# MSDS

## MATERIAL SAFETY DATA SHEET

**Prepared For** : [redacted]

**Prepared By** : **Shenzhen LCS Compliance Testing Laboratory Ltd.**
**Room 101, 201, Building A and Room 301, Building C,**
**Juji Industrial Park, Yabianxueziwei, Shajing Street,**
**Bao'an District, Shenzhen, Guangdong, China**

**Issue Date** : **2022.01.01**

**Report Number** : **KA2111080695A**

**Written by:** Hua Quan **Approved by:** LCS TESTING LABORATORY APPROVED

# Material Safety Data Sheet

REPORT NO.: KA2111080695A

** The MSDS is prepared based on the information provided by client. The contents and formats of this MSDS are revised as per client's request.*

## Section 1-Chemical Product and Company Identification

| | |
|---|---|
| **Product Name** | Polymer Lithium ion Battery |
| **Model** | 501230 |
| **Trade Mark** | N/A |
| **Ratings** | 3.7V, 140mAh, 0.518Wh |
| **Weight** | 3.2g |
| **Manufacturer** | [redacted] |
| **Manufacturer address** | [redacted] |
| **Emergency Telephone** | [redacted] |
| **Fax** | [redacted] |

## Section 2- Composition Information

| Chemical Composition | CAS No. | Weight (%) | Trade Secret |
|---|---|---|---|
| Lithium cobaltate | 12190-79-3 | 15 - 40 | * |
| Graphite | 7782-42-5 | 10 - 30 | * |
| Phosphate(1-), hexafluoro-, lithium | 21324-40-3 | 10 - 30 | * |
| Copper | 7440-50-8 | 7-13 | * |
| Aluminium | 7429-90-5 | 5-10 | * |
| Nickel | 7440-02-0 | 1-5 | * |

* * * The exact percentage (concentration) of composition has been withheld as a trade secret.

## Section 3- Hazards Identification

| | |
|---|---|
| **Emergency overview:** | N/A |
| **Classification according to GHS** | Not a dangerous substance according to GHS |
| **Label elements:** | |
| Hazard pictogram(s) | Not Applicable |
| Signal word | Not Applicable |
| Hazard statement(s) | Not Applicable |

| Precautionary statement(s): | |
|---|---|
| Prevention | Not Applicable |
| Response | Not Applicable |
| Disposal | Not Applicable |
| **Environmental hazards:** | No relevant information |
| **Important symptoms:** | See section 11 for more information |

## Section 4- First Aid Measures

| | |
|---|---|
| **Eye contact** | Flush eyes with plenty of water for least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid. |
| **Skin contact** | Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid. |
| **Inhalation** | Remove from exposure and move to fresh air immediately. Use oxygen if available. |
| **Ingestion** | Give at least 2 glasses of milk or water. Induce vomiting unless patient is unconscious. Call a physician. |

## Section 5- Fire Fighting Measures

| | |
|---|---|
| **Flash Point** | N/A |
| **Auto-Ignition Temperature** | N/A |
| **Extinguishing Media** | $H_2O$, $CO_2$ |
| **Special Fire-Fighting Procedures** | Self-contained breathing apparatus |
| **Unusual Fire and Explosion Hazards** | Cell may vent when subjected to excessive heat-exposing battery contents |
| **Hazardous Combustion Products** | Carbon monoxide, carbon dioxide, lithium oxide fumes. |

## Section 6- Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures:**
If the battery is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. The preferred response is to leave the area and allow the vapors to dissipate. Avoid skin and eyes contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerated. If leakage of the battery happens, liquid could be absorbed with sand, earth or other inert substance and contaminated area should be ventilated meantime.

**Environment precautions:**
Do not allow product to reach sewage system or any water source.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.

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| **Methods and material for containment and cleaning up:**<br>If battery casing is dismantled, small amounts of electrolyte may leak. Collect all released material in a plastic lined container. Dispose off according to the local law and rules. Avoid leached substances to get into the earth, canalization or waters. |

## Section 7- Handling and Storage

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|---|---|
| **Handling** | The battery 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.<br>Do not short circuit terminals, or over charge the battery, forced over-discharge, throw to fire.<br>Do not crush or puncture the battery, or immerse in liquids. |
| **Storage** | Avoid mechanical or electrical abuse. Storage preferably in cool, dry and ventilated area, which is subject to little temperature change. Storage at high temperatures should be avoided.<br>Do not place the battery near heating equipment, nor expose to direct sunlight for long periods. |
| **Other Precautions** | The battery may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity. |

## Section 8- Exposure Controls/Personal Protection

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|---|---|
| **Engineering Controls** | Use local exhaust ventilation or other engineering controls to control sources of dust, mist, fumes and vapor.<br>Keep away from heat and open flame. Store in a cool, dry place. |
| **Personal Protective Equipment** | Respiratory Protection: Not necessary under normal conditions.<br>Skin and body Protection: Not necessary under normal conditions, Wear suitable protective clothing and gloves if handling an open or leaking battery.<br>Hand protection: Wear suitable gloves if handling an open or leaking battery.<br>Eye Protection: Not necessary under normal conditions, Wear safety glasses if handling an open or leaking battery. |
| **Other Protective Equipment** | Have a safety shower and eye wash fountain readily available in the immediate work area. |
| **Hygiene Measures** | Do not eat, drink, or smoke in work area. Maintain good housekeeping. |

