# SAFETY DATA SHEET

## POWERMAX 3V LITHIUM COIN BATTERY

**Infosafe No.: LQBQF**
**ISSUED Date : 30/05/2023**
**ISSUED by: General Motors LLC Australia and New Zealand Pty Ltd**

### Section 1 - Identification

**Product Identifier**
POWERMAX 3V LITHIUM COIN BATTERY

**Company Name**
General Motors LLC Australia and New Zealand Pty Ltd

**Address**
Australia: 80 Turner Street, Port Melbourne, Vic
New Zealand: 2/118 Savill Drive, Mangere East, Auckland

**Telephone/Fax Number**
Tel: Aust: 1800 00 4678

**Emergency Phone Number**
Aust: 1800 638 556 / NZ: 0800 154 666 (24hrs)

**Recommended use of the chemical and restrictions on use**
Lithium metal batteries

**Other Names**

| Name |
| --- |
| POWERMAX 3V LITHIUM BUTTON BATTERY |
| POWERMAX SOURCED ACDELCO BUTTON BATTERY |
| 3V LITHIUM COIN BATTERY |
| 19380190- CR2450 |
| 19380191- CR1620 |
| 19380192- CR1616 |
| 19380193- CR2025 |
| |

| |
|---|
| 19380194- CR2032 |
| 19380190- CR2450- 3V- LITHIUM- COIN- BATTERY |
| 19380191- CR1620- 3V- LITHIUM- COIN- BATTERY |
| 19380192- CR1616- 3V- LITHIUM- COIN- BATTERY |
| 19380193- CR2025- 3V- LITHIUM- COIN- BATTERY |
| 19380194- CR2032- 3V- LITHIUM- COIN- BATTERY |

**Additional Information**
Supplier:
CHANGZHOU LITHIUM BATTERIES LTD
No.35, Taihu Rd (West), New-north District, Changzhou, Jiangsu, PRC. 213000
Tel: +86-519-85100885
Fax: +86-519-85111088
Emergency phone number: +86-519-85100885

## Section 2 - Hazard(s) Identification

**GHS classification of the substance/mixture**
Not classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.
Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)
Not classified as Hazardous according to the Hazardous Substances (Hazard Classification) Notice 2020, New Zealand.
Classified as Dangerous Goods for transport according to the New Zealand Standard NZS 5433:2020 Transport of Dangerous Goods on Land.

## Section 3 - Composition and Information on Ingredients

**Ingredients**

| Name | CAS | Proportion |
|---|---|---|
| Stainless Steel | 12597- 68- 1 | 20- 55 % |
| manganese dioxide | 1313- 13- 9 | 25- 40 % |
| lithium | 7439- 93- 2 | <10 % |
| propylene carbonate | 108- 32- 7 | <10 % |
| 1, 2- dimethoxyethane | 110- 71- 4 | <10 % |

| | | |
|---|---|---|
| Polypropylene | 9003- 07- 0 | <10 % |
| Graphite | 7782- 42- 5 | <5 % |
| Lithium perchlorate | 7791- 03- 9 | <5 % |
| nickel | 7440- 02- 0 | 0- 1 % |
| Ingredients determined not to be hazardous | | Balance |

**Other Information**
Lithium content: up to 0.275 g depending on model.

## Section 4 - First Aid Measures

**Inhalation**
Not considered a potential route of exposure for intact product, when used as intended. However, if the sealed unit is damaged and exposure occurs, remove affected person from contaminated area. Keep at rest until recovered. If symptoms develop and/or persist seek medical attention.

**Ingestion**
The battery can cause severe or fatal injuries in 2 hours or less if it is swallowed or placed inside any part of the body. SEEK IMMEDIATE MEDICAL ATTENTION

**Skin**
Not considered a potential route of exposure for intact product, when used as intended.
If the sealed unit is damaged and exposure occurs: Wash affected area thoroughly with soap and water. If symptoms develop seek medical attention.

**Eye**
Not considered a potential route of exposure for intact product, when used as intended. If the sealed unit is damaged and exposure occurs: If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing for several minutes until all contaminants are washed out completely. If symptoms develop and/or persist seek medical attention.

**First Aid Facilities**
Eyewash and normal washroom facilities.

**Advice to Doctor**
Treat symptomatically.

**Other Information**
For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126; New Zealand 0800 764 766) or a doctor at once.

