Material Safety Data Sheet

Date of issue 2024-08-21 Versie 1

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

1.1. Product identification

Product code CR2025

Product name Li-Mn Button cell

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

This chemical is not considered hazardous by the Regulation (EC) No 1272/2008 (CLP). This product is an article which is a sealed battery and as such does not require an SDS per the Regulation (EC) No 1272/2008 (CLP) unless ruptured. The hazards indicated are for a ruptured battery.

Classification according to GHS
Acute toxicity, oral (4)
Acute toxicity, dermal (4)
Skin corrosion/irritation (1B)
Serious eye damage/eye irritation (2)
Sensitisation, skin (1)
Carcinogenicity (2)
Specific target organ toxicity, repeated exposure (1)

2.2. Label elements

Signal word
N/A

Hazard statements:

H302 Harmful if swallowed
H314 Causes severe skin burns and eye damage
H317 May cause an allergic skin reaction
H318 Causes serious eye damage
H332 Harmful if inhaled
H335 May cause respiratory irritation
H351 Suspected of causing cancer
H373 May cause damage to organs through prolonged or repeated exposure

Precautionary statements:
Preventation:

P201 Obtain special instructions before use
P202 Do not handle until all safety precautions have been read and understood
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P264 Wash skin and clothing thoroughly after handling
P270 Do not eat, drink or smoke when using this product
P272 Contaminated work clothing should not be allowed out of the workplace
P280 Wear protective gloves, protective clothing, eye protection, face protection

Response:

P304+P340 IF INHALED: Remove person to fresh air and keep 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.
P303+P361+P353 IF ON SKIN (or hair): Take of immediately all contaminated clothing. Rinse skin with water.
P302+P352 IF ON SKIN: Wash with plenty of water
P310 Immediatly call a Poison center
P321 Specific treatment (see additinal emergency instructions)
P330 Rinse mouth
P363 Wash contaminated clothing before reuse.

Storage:

P405 Store locked up

Disposal:

P501 Send contents to approved waste treatment plants.

Hazards not otherwise classified (HNOC)	N/A
Other information	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Interactions with other chemicals	Use of alcoholic beverages may enhance toxic effect.

Section 3: COMPOSITION AND INFORMATION ON INGREDIENTS

3.1 Mixtures

Weight (%)	Chemical Composition	CAS No.
57.41	Iron	7439-89-6
29.79	Manganese dioxide	1313-13-9
3.92	Perchloric Acid, Lithium Salt	7791-03-9
2.46	Polypropylene	9003-07-0
2.83	Propylene Carbonate	108-32-7
1.71	Lithium	7439-93-2
0.21	Graphite(C)	7782-42-5
0.21	Poly(tetrafluoroethylene)	9002-84-0
1.46	Ethylene Glycol Dimethyl Ether	110-71-4

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation If inhaled the internals of battery vomiting. Seeking Immediate medical attention.

Skin contact If the internal battery materials of an opened battery cell come into contact with skin, immediately flush with plenty of water or soap.

Eye contact Flush with copious of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Swallowing Do not induce vomiting. Get medical attention.

Section 5: FIRE-FIGHTING MEASURES

5.1 Danger characteristic

Exposure to excessive heat can cause venting of the liquid electrolyte.
Battery may burst and release hazardous decomposition products when exposed to a fire situation.

5.2 Hazardous combustion products

Corrosive and toxic gas may be emitted during fire.

5.3 Fire-Fighting method

The staff must equip with filtermask (full mask) or isolated breathing apparatus.
The staff must wear the clothes which can defense the fire in the upwind direction.
Remove the container to the open space as soon as possible.
Spray water on the containers in the fireplace to keep them cool until finish extinguishment.

5.4 Fire-Fighting media

Plenty of water, dry chemical powder or carbon dioxide

Section 6: ACCIDENTAL RELEASE MEASURES

Emergency treatment

If the battery material is released, remove personnel from area until the batteries cool down and fumes dissipate. Provide maximum ventilation to clear out hazardous gases and avoid skin and eye contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerate waste.

Section 7: HANDLING AND STORAGE

Handling:

1. Do not allow battery terminates to contact each other, or contact with other metals.
2. Do not put the cell or battery into a fire or heat it. Do not solder the cell directly. Do not use or leave the cell or battery in a place near fire or heaters.
3. Do not expose the battery to excessive physical shock or vibration.
4. Do not immerse, throw, and wet a battery in water.
5. Short-circuiting should be avoided. Short circuit will reduce the life of the battery and can lead to ignition of surrounding materials. Physical contact with to short- circuited battery can cause skin burn.
6. The batteries should not be opened, destroyed or incinerate, since they may leak or rupture and release to the environment the ingredients that they contain in the hermetically sealed container.
7. Place the cell beyond the child packing and container.
8. Do not connect the battery directly to an electric outlet or cigarette socket in a car.
9. Be sure to use the specified charger for battery, and follow the charging instructions correctly.
10. Do not mix old and new batteries together, neither with Ni-Cd, dry batteries or another manufacturer batteries or product.

