Material Safety Data Sheet

Date of issue 2026-03-24 Versie 3

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

1.1. Product identification

Product code LR6

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 Danger

See Section 14.

2.2 Primary Route(s) of Exposure

Inhalation, Ingestion, Skin contact and Eye contact.

2.3 Health Hazard

There is no danger in normal use, the battery cannot be disassembled, opened or decomposed, and the materials or components inside are harmful.
Inhalation: Vapors or mists from a ruptured battery may cause respiratory irritation.
Ingestion: The batttery ingredients or raw materials can cause severe chemical burns to mouth, esophagus and gastrointestinal tract.
Skin: Skin contact with the battery's internal chemistry can cause severe irritation or burn to the skin.
Eye: Eye contact with the battery's internal chemistry can cause severe irriration or burn to the eye.

Section 3: COMPOSITION AND INFORMATION ON INGREDIENTS

3.1 Mixtures

Chemical Composition	CAS No.	Concentration ranges (%)
Manganese dioxide	1313-13-9	30
Potassium hydroxide	1310-58-3	10
Zinc	7440-66-6	8
Iron	7439-89-6	37
Graphite	7782-42-5	30
Water	7732-18-5	11
Paper	/	1

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation Remove source of contamination or move victim to fresh air. Obtain medical advice.

Skin contact Take off contaminated clothing, rinse with plenty of water, if skin allergies and redness, please seek medical treatment in time.

Eye contact Irrigate with flowing water for 15 minutes. If irritation persists, please seek medical treatment in time.

Ingestion Please rinse mouth thoroughly with water. Induce vomiting under the guidance of professional personage. Please seek medical treatment in time.

Section 5: FIRE-FIGHTING MEASURES

Characteristics of Hazard Toxic fumes, gases or vapors may evolve on burning.

Hazardous Combustion Products Carbon monoxide, carbon dioxide, and so on.

Fire-extinguishing Methods and Extinguishing media For small fires, can use water, dry powder fire extinguisher, dry sans and other proper fire extinguishing media.

Attention in Fire-extinguishing Firefighting personnel shall wear gas masks and full-body firefighting suits.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment, and emergency procedures

In case of rupture. Attention! Corrosive material. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Refer to protective measures listed in Section 7 and 8.

6.2. Environmental precautions

Prevent product from contaminating soil and from entering sewers or waterways.

6.3. Methods and material for containment and cleaning up

Stop the leak id safe to do so. Contain the spilled liquid with dry sand or earth. Clean up spills immediately. Absorb spilled material with an inert absorbent (dry sand or earth). Scoop contaminated absorbent into an acceptable waste container. Collect all contaminated absorbent and dispose of according to directions in Section 13. Scrub the area with detergent and water, collect all contaminated wash water for proper 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

Do not disassemble, squeeze, or put the battery into a high temperature environment. Do not short circuit or install with incorrect polarity.

7.2. Conditions for safe storage

Store in a cool, dry, well-ventilated area away from icompatible substances. Keep out of reach of children.

7.3 Other Precautions

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protection equipment.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Engineering Controls

No engineering controls are required for handling batteries that have not been damaged.
Personal protective equipments for damaged batteries should include chemical resistant gloves and safety glasses.

8.2. Personal protective equipment

Eye / face protection	Not be considered under normal use conditions. If the electrolyte leaks, wear protective glasses and safety mask.
Skin and body protection	Not to be considered under normal use conditions. If the electrolyte leaks, wear protective gloves and clothing.
Respiratory protection	Not to be considered under normal use conditions. If the electrolyte leaks or the battery vents, wear a gas mask.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information about basic physical and chemical properties

Properties	Value
Physical state:	Solid
Colour:	Blue
Odour:	Normally, no odor
Flammability:	Not available
Flash point:	Not available
pH:	Not available
Solubility	Not available
Relative vapour density:	Not available

Section 10: STABILITY AND REACTIVITY

10.1. Chemical stability Stable under recommended storage conditions.

10.2. Conditions to avoid Heat above 70°C or incinerate, expose over a long period to humid conditions.

10.3. Incompatible materials Acids, Oxidizing agents, Bases

10.4. Hazardous decomposition products Toxic Fumes, and may form peroxides.

Section 11: TOXICOLOGICAL INFORMATION

Irritation In the case of internal material exposure, the vapor fumes may cause irritation to the eyes and the leaking electrolyte may cause irritation to the skin.

Senzitization No data available

Reproductive Toxicity No data available

Toxicologically Synergistic Materials No data available

Section 12: ECOLOGICAL INFORMATION

12.1 General note Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

12.2 Anticipated behavior of a chemical product in environment/possible environmental impact/ecotoxicity No data available

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment

Recycle or dispose of in accordance with government, state & local regulations.

13.2 Attention for waste treatment

Deserted batteries couldn't be treated as ordinary trash. Couldn't be thrown into fire or placed in high temperature. Couldn't be dissected pierced, crushed or treated similary. Best way is recycling.

Section 14: INFORMATION REGARDING TRANSPORT

14.1 UN number /
14.2 Proper shipping name Batteries, dry
14.3 DGR
According to Special Provision A123 of the 2026 IATA Dangerous Goods Regulations 67 Edition.
Examples of such batteries are: alkali -manganese, zinc-carbon and nickel-cadmium batteries. Any alectrical battery or battery powered device, equipment or vehicle muste 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 actication. The words “Not Restricted” and the special provision number must be included in the description of the substance on the Air Waybill.

14.4 IMDG CODE
the batteries are not restricted according to IMDG code 2024 Edition (Amdt 42-24).
14.5 Regulations concerning road transportation of dangerous goods
The batteries are not restricted according to JT/T 617.1-2018~JT/T 617.7-2018
14.6 ADR The batteries are not restricted according to ADR 2025
14.7 RID The batteries are not restricted according to RID2025

Section 15: REGULATORY INFORMATION

Recommendations on the Transport of Dangerous Goods-Model Regulations.

Recommendations on the Transport of Dangerous Goods-Manual of Test and Criteria

Dangerous Goods Regulations

International Maritime Dangerous Goods Code

Regulations Concerning Road Transportation of Dangerous Goods

Agreement Concerning the International Carriage od Dangerous Goods by Road (ADR)

Regulations concerning the International Carriage of Dangerous Goods by Rail (RID)

Technical Instructions for the Safe Transport of Dangerous Goods

Classification and Code of Dangerous Goods

Occupational Safety and Health Act (OSHA)

Toxic Substance Control Act (TSCA)

Federal Environmental Pollution Control Act (FEPCA)

Resource Conservation and Recovery Act (RCRA)

Code of Federal Regulations (CFR)

In accordance with all Federal, State and local laws.

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.

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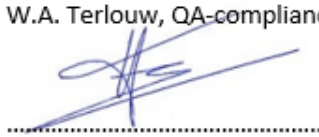
Disclaimer
The information in this MSDS is prepared to the best of our ability and reflects the state of knowledge at the time of publication. The data is presented as a guideline for the safe handling, use, storage, transport, and disposal of the substance, and cannot be regarded as a guarantee certificate 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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