## Section 5 - Firefighting Measures

**Suitable Extinguishing Media**
Carbon dioxide or dry chemical.

Plenty of cold water is also effective to cool the surrounding area and control the spread fire. But hydrogen gas may be evolved by the reaction of water and lithium and it can form an explosive mixture. Therefore in the case that lots of lithium batteries are burning in a confined space, use a smothering agent.

**Unsuitable Extinguishing Media**
Do not use water jet.

**Hazards from Combustion Products**
Under fire conditions this product may emit toxic and/or irritating fumes and gases.

**Specific hazards arising from the chemical**
Electrolyte and lithium metal are inflammable. Risk of explosion by fire if batteries are disposed in fire or heated.

**Hazchem Code**
4W

**Decomposition Temperature**
Not available

**Precautions in connection with Fire**
Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. In case of fire the product may be violently or explosively reactive. Use water spray to disperse vapours. This product should be prevented from entering drains and watercourses.

## Section 6 - Accidental Release Measures

**Emergency Procedures**
Wear appropriate personal protective equipment and clothing to prevent exposure. Collect the material and place into a suitable labelled container. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

## Section 7 - Handling and Storage

**Precautions for Safe Handling**
Avoid exposure. Use only in a well ventilated area. Keep containers tightly closed. Prevent the build up of dusts, mists or vapours in the work atmosphere. Maintain high standards of personal hygiene i.e. Washing hands prior to eating, drinking, smoking or using toilet facilities.
When packing the batteries, do not allow battery terminals to contact each other, or contact with other metals. Be sure to pack batteries by providing partitions in the packaging box, or in a separate plastic bag so that the single batteries are not mixed together. Use strong material for packaging boxes so that they will not be damaged by vibration, impact, dropping and stacking during their transportation. Do not short-circuit, recharge, deform, throw into fire or disassemble. Never disassemble a battery.

**Conditions for safe storage, including any incompatibilities**
Store in a cool, dry, well-ventilated area, out of direct sunlight. Keep container tightly closed. Ensure that storage conditions comply with applicable local and national regulations.
Do not store in disorderly fashion, or allow metal objects to be mixed with stored batteries.
The cells and batteries shall not be stored in high temperature, the maximum temperature allowed is 60°C for a short period during the shipment, otherwise the cells maybe leakage and can result in shortened service life.

## Section 8 - Exposure Controls and Personal Protection

**Occupational exposure limit values**
No exposure standards have been established for this material. However, the available exposure limits for ingredients are listed below:
Australia:

Graphite:

TWA: 3 mg/m³

Nickel:
TWA: 1 mg/m³
NOTE: Carc. 2

TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

'Carc. 2': Suspected human carcinogen.
Source: Safe Work Australia

New Zealand:

Graphite:

TWA: 3 mg/m³ (respirable)

Nickel:
TWA: 0.005 mg/m³ (respirable)
NOTE: Sen, Carcinogen category 2

TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

'Carcinogen category 2': Suspected human carcinogen.
'Sen': A substance that can ‘sensitise’ the respiratory system, inducing a state of hypersensitivity to it, so that on subsequent exposures, an allergic reaction can occur (which would not develop in non-sensitised individuals). It is uncommon to become sensitised to a compound after just a single reaction to it.
Source: Workplace Exposure Standards and Biological Exposure Indices

**Biological Monitoring**
Name: Nickel and inorganic compounds
Determinant: 1. Nickel in urine after exposure to elemental Nickel and poorly soluble compounds
2. Nickel in urine after exposure to soluble compounds
Value: 1. 5 µg/l

2. 30 µg/l
Sampling time: Post shift at end of workweek
Source: American Conference of Industrial Hygienists (ACGIH).

**Control Banding**
Not available

**Engineering Controls**
None required, when used as intended.

**Respiratory Protection**
None required, when used as intended.
Where exposure to battery content is possible: If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable dust/particulate filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements.
Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

**Eye and Face Protection**
None required, when used as intended.
Where exposure to battery content is possible: Safety glasses with side shields, chemical goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform to relevant regulations.
Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 (series) - Eye Protectors for Industrial Applications.