Storage:

1. Batteries should be separated from other materials and stored in a noncombustible, well ventilated, sprinkler-protected structure with sufficient clearance between walls and battery stacks.
2. Keep the sample in the cool, dry and well-ventilated place (temperature: -20~30 ºC, humidity: 45~85%). Do not exposure to direct sunlight for long periods. Keep away from fire and heating sources. Don't keep the samples with oxidizer and acid.
3. Equip with relevant types and quantities of the extinguishment instruments. The storage place should be equipped with suitable shelter materials for divulgence handling.
4. For rechargeable battery, charge the battery every 6 months to the amount specified by the manufacture, even if the battery is not used.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Measures to control exposure

Eye / face protection	Not necessary under conditions of normal use. Wear protective glasses if handling a leaking or ruptured battery.
Hand protection	Not necessary under conditions of normal use. Wear chemical resistant rubber glove.
Skin and body protection	Not necessary under conditions of normal use. Wear fireproofing, gas defense clothes in case of handling a leaking or ruptured battery.
Respiratory protection	Not necessary under conditions of normal use. Wear self-contained breathing filtermask if the density exceed in the air. Wear breathing apparatus under the condition of emergency rescue or evacuation.
Engineering controls:	Keep away from heat and open flame. Supply with sufficient partial air exhaust. Store in a cool, dry place.
Other Protections:	No smoking, dining and drinking water in the workplace. Keep good habit of hygiene.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information about basic physical and chemical properties

Properties	Value
Appearance:	Not available
Physical state:	Solid
Form:	Not available
Odor:	Odorless
Solubility:	Insoluble in water

Section 10: STABILITY AND REACTIVITY

10.1. Distribution of Ban Explosives, inflammables, strong oxidants and corrosives.

10.2. Chemical stability Stable under normal temperature and pressure.

10.3. Conditions to avoid Fire source, heating source, disassemble, external short circuit, crushes, deformation, high temperature above 100°C, direct sunlight and high humidity, immerse in water or overcharge.

10.4. Hazardous Polymerization Will not occur.

10.5. Hazardous decomposition products Metal oxides, carboxyl compound such as CO, CO2, etc.

Section 11: TOXICOLOGICAL INFORMATION

Acute Toxicity No information is available

Sub-acute and Chronic Toxicity No information is available

Irritation Data The internal battery materials may cause irritation to eyes and skin

Sensitization The liquid in the battery may cause sensitization to some person

Mutagenicity No information is available

Carcinogenicity No information is available

Others Since the materials in this battery are sealed in the can, the potential for exposure to the components of the battery is negligible, when the battery is used as directed. However technical or electrical abuse of the battery may result in the release of battery contents.

Section 12: ECOLOGICAL INFORMATION

12.1. Ecological Toxicity No information is available

12.2. Persistence and degradability No data available

12.3. Bioaccumulation Potential No information is available

12.4. Mobility in soil No data available

12.5. Other harmful effects Don’t abandon the battery into environment, may cause water or soil pollution

Section 13: DISPOSAL CONSIDERATIONS

Appropriate Method of Substance:

The battery should be completely discharged prior to disposal in order to prevent short circuit.
The battery contains recyclable materials, and it is suggested recycle.
Refer to National or Local regulations before handling.
Disposal of the battery should be performed by permitted, professional disposal firms knowledgeable in National or Local regulations of hazardous waste treatment and hazardous waste transportation.

Section 14: INFORMATION REGARDING TRANSPORT

General packaging requirement:
1. The cells or batteries must be protected so as to prevent short circuits.
2. The cells or batteries or equipment must be packed in suitable strong outer packaging.
3. If batteries contained in equipment, equipment must be secured against movement within the outer packaging and be packed so as to prevent accidental activation.

Air transportation, according to IATA-DGR 65th Edition

UN Number + PSN	**UN 3090, LITHIUM METAL BATTERIES**
Hazard Class	Class 9
Packaging requirement	Strong package, packaging according to PACKING INSTRUCTION 968, section IB

Sea transportation, according to IMO IMDG Code (41-2022)

UN Number + PSN	**UN 3090, LITHIUM METAL BATTERIES**
Hazard Class	Not restricted, according to sp188
Package instruction	Strong package, Packaging in accordance to corresponding requirements of sp188
EmS No.	F-A, S-I

Road transportation, according to ADR-2023

UN Number + PSN	**UN 3090, LITHIUM METAL BATTERIES**
Hazard Class	Not restricted, according to sp188
Package instruction	Strong package, Packaging in accordance to corresponding requirements of sp188
EmS No.	F-A, S-I

Section 15: REGULATORY INFORMATION

Dangerous Goods Regulation (DGR)
Recommendations on the Transport of Dangerous Goods Model Regulations
International Maritime Dangerous Goods (IMDG)
Occupational Safety and Health Act (OSHA)
Toxic Substances Control Act (TSCA)
Code of Federal Regulations (CFR)
Technical Instructions for the Safe Transport of Dangerous Goods
California Proposition 65
Superfund Amendments and Reauthorization Act Title III (302/311/312/313) (SARA)
Globally Harmonized System of Classification and Labeling of Chemicals(GHS)
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.

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 Commision
EC50:	Median effective concentration
IARC:	International Agengy 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

Date of issue 2024-08-21

Revision date N/A

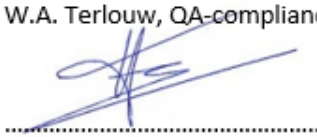
Reason for revision: N/A

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



.....
Signature