GP Batteries

Material Safety Data Sheet Model No.: GP Lithium button cell

IDENTITY (As Used on Label and List) Lithium Battery	Note : Blank spaces are not permitted if any item is not applicable or no information is available, the space must be marked to indicate that.

Section 1- Identification

Product Name	Lithium Battery
Manufacturer's name, address, telephone number	Manufacturer: GP Batteries International Ltd.
	Address: 7/F, Building 16W, 16 Science Park West Avenue, Hong Kong Science Park, New Territories, Hong Kong
	Tel: +852-24843111
Emergency phone number	Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-527-3887
Date of prepared and revision	Jan 1, 2021

Section 2 – Hazards Identification

GHS Classification: N/A

The battery is sealed hermetically. Thus, the ingredients have no hazard potential, except the battery is violated or dismantled. Electrolyte and Lithium Metal are inflammable, if batteries are disposed in fire or heated above 100℃, Stacking, or jumbling batteries may cause external short circuits, heat generation, fire or explosion. Vapor generated from burning batteries, may irritate eyes, skin and throat.

Section 3 – Composition/Information On Ingredients

INGREDIENT NAME	CAS#	% Weight
Polypropylene	9003-07-0	6.5%
Lithium	7439 - 93 - 2	2 %
Propylene Carbonate	108 - 32 - 7	5%
Manganese Dioxide	1313 - 13 - 9	26.5%
Methylal	109-87-5	7%
Lithium Perchlorate	7791 - 03 - 9	2.5 %
Graphite	7782 – 42 - 5	7.5 %
Steel	12597-69-2	43 %

Section 4 – First Aid Measures

a) Description of necessary measure, subdivided according to different routes of exposure, i.e., inhalation. Skin and eye contact, and ingestion

Inhalation	Fumes can cause respiratory irritation. Remove to fresh air and consult a physician.
Skin Contact	Immediately flush skin with soap and plenty of water. If itch or irritation by chemical burn persists, consult a physician.
Eye Contact	Immediately flush eye with flowing lukewarm water for a minimum of 15 minutes. Consult a physician immediately.
Ingestion	If swallowing a battery, consult a physician immediately. If content come into mouth, immediately rinse by plenty of water and consult a physician.

b) Most important symptoms/ effects, acute and delayed:
N/A

c) Indication of immediate medical attention and special treatment needed, if necessary:
Wash with clean water immediately

Section 5 – Fire-Fighting Measures

In case of fire where lithium batteries are present, flood area with water or smother with a Class D fire extinguishant appropriate for lithium metal, such as lith-X. Water may not extinguish burning batteries but will cool the adjacent batteries and control the spread of fire. Burning batteries will burn themselves out. Virtually all fires involving lithium batteries can be controlled by flooding with water. However, the contents of the battery will react with water and form hydrogen gas. In a confined space, hydrogen gas can from an explosive mixture. In this situation, smothering agents are recommended. A smothering agent will extinguish burning lithium batteries.

Emergency Responders should wear self-contained breathing apparatus. Burning lithium manganese dioxide battery produce toxic and corrosive lithium hydroxide fumes.

Section 6 – Accidental Release Measures

Respiratory protection (Special type):	Avoid exposure to electrolyte fumes from open or leaking batteries
Ventilation:	Room ventilation may be required in areas where there are open or leaking batteries
Protective Gloves:	Use neoprene or natural rubber gloves if handling an open or leaking battery, battery materials should be collected in a leak-proof container.
Eye Protection:	Water safety glasses with side shields if handling an open or leaking battery

Section 7 – Handling and Storage

Store in a cool, well ventilated area. Elevated temperatures can result in shortened battery life. In locations that handle large quantities of lithium batteries, such as warehouse, lithium batteries should be isolated from unnecessary combustible.

Mechanical Containment: If potting or sealing the battery in an airtight or watertight container is required, consult your GP Batteries International Ltd representative for precautionary suggestions. Do not obstruct safety release vents on batteries, Encapsulation of batteries will not allow cell venting and can cause high pressure rupture.

Handling: Accidental short circuit for a few seconds will not seriously affect the battery. Prolonged short circuit will cause the battery to lose energy, generate significant heat and can cause the safety release vent to open. Source of short circuits include jumbled batteries in bulk containers, metal jewelry, metal covered tables or metal belts used for assembly of batteries into devices. Damaging a lithium battery may result in an internal short circuit.

The contents of an open battery, including a vented battery, when exposed to water, may result in a fire and/or explosion. Crushed or damaged batteries may result in a fire.

If soldering or welding to the battery is required, consult us for proper precaution to prevent seal damage or short circuit.

Do not recharge.

Do not puncture or abuse.