**Hand Protection**
None required, when used as intended.
Where exposure to battery content is possible: Wear gloves of impervious material (rubber gloves). Final choice of appropriate gloves will vary according to individual circumstances. i.e. methods of handling or according to risk assessments undertaken. Occupational protective gloves should conform to relevant regulations.
Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

**Thermal Hazards**
No further relevant information available.

**Body Protection**
Suitable protective work wear, e.g. cotton overalls buttoned at neck and wrist is recommended.

## Section 9 - Physical and Chemical Properties

| Properties | Description | Properties | Description |
|---|---|---|---|
| **Form** | Article - Battery | **Appearance** | Coin shape |
| **Colour** | Not available | **Odour** | Odourless |
| **Melting Point** | Not available | **Boiling Point** | Not available |
| **Decomposition Temperature** | Not available | **Solubility in Water** | Not available |
| **Specific Gravity** | Not available | **pH** | Not available |
| **Vapour Pressure** | Not available | **Relative Vapour Density (Air=1)** | Not available |
| **Evaporation Rate** | Not available | **Odour Threshold** | Not available |
| **Viscosity** | Not available | **Volatile Component** | Not available |
| | | | |

| | | | |
|---|---|---|---|
| **Partition Coefficient: n-octanol/water (log value)** | Not available | **Flash Point** | Not available |
| **Flammability** | Flammable liquid inside battery | **Auto-Ignition Temperature** | Not available |
| **Explosion Limit - Upper** | Not available | **Explosion Limit - Lower** | Not available |
| **Explosion Properties** | Not available | **Oxidising Properties** | Not available |

## Section 10 - Stability and Reactivity

**Reactivity**
Reacts with incompatible materials.

**Chemical Stability**
Stable under normal conditions of storage and handling.

**Possibility of hazardous reactions**
Not available

**Conditions to Avoid**
Extremes of temperature and direct sunlight.

**Incompatible Materials**
Water

**Hazardous Decomposition Products**
Thermal decomposition may result in the release of toxic and/or irritating fumes including hydrogen.

**Hazardous Polymerization**
Will not occur

## Section 11 - Toxicological Information

**Toxicology Information**
No toxicity data available for this material.

**Ingestion**
The battery can cause severe or fatal injuries in 2 hours or less if it is swallowed or placed inside any part of the body.

**Inhalation**
No adverse effects expected.
Exposure to contents of battery: May cause irritation of the nose, throat and respiratory system.

**Skin**
Unlikely due to form of product.
Exposure to contents of battery: May be irritating to skin. The symptoms may include redness, itching and swelling.

**Eye**
Unlikely due to form of product.

Exposure to contents of battery: May be irritating to eyes. The symptoms may include redness, itching and tearing.

**Respiratory Sensitisation**
Not expected to be a respiratory sensitiser.

**Skin Sensitisation**
Not expected to be a skin sensitiser.

**Germ Cell Mutagenicity**
Not considered to be a mutagenic hazard.

**Carcinogenicity**
Not considered to be a carcinogenic hazard.
Nickel is listed as a Group 2B: Possibly carcinogenic to humans according to International Agency for Research on Cancer (IARC).
Polypropylene is listed as a Group 3: Not classifiable as to carcinogenicity to humans according to International Agency for Research on Cancer (IARC).

**Reproductive Toxicity**
Not considered to be toxic to reproduction.

**STOT - Single Exposure**
Not expected to cause toxicity to a specific target organ.

**STOT - Repeated Exposure**
Not expected to cause toxicity to a specific target organ.

**Aspiration Hazard**
Not expected to be an aspiration hazard.

## Section 12 - Ecological Information

**Ecotoxicity**
No ecological data are available for this material.

**Persistence and degradability**
Not available

**Mobility**
Not available

**Bioaccumulative Potential**
Not available

**Other Adverse Effects**
Not available

**Environmental Protection**
Do not discharge this material into waterways, drains and sewers.

**Hazardous to the Ozone Layer**
This product is not expected to deplete the ozone layer.

## Section 13 - Disposal Considerations

**Disposal Considerations**
Return whole scrap batteries to the distributor, manufacturer or a licensed battery recycler. To minimise personal exposure to the chemical, refer to Section 8—Exposure controls and personal protection.

## Section 14 - Transport Information

**Transport Information**
Australia Road and Rail Transport (ADG Code):
This material is classified as Dangerous Goods Class 9 Miscellaneous Dangerous Goods
Class 9: Miscellaneous substances Dangerous Goods are incompatible in a placard load with any of the following:
Class 1: Explosives (when the class 9 substance is a fire risk substance) Division 5.1: Oxidising substances (when the class 9 substance is a fire risk substance) and
Division 5.2: Organic peroxides (when the class 9 substance is a fire risk substance)

