Safety Data Sheet

According to HCS-2012 APPENDIX D TO § 1910.1200

Date of Issue: Aug. 22, 2019 File No.: SDS-190821-001

1. IDENTIFICATION

(1) Product Identifier used on the lable

Name of Product: Rechargeable Li-ion Battery

(2) Other means of identification

Product Models: GB1S1PMH1V2

Nominal Voltage: 3.7V

Nominal capacity: 3100mAh

Nominal power: 11.47Wh

Weight: 47g

(3)Recommended use of the chemical and restriction on use

Recommended Use: LITHIUM ION BATTERIES

Restriction On Use: No information available

(4) Information of Supplier:

Company Name: NuEnergy Storage Technologies Limited.

Address: 17TH FLOOR, SIUYING COMMERCIAL BUILDING 151-155 QUEEN-S ROAD CENTRAL, HONG KONG

Zip code: 999077

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+86-13660376234

2. Hazard(s) Identification

(1) Classification:

This product is an article which is a sealed battery and as such does not requirements of the hazard communication standards unless ruptured. The sealed Li-ion Battery is not hazardous in normal use.

(2) Signal Word: No signal word

(3) Hazard Statements and Symbol

Hazard statement:	No hazard statement
Pictogram(s):	No pictogram
Precautionary Statements:	No Precautionary Statements

(4) Description of any hazards not otherwise classified

In case of mistreatment (abusive over charge, reverse charge, external short circuit) and in case of fault some electrolyte can leak from the cell through the safety device. In these case refer to the risk of the electrolyte. Contact with internal components may cause irritation or severe burns. Irritating to eyes, respiratory system and skin. The electrode materials are only hazardous, If the material are released by mechanical damaging of the cell or if exposed to fire.

Skin touch

Contact with battery electrolyte may cause burns and skin irritation.

Eye touch

Contact with battery electrolyte may cause burns. Eye damage is possible.

Inhalation

Inhalation of a large number of vapors or fumes released due to heat may cause respiratory.

Ingestion

Ingestion of battery contents may cause mouth, throat and intestinal burns and damage.

(5) Unknown Toxicity

No information available.

3. Composition/ Information on Ingredients

Chemical Name	CAS No.	Weigh%
Cobalt lithium manganese nickel oxide	182442-95-1	30
Carbon	7440-44-0	30
1,1-Difluoroethylene polymer	24937-79-9	10
Aluminium	7429-90-5	15
Copper	7440-50-8	15

4. First Aid Measures

(1) General Advice

First aid is Applicable only in the case of battery rupture.

(2) Description of necessary measures

Skin Contact:

Remove contaminated clothes and rinse the skin with plenty of water. Get medical advice/attention if you feel unwell.

Eye contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 30 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area. Get medical advice/attention if you feel unwell.

Inhalation of Vented Gas:

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/ attention if you feel unwell.

Ingestion:

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Call a physician or poison control center immediately.

(3) Most important symptoms and effects, acute and delayed

Contact with internal components may cause allergic skin sensitizations (rash) and irritate eyes, skin nose, throat, respiratory system. Cobalt compounds are considered to be possible human carcinogen(s).

(4) Indication of any immediate medical attention and special treatment needed

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

(1) Suitable Extinguishing Media

Use foam, dry powder or dry sand, CO_2 as appropriate.

(2) Unsuitable Extinguishing Media:

CAUTION: Use of water spray when fighting fire may be inefficient.

(3) Specific Hazards Arising from the chemical

Under fire conditions, batteries may burst and release hazardous decomposition products when exposed to fire situation. This could result in the release of flammable or corrosion materials.

Hazardous Combustion product:

CO, CO_2, Metals oxides, Irritating fumes.

(4) Special protective equipment and precautions for fire-fighters

Firefighters must wear fire resistant protective equipment and appropriate breathing apparatus. The staff must equipment filter mask (full mask) or isolated breathing apparatus. The staff must wear the clothes which can defense the fire and the toxic gases. Put out the fire in the upwind direction. Remove the container to open space as soon as possible. Spray water on the containers in the fireplace to keep them cool until finish extinguishment.

6. Accidental Release Measures

(1) Personal precautions, protective equipment and emergency procedures

If the battery material 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, dispose the case after the batteries cool and vapors dissipate. Provide maximum ventilation. Avoid contact with skin, eyes or inhalation of vapors.

(2) Methods and material for containment and cleaning up

If battery casing is dismantled, small amounts of electrolyte may leak. Prevent further leakage or spillage if safe to do so. 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.

