ability and reflects the state of knowledge at the time of publication. The data is presented as a guideline for the safe handling, use, storage, transport, and disposal of the substance, and cannot be regarded as a guarantee certificate or quality specification. The information given relates to the substance as such and may no longer be valid when the substance is used together with other substances or in processes.

End of the material safety data sheet

Intronics BV
W.A. Terlouw, QA-compliance officer


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Signature