New Zealand Road and Rail Transport (NZS 5433):
This material is classified as Dangerous Goods Class 9 Miscellaneous Dangerous Goods
Class 9: Miscellaneous substances Dangerous Goods are incompatible in a placard load with any of the following:
Class 1: Explosives (when the class 9 substance is a fire risk substance) Division 5.1: Oxidising substances (when the class 9 substance is a fire risk substance) and
Division 5.2: Organic peroxides (when the class 9 substance is a fire risk substance)

Marine Transport (IMO/IMDG):
Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.
UN No.: 3090
Proper Shipping Name: LITHIUM METAL BATTERIES
DG Class: 9
Packaging Group: -
EMS No.: F-A, S-I
Special Provisions: 188, 230, 310, 376, 377, 384, 387

Air Transport (ICAO/IATA):
Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.
UN No: 3090
Proper Shipping Name: LITHIUM METAL BATTERIES
Class: 9
Packing Group: -
Label: Miscellaneous Lithium batt
Packing Instruction: Forbidden (For passenger and cargo aircraft)
Packing Instruction: See 968 (For cargo aircraft only)
Special Provisions: A88, A99, A154, A164, A183, A201, A206, A213, A334, A802

**ADG U.N. Number**
3090

**ADG Proper Shipping Name**
LITHIUM METAL BATTERIES

**ADG Transport Hazard Class**
9

**Hazchem Code**
4W

**IERG Number**
26

**Special Precautions for User**
Not available

**Additional Information**
This product can be transported as non dangerous good when transported by road, rail (ADG) and marine (IMDG) if it qualifies under Special Provision 188.

**IMDG Marine pollutant**
No

**Transport in Bulk**
Not available

**Additional Information**
This product can be transported as non dangerous good when transported by road, rail (ADG) and marine (IMDG) if it qualifies under Special Provision 188.

## Section 15 - Regulatory Information

**Regulatory Information**
Not classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) including Work, Health and Safety Regulations, Australia.
Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).
Not classified as Hazardous according to the Hazardous Substances (Hazard Classification) Notice 2020, New Zealand.

**Poisons Schedule**
Not Scheduled

**Montreal Protocol**
Not listed

**Stockholm Convention**
Not listed

**Rotterdam Convention**
Not listed

**International Convention for the Prevention of Pollution from Ships (MARPOL)**

Not available

**Agricultural and Veterinary Chemicals Act 1994**
Not available

**Basel Convention**
Not available

## Section 16 - Any Other Relevant Information

**Date of Preparation**
SDS Created: May 2023

**Version Number**
1.0

**Literature References**
Australia:
Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice.
Standard for the Uniform Scheduling of Medicines and Poisons.
Australian Code for the Transport of Dangerous Goods by Road & Rail.
Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
Code of Practice for Supply Diversion into Illicit Drug Manufacture.
National Code of Practice for Chemicals of Security Concern.
Agricultural Compounds and Veterinary Chemicals Act.
International Agency for Research on Cancer (IARC) Monographs.
Montreal Protocol on Substances that Deplete the Ozone Layer.
Stockholm Convention on Persistent Organic Pollutants (POPs).
Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade.
Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.
International Air Transport Association (IATA) Dangerous Goods Regulations.
International Maritime Dangerous Goods (IMDG) Code.
Workplace exposure standards for airborne contaminants.
Adopted biological exposure determinants, American Conference of Industrial Hygienists (ACGIH).
Globally Harmonised System of Classification and Labelling of Chemicals (7th revised edition).
Code of Practice: Managing Noise and Preventing Hearing Loss at Work.

New Zealand:
Hazardous Substances and New Organisms Act (1996).
Health and Safety at Work (Hazardous Substances) Regulations {2017}.
Workplace Exposure Standards and Biological Exposure Indices.
Agricultural Compounds and Veterinary Medicines Act (1997).
Montreal Protocol on Substances that Deplete the Ozone Layer.
Stockholm Convention on Persistent Organic Pollutants (POPs).

Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade.
Transport of Dangerous goods on land NZS 5433.
Recommendations on the Transport of Dangerous Goods - Model Regulations.
Dangerous Goods Emergency Action Code List.
Hazardous Substances (Safety Data Sheets) Notice (2017). (EPA Consolidation)
Assigning a hazardous substance to a group standard.
Adopted biological exposure determinants, American Conference of Industrial Hygienists (ACGIH).

**User Codes**

| User Title Label | User Codes |
|---|---|
| Part Number | 19380190 |
| Part Number | 19380191 |
| Part Number | 19380192 |
| Part Number | 19380193 |
| Part Number | 19380194 |

## END OF SDS