SAFETY DATA SHEET

HCS-2012 APPENDIX D TO §1910.1200

Version 1 **Issue Date** 9-Apr-2015
Product Name Lithium Ion Battery - 3370107 **Revision date** 9-Apr-2015

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name	Lithium Ion Battery -3370107
Chemical Name	Lithium Ion Battery

Other means of identification

Voltage : 3.7V
Watt-Hour：22.2Wh
Battery Weight: 124g

Recommended use of the chemical and restrictions on use

Recommended Use	Power supply.
Uses advised against	No information available

Details of the supplier of the safety data sheet

Supplier	GREAT POWER BATTERY (ZHUHAI) CO., LTD
Address	XINQING TECHNOLOGY PARK, ZHUFENG AVENUE, JING AN TOWN, DOUMEN DISTRICT, ZHUHAI CITY, GUANGDONG PROVINCE,CHINA
Postal Code	519100
Phone	+86-756-3922111
FAX	+86-756-3922334
E-mail	renzheng@greatpower.net

Emergency telephone number

+86-756-3922334

2. HAZARDS IDENTIFICATION

GHS Classification

Not classified according to GHS as an article.

Label elements

Symbols/Pictograms	None
Signal word	None
Hazard Statements	None
Precautionary Statements	
Prevention	None
Response	None
Storage	None
Disposal	None

Hazards not otherwise classified (HNOC)

No information available

Unknown acute toxicity

.?% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature Mixture

Chemical Name	CAS No	Weight-%

Lithium Cobalt Oxide (CoLiO2)	12190-79-3	30 - 60
Graphite	7782-42-5	10 - 30
Phosphate(1-), hexafluoro-, lithium	21324-40-3	5 - 10
Dimethyl carbonate	616-38-6	5 - 10
Cellulose, carboxymethyl ether	9000-11-7	1 - 5
Polypropylene	9003-07-0	1 - 5
Carboxymethyl cellulose	9000-11-7	1 - 5
Nickel	7440-02-0	0.1 - 1
Aluminum foil	7429-90-5	0.1 - 1

4. FIRST AID MEASURES

Description of first aid measures

General advice: No hazards which require special first aid measures.
Inhalation: Not an expected route of exposure.
Skin Contact: No special technical protective measures are necessary.
Eye contact: Not an expected route of exposure.
Ingestion: Rinse mouth Get medical attention Never give anything by mouth to an unconscious person

Most important symptoms and effects, both acute and delayed

No information available.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media: No information available.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapors
Keep product and empty container away from heat and sources of ignition
In the event of fire and/or explosion do not breathe fumes

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation, especially in confined areas
ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area)

Methods and material for containment and cleaning up

Pick up and transfer to properly labeled containers
Pick up and transfer to properly labeled containers

Should not be released into the environment

7. HANDLING AND STORAGE

Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice
Ensure adequate ventilation, especially in confined areas
Keep away from heat, sparks, flame and other sources of ignition
Do not eat, drink or smoke when using this product

Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place
Keep away from heat

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH	Denmark	European Union
Lithium Cobalt Oxide (CoLiO2) (CAS #: 12190-79-3)	TWA: 0.02 mg/m^3 Co	-	-	TWA: 0.01 mg/m^3	-
Graphite (CAS #: 7782-42-5)	TWA: 2 mg/m^3 respirable fraction all forms except graphite fibers	-	-	TWA: 2.5 mg/m^3	-
Phosphate(1-), hexafluoro-, lithium (CAS #: 21324-40-3)	TWA: 2.5 mg/m^3 F	-	-	TWA: 2.5 mg/m^3	-
Nickel (CAS #: 7440-02-0)	TWA: 1.5 mg/m^3 inhalable fraction	TWA: 1 mg/m^3 (vacated) TWA: 1 mg/m^3	IDLH: 10 mg/m^3 IDLH: 10 mg/m^3 Ni TWA: 0.015 mg/m^3 TWA: 0.015 mg/m^3 except Nickel carbonyl Ni	TWA: 0.05 mg/m^3	-
Aluminum foil (CAS #: 7429-90-5)	TWA: 1 mg/m^3 respirable fraction	TWA: 15 mg/m^3 total dust TWA: 5 mg/m^3 respirable fraction (vacated) TWA: 15 mg/m^3 total dust (vacated) TWA: 5 mg/m^3 respirable fraction (vacated) TWA: 5 mg/m^3 Al Aluminum	TWA: 10 mg/m^3 total dust TWA: 5 mg/m^3 respirable dust TWA: 5 mg/m^3 Al	TWA: 5 mg/m^3 TWA: 2 mg/m^3	-

Chemical Name	Latvia	France	Finland	Germany	Italy
Nickel (CAS #: 7440-02-0)	TWA: 0.05 mg/m^3	TWA: 1 mg/m^3	TWA: 1 mg/m^3 TWA: 0.1 mg/m^3	Skin	-
Aluminum foil (CAS #: 7429-90-5)	TWA: 2 mg/m^3	TWA: 10 mg/m^3 TWA: 5 mg/m^3	TWA: 1.5 mg/m^3	TWA: 4 mg/m^3 TWA: 1.5 mg/m^3	-

Chemical Name	Poland	Portugal	Spain	Switzerland	Netherlands
Nickel (CAS #: 7440-02-0)	TWA: 0.25 mg/m^3	TWA: 1.5 mg/m^3	TWA: 1 mg/m^3	TWA: 0.5 mg/m^3	-
Aluminum foil (CAS #: 7429-90-5)	TWA: 2.5 mg/m^3 TWA: 1.2 mg/m^3	TWA: 10 mg/m^3 TWA: 5 mg/m^3	TWA: 10 mg/m^3 TWA: 5 mg/m^3	TWA: 3 mg/m^3	TWA: 0.05 mg/m^3

Chemical Name	Norway	United Kingdom	Australia	Austria	Belgium
Lithium Cobalt Oxide (CoLiO2) (CAS #: 12190-79-3)	-	-	-	Skin	-
Graphite (CAS #: 7782-42-5)	-	-	3 mg/m^3	STEL 10 mg/m^3 TWA: 5 mg/m^3	-
Phosphate(1-), hexafluoro-, lithium (CAS #: 21324-40-3)	-	-	2.5 mg/m^3	-	-
Nickel (CAS #: 7440-02-0)	TWA: 0.05 mg/m^3 STEL: 0.15 mg/m^3	STEL: 1.5 mg/m^3 TWA: 0.5 mg/m^3	1 mg/m^3	-	-
Aluminum foil (CAS #: 7429-90-5)	TWA: 5 mg/m^3 STEL: 10 mg/m^3	STEL: 30 mg/m^3 STEL: 12 mg/m^3 TWA: 10 mg/m^3 TWA: 4 mg/m^3	10 mg/m^3 5 mg/m^3	STEL 20 mg/m^3 TWA: 10 mg/m^3	-

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas
Remove all sources of ignition

Individual protection measures, such as personal protective equipment

Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
Hand Protection	No special technical protective measures are necessary.
Eye/face protection	No special technical protective measures are necessary.
Skin and body protection	Wear suitable protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Solid
Color	Silver
Odor	Odorless
Odor Threshold	Not determined
pH	Not determined
Melting point/freezing point	Not determined
Boiling point / boiling range	Not determined
Flash point	Not applicable
Evaporation rate	Not determined
Flammability (solid, gas)	Not flammable
Flammability Limit in Air	Not determined
Vapor Pressure	Not applicable
Vapor density	Not determined
Density	Not determined
Relative density	Not determined
Bulk density	Not determined
Specific gravity	Not determined
Water solubility	Not determined
Partition coefficient (LogPow)	Not determined
Autoignition temperature	Not determined
Decomposition temperature	Not determined
Kinematic viscosity	Not determined
Dynamic viscosity	Not determined
Explosive properties	Not an explosive
Oxidizing properties	Not determined

Other information

No information available

10. STABILITY AND REACTIVITY

Reactivity

Stable under recommended storage and handling conditions (see SECTION 7, handling and storage).

Chemical stability

Stable under normal conditions

Possibility of Hazardous Reactions

None under normal processing

Conditions to avoid

Extremes of temperature and direct sunlight

Incompatible materials

None known based on information supplied

Hazardous Decomposition Products

None known based on information supplied

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	Inhalation of vapors in high concentration may cause irritation of respiratory system
Eye contact	Contact with eyes may cause irritation
Skin Contact	Substance may cause slight skin irritation
	Ingestion may cause irritation to mucous membranes

Information on toxicological effects

Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Dimethyl carbonate (CAS #: 616-38-6)	= 13000 mg/kg (Rat)	> 5 g/kg (Rabbit)	= 140 mg/L (Rat) 4 h
Polypropylene (CAS #: 9003-07-0)	>5 g/kg	-	-
Nickel (CAS #: 7440-02-0)	> 9000 mg/kg (Rat)	-	-

Skin corrosion/irritation

Non-irritating to the skin

Serious eye damage/eye irritation

No eye irritation

Sensitization

No information available

Germ cell mutagenicity

No information available

Carcinogenicity

Chemical Name	ACGIH	IARC	NTP	OSHA
Lithium Cobalt Oxide (CoLiO2) (CAS #: 12190-79-3)	A3	-	-	-
Nickel (CAS #: 7440-02-0)	-	Group 2B	Known Reasonably Anticipated	X

Reproductive toxicity

No information available

STOT - single exposure

No information available

STOT - repeated exposure

No information available

Aspiration hazard

No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/aquatic plants EC50	Fish LC50	Crustacea EC50
Lithium Cobalt Oxide (CoLiO2) (CAS #: 12190-79-3)	-	275 mg/L/96h(Fundulus heteroclitus)	-
Nickel (CAS #: 7440-02-0)	0.18 mg/L/72h Pseudokirchneriella subcapitata 0.174 - 0.311 mg/L/96h Pseudokirchneriella subcapitata static	100 mg/L/96h Brachydanio rerio 1.3 mg/L/96h Cyprinus carpio semi-static 10.4 mg/L/96h Cyprinus carpio static	100 mg/L/48h Daphnia magna 1 mg/L/48h Daphnia magna Static

Persistence and degradability

No information available

Bioaccumulative potential

No information available

Mobility in soil

No information available

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes: Disposal should be in accordance with applicable regional, national and local laws and regulations

Contaminated packaging: Dispose of in accordance with federal, state and local regulations

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Nickel 7440-02-0	-	Included in waste streams: F006, F039	-	-

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Lithium Cobalt Oxide (CoLiO2) 12190-79-3	Toxic
Nickel 7440-02-0	Toxic powder Ignitable powder
Aluminum foil 7429-90-5	Ignitable powder

14. TRANSPORT INFORMATION

DOT / IMDG / IATA

The polymer lithium ion batteries has passed the test UN38.3

According to packing instruction PI965~PI967 section II of IATA DGR 56th Edition for transportation or the special provision 188 of IMDG or 49CFR 173. 185.

The products are not subject to dangerous goods.

UN/ID No. Not regulated
Proper shipping name Not regulated
Hazard Class Not regulated
Packing Group Not regulated
Special precautions No information available
Marine pollutant Not applicable

15. REGULATORY INFORMATION

International Inventories

Component	AICS	DSL/NDSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	TSCA
Lithium Cobalt Oxide (CoLiO2) 12190-79-3 (30 - 60)	X	X	X	X	X	X	-	X
Graphite 7782-42-5 (10 - 30)	X	X	X	-	X	X	X	X
Phosphate(1-), hexafluoro-, lithium 21324-40-3 (5 - 10)	X	X	X	X	X	X	X	X
Dimethyl carbonate 616-38-6 (5 - 10)	X	X	X	X	X	X	X	X
Cellulose, carboxymethyl ether 9000-11-7 (1 - 5)	X	X	-	-	X	-	-	-
Polypropylene 9003-07-0 (1 - 5)	X	X	-	X	X	X	X	X
Nickel 7440-02-0 (0.1 - 1)	X	X	X	-	X	X	X	X
Aluminum foil 7429-90-5 (0.1 - 1)	X	X	X	-	X	X	X	X

"-" Not Listed
"X" Listed

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
Nickel - 7440-02-0	0.1
Aluminum foil - 7429-90-5	1.0

SARA 311/312 Hazard Categories

Does not apply

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Nickel 7440-02-0	-	X	X	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Nickel 7440-02-0	100 lb	-	RQ 100 lb final RQ RQ 45.4 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65
Nickel - 7440-02-0	Carcinogen

U.S. State Right-to-Know Regulations

This product may contain substances regulated by state right-to-know regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Dimethyl carbonate 616-38-6	X	X	X
Aluminum foil 7429-90-5	X	X	X
Nickel 7440-02-0	X	X	X

16. OTHER INFORMATION

Revision Note

Issue Date	9-Apr-2015
Revision date	9-Apr-2015
Revision Note	Not applicable

Key or legend to abbreviations and acronyms used in the safety data sheet

TWA - TWA (time-weighted average)
STEL - STEL (Short Term Exposure Limit)
Ceiling - Maximum limit value
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

Disclaimer

The information provided in this Material 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 a 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 in combination with any other materials or in any process, unless specified in the text.

-------- End of Safety Data Sheet --------