7. Handling and Storage

(1) Precaution for safe handling

Always follow the warning information on the batteries and in the manuals of devices. Only use the recommended battery types. Keep batteries away from children. For devices to be used by children, the battery casing should be protected against unauthorized access. Unpacked batteries shall not lie about in bulk. In case of battery change always replace all batteries by new ones of identical type and brand. Do not swallow batteries. Do not throw batteries into water. Do not throw batteries into fire. Avoid deep discharge. Do not short-circuit batteries use recommended charging time and current.

(2) Conditions for safe storage, including any incompatibilities

Storage：Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children. Do not storage battery haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects. If battery is subject to storage for such a long term as more than 3months, it is recommended to recharge the battery periodically.

Incompatible products：Strong acids. Strong oxidizing agent.

8. Exposure Controls/Personal Protection

(1) Control parameters

Not established

(2) Appropriate engineering controls

Under normal conditions (during charge and discharge) release of ingredients does not occur.

(3) Individual protection measures

Respiratory protection:

No personal respiratory protective equipment normally required. In case of inadequate ventilation wear respiratory protection

Eye /face protection:

No personal protective equipment normally required.

Skin protection:

Wear protective clothing to prevent contact.

Hand protection:

Wear protective gloves to prevent contact.

9. Physical and Chemical Properties

Physical State: Solid

Color: Light blue

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient: n-octanol/water: No data available

Auto-ignition temperature: 130℃ (266℉)

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:

Stable under recommended storage and handling conditions.

Chemical stability:

Stable under recommended storage conditions.

Possibility of Hazardous Reactions:

When heated above 150°C (302°F) the risk of rupture occurs. Due to special safety construction, rupture implies controlled release of pressure without ignition

Conditions to avoid:

Do not subject battery to mechanical shock, vibration and over discharge. Keep away from open flames, high temperature.

Incompatible materials:

Strong acids, strong oxidizing agents.

Hazardous decomposition products:

Under fire conditions, the electrode materials can form carcinogenic cobalt oxides and poisonous gas.

11. Toxicological Information

Information on the likely routes of exposure

Inhalation:

Inhalation of a large number of vapors or fumes released due to heat may cause respiratory.

Eye Contact:

Contact with battery electrolyte may cause burns. Eye damage is possible.

Skin Contact:

Contact with battery electrolyte may cause burns and skin irritation.

Ingestion:

Ingestion of battery contents may cause mouth, throat and intestinal burns and damage.

Under normal conditions（during charge and discharge）release of ingredients does not occur. If accident release occurs see information in section 2,3, and 4. Swallowing of battery can be harmful. Call the local Poison Control Centre for advice and follow-up.

Information on toxicological characteristics

Acute toxicity:

No data available.

Skin corrosion/irritation:

The liquid in the battery irritates.

Serious eye damage/ irritation:

The liquid in the battery irritates.

Respiratory sensitization:

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

Skin sensitization:

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

Germ Cell Mutagenicity:

No data available.

Reproductive Toxicity:

No data available.

STOT-single Exposure:

No data available.

STOT-repeated Exposure:

No data available.

Aspiration Hazard:

No data available.

12. Ecological Information

Ecotoxicity:

Water hazard class1(Self-assessment): slightly hazardous for water

Persistence and Degradability:

No information available

Bioaccumulation:

No information available

Other adverse effects:

No information available

13. Disposal Considerations

Waste treatment methods

Disposal methods:

Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

14. Transportation Information

According to Packing Instruction 965-967 of IATA DGR 60th Edition, the special provision 188 of IMDG(inc Amdt 38-16). The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles. Don't put the goods together with oxidizer and chief food chemicals. The transport vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, Power and fire sources. Under the condition of road transportation, the driver should drive in accordance with regulated route, don't stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport:

UN number: 3480 or 3481

UN proper shipping name:

LITHIUM ION BATTERIES (INCLUDING LITHIUM ION POLYMER BATTERIES) or
LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT or
LITHIUM ION BATTERIES PACKED WITH EQUIPMENT (Including lithium ion polymer batteries)

Transport hazard class: 9

Packing group (if applicable):II

Marine pollutant(YES/NO): No

Transport in bulk : No information available

Special precautions: No information available

Organizations governing the transport of lithium batteries:

Area	Method	Organization	Special Provision
USA	Air, rail, road, marine	DOT	49 CFR Section 173.185

15. Regulatory information

OSHA hazard communication standard (29 CFR 1910.1200)

____✓____*Hazardous* _____*Non-hazardous*

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test.

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