Section 8– Exposure Control / Person Protection

Respiratory protection (Special type):	N/A
Ventilation:	N/A
Protective Gloves:	N/A
Eye Protection:	N/A
Other Protective Clothing	N/A

Section 9 - Physical / Chemical Properties

Boiling Point(°C):	N/A	Specific Gravity (H2O =1)	N/A
Vapor Pressure (mm Hg @ 25°C):	N/A	Evaporation Rate (Butyl Acetate = 1)"	N/A
Vapor Density (AIR = 1):	N/A	Melting Point	N/A
Solubility in Water (% by Weight):	N/A		
Appearance and Odor:		Button Shape. Odorless	

Section 10 – Stability and Reactivity

Stable or Unstable:	Stable
Incompatibility (Materials to avoid)	N/A
Hazardous Decomposition products:	N/A
Conditions to avoid:	Stable

Lithium manganese batteries do not meet an of the criteria established in 40CFR 261.2 for reactivity

Section 11 – Toxicological Information

N/A

Section 12 – Ecological Information

N/A

Section 13 – Disposal Considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging.

The battery may be regulated by national or local regulation. Please follow the instructions of proper regulation.

If you choose to retain discharged batteries and recycle be sure to store them out of the reach of children and pets.

Do not store with adult medications of similar size of shape.

Section 14 – Transportation Information

Lithium primary button cells manufactured by GP Batteries International Ltd. are considered to be UN3090 Lithium Metal Batteries and are tested according to UN38.3 of the UN Manual Of Tests and Criteria for compliance with the requirements of special provisions ADR188, IMDG 188, as well as the requirements of DOT/49 CFR chapter 173.185,and the General Requirements of IATA DGR packing instruction 968. Positive test results as well as other relevant information required for transportation are stated in dedicated Declarations of Conformity.

Transportation of cells or batteries packed with equipment or contained in equipment have to follow the appropriate regulation: UN 3091.

Compilation of transport requirements for Lithium batteries can be found in:

www.lithium-batterie-serve.de/en

www.iata.org/whatwedo/cargo/dgr/documents/lithium-battery-shipping-guidelines.pdf

The packaging shall be adequate to avoid mechanical damage during transport, handling and stacking. The materials and pack design shall be chosen so as to prevent the development of unintentional electrical conduction, corrosion of the terminals and ingress of moisture.

Shipping Mode	Lithium Content	Net Quantity wt per pack	Battery Model			
Air	≤ 0.3g/cell	≤ 2.5Kg	All Lithium Coin	NO	YES	YES
Land/Sea	ALL	ALL	ALL	NO	YES	YES

*** In the event of an incident during transportation call 1-900-424-9300 (North-America/ 1-703-527-3887 (international), or 911 if case serious.*

The Batteries in all forms of transportation (e.g. Truck, air, or sea) must be packaged in a safe and responsible manner. Regulatory concerns form all agencies for safe packaging require that batteries be packaged in s manner that prevents short circuits and be contained in (Strong Carton / Packaging) that prevents spillage of contents.

The lithium button cell are exempt from the classification as dangerous goods as they meet the requirements of the special provisions listed below (Essentially, they are properly packaged and labeled, Contains less than 1 gram of lithium and pass the tests defined in UN model regulation section 38.3).

Regulatory Parties	Special Provisions
ADR	188,230,310,636,656
IMDG	188,230,310,957
UN	UN3090, UN3091
US DOT	29,A54,A101,A100
IATA, ICAO	Packaging Instructions 968 – 970 (section II)

Ref: Summary of Packing Instruction (2021 IATA Dangerous Goods Regulations 62nd Edition) the minimum requirements necessary to transport as non-restricted goods are as follows

1. For a lithium metal/lithium alloy cell, the lithium content is not more than 1g.
2. Each package must be displayed a battery handling label. (Tel no and emergency call must be printed on label).
3. Each consignment must be accompanied with a declaration of non-dangerous goods document.
4. The Original package must be capable of with standard a 1.2m drop test.

Lithium Content ***鋰之含量***

Model No	Lithium / g	Model No:	Lithium / g
CR2450	0.180	CR2430	0.090
CR2330	0.080	CR2320	0.043
CR2032	0.070	CR2025	0.050
CR2016	0.030	CR1632	0.040
CR1616	0.020	CR1620	0.030
CR1220	0.010	CR1225	0.0.15

Section 15 – Regulatory Information

Special requirement be according to the local regulations.

Section 16 – Other Information

The data in this Material Safety Data Sheet relates only to the specific material designated herein. However, the data is provided without any warranty; expressed or implied, regarding its correctness or accuracy. It is the user's responsibility to assume liability on loss, injury, damage, or expense resulting from improper use of this product. We urge you to make this information available as appropriate in your organization and to any others with whom you arrange to handle this product.
In California only, packages that contain CR Li coin cells and the Owner'/Operation Instructions of Products that contains CR Coin cells must include the following statement: Perchlorate Material – Special handling may apply.
See below URL: www.dtsc.ca.gov/hazardouswaste/perchlorate.
The effective date for such Perchlorate label is July 1,2006 for non-consumer products and January 1,2007 for consumer products