## Section 9- Physical and Chemical Properties

| | |
|---|---|
| **Form** | Solid |
| **Color** | Silver |
| **Odour** | Not Applicable |
| **pH** | Not Applicable |
| **Melting point/freezing point** | Not Applicable |

| | |
|---|---|
| **Boiling Point and Boiling range** | Not Applicable |
| **Flash Point** | Not Applicable |
| **Upper/lower flammability or explosive limits** | Not Applicable |
| **Vapor Pressure** | Not Applicable |
| **Vapor Density** | Not Applicable |
| **Relative density** | Not Applicable |
| **Solubility in Water** | Not Applicable |
| **Auto-ignition temperature** | Not Applicable |
| **Decomposition temperature** | Not Applicable |
| **Evaporation rate** | Not Applicable |
| **Flammability (soil, gas)** | Not Applicable |
| **Viscosity** | Not Applicable |
| **Section 10- Stability and reactivity** | |
| **Stability** | The product is stable under conditions described Section 7 |
| **Conditions to Avoid** | Heat above 70°C or incinerate. Deform, Mutilate, Crush, Disassemble, Overcharge, Short circuit, Expose over a long period to humid conditions. |
| **Incompatible Materials** | Oxidizing agents, acid, base. |
| **Hazardous Decomposition Products** | Carbon monoxide, carbon dioxide, lithium oxide fumes. |
| **Possibility of Hazardous Reaction** | Not Applicable |
| **Section 11 – Toxicological Information** | |
| **Irritation** | Risk of irritation occurs only if the cell is mechanically, thermally or electrically abused to the point of compromising the enclosure. If this occurs, irritation to the skin, eyes and respiratory tract may occur. |
| **Sensitization** | Not Applicable |
| **Neurological Effects** | Not Applicable |
| **Teratogenicity** | Not Applicable |
| **Reproductive Toxicity** | Not Applicable |
| **Mutagenicity (Genetic Effects)** | Not Applicable |

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|---|---|
| **Toxicologically Synergistic Materials** | Not Applicable |
| **Section 12- Ecological Information** | |
| **Ecological Toxicity** | Not Applicable |
| **Mobility in soil** | Not Applicable |
| **Persistence and Degradability** | Not Applicable |
| **Bioaccumulation potential** | Not Applicable |
| **Other Adverse Effects** | Not Applicable |
| **Section 13- Disposal Considerations** | |
| **Product disposal recommendation** | Observe local, state and federal laws and regulations. |
| **Uncleaned packaging recommendation** | Disposal must be made according to official regulations |
| **Section 14 – Transport Information** | |
| **Label for conveyance** | Lithium Battery Label |
| **UN Number** | UN 3480 or UN 3481 |
| **Transport hazard class(es)** | 9 |
| **Packing group** | -- |
| **Marine pollutant** | No |
| **UN Proper shipping name** | Lithium ion Batteries (Including lithium ion polymer batteries)<br>Lithium ion Batteries packed with equipment (Including lithium ion polymer batteries)<br>Lithium ion Batteries contained in equipments (Including lithium ion polymer batteries) |
| **ICAO/IATA** | Can be shipped by air in accordance with international Civil Aviation Organization (ICAO), TI or International Air Transport Association (IATA) DGR 63rd Packing Instructions Section IB of 965 or Section II of 966 967 appropriately. |
| **IMDG CODE** | International Maritime Dangerous Goods Code under Special Provision 188<br>IMDG CODE (Amdt 40-20) |
| **ADR** | European Agreement concerning the International Carriage of Dangerous Goods by Road under Special Provision 188 |
| **RID** | Regulations concerning the International Carriage of Dangerous Goods by Rail under Special Provision 188 |

The dangerous goods regulations require that each battery design be subject to tests contained in Section 38.3 of the UN Manual of Tests and Criteria prior to being offered for transport.

## Section 15- Regulatory information

**Law information**

《Dangerous Goods Regulations》
《Recommendation on the Transport of Dangerous Goods Model Regulations》
《International Maritime Dangerous Goods》
《Technical Instructions for the Safe Transport of Dangerous Goods》
《Classification and code of dangerous Goods》
《Consumer Product Safety Act》(CPSA)
《Federal Environmental Pollution Control Act》(FEPCA)
《Resource Conservation and Recovery Act》(RCRA)
《European Agreement concerning the International Carriage of Dangerous》
《Regulations concerning the International Carriage of Dangerous》

In according with all Federal, State and local laws.

## Section 16- Other Information

The information above is believed to be accurate and represents the best information currently available to us. However, concorde makes no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. Although reasonable precautions have been taken in the preparation of the data contained herein, it is offered solely for your information, consideration and investigation. This material safety data sheet provides guidelines for the safe handling and use of this product; it does not and cannot advise on all possible situations, therefore, your specific use of this product should be evaluated to determine if additional precautions are required.

-- End of Report --