SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
US OSHA HCS 2024 and Canada Hazardous Products Act (HPA) and
Hazardous Products Regulation (HPR), as amended

Issuing Date 08-Aug-2025 **Revision date** 08-Aug-2025 **Revision Number** 1

1. Identification

Product identifier

Product Name EGO Battery pack (11036 、 BA4480X)- murata4.0

Other means of identification

UN number or ID number UN3480

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use Battery

Restrictions on use Do not short circuit or expose to temperatures higher than the maximum temperature rating specified by the manufacturer. Do not over charge or crush any cell or pack. Ensure cells and batteries are safely handled and stored. Review Section 7 completely before use

Details of the supplier of the safety data sheet

Initial supplier identifier
Chervon Canada Inc.
1-3480 Laid Road
Mississauga, Ontario L5L 5Y4
Canada
Phone: 1-866-624-3786

Supplier Address
Chervon North America
769 Seward Ave NW Suite 102
Grand Rapids, MI 49504
Phone: +1-847-571-8373

Manufacturer Address
NANJING CHERVON INDUSTRY CO LTD
NANJING JIANGNING ECONOMIC & TECHNICAL DEVELOPMENT ZONE
159 SOUTH JIANG-JUN RD
NANJING JIANGSU 211106 CHINA
025-84994307

Emergency telephone number

Emergency telephone +1-847-571-8373
+862552101133

2. Hazard(s) identification

Classification of the substance or mixture

This product is a battery. No exposure to hazardous chemicals is expected to occur during intended product use. Misuse of the product may result in exposure to hazardous chemicals. The hazard classification information below relates to the mixture of components contained within the battery..

Acute toxicity - Inhalation (Dusts/Mists)	Category 2
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1
Carcinogenicity	Category 1A
Specific target organ toxicity (repeated exposure)	Category 1

Label elements

Danger

Hazard statements
Fatal if inhaled.
Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
May cause cancer.
Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements - Prevention
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves, protective clothing, eye protection and face protection.
Do not breathe dust.
Use only outdoors or in a well-ventilated area.
Wear respiratory protection.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Do not eat, drink or smoke when using this product.
Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention.
Specific treatment is urgent (see supplemental first aid instructions on this label).
Specific treatment (see supplemental first aid instructions on this label).
Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice and attention.
Skin
IF ON SKIN: Wash with plenty of water and soap.
Take off contaminated clothing and wash it before reuse.
If skin irritation or rash occurs: Get medical advice and attention.
Inhalation
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Immediately call a POISON CENTER or doctor.
Precautionary Statements - Storage
Store locked up.
Store in a well-ventilated place. Keep container tightly closed.
Precautionary Statements - Disposal
Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable.

Unknown acute toxicity
10 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Hazards classified under paragraph (d)(1)(ii) of 1910.1200
No information available.

Other information
Very toxic to aquatic life with long lasting effects.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No.	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Lithium cobalt nickel oxide	113066-89-0	30 - 60	-	-
Graphite	7782-42-5	10 - 30	-	-
Copper	7440-50-8	10 - 30	-	-
Aluminum	7429-90-5	5 - 10	-	-
Phosphate(1-), hexafluoro-, lithium	21324-40-3	0.5 - 1.5	-	-
Ethylene carbonate	96-49-1	0.5 - 1.5	-	-

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

4. First-aid measures

Description of first aid measures

General advice First aid is upon rupture of sealed battery. Immediate medical attention is required. Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.

Inhalation If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Remove to fresh air. Do not breathe dust. If breathing is difficult, (trained personnel should) give oxygen. Get medical attention immediately if symptoms occur.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.

Skin contact May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician. Wash off immediately with soap and plenty of water for at least 15 minutes.

Ingestion Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Do not breathe dust. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms Coughing and/ or wheezing. Difficulty in breathing. Itching. Rashes. Hives. May cause redness and tearing of the eyes. Burning sensation.

Effects of Exposure May cause cancer. Causes damage to organs through prolonged or repeated exposure.

Indication of any immediate medical attention and special treatment needed

Note to physicians May cause sensitization in susceptible persons. Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Use of water spray when fighting a lithium fire may be inefficient. However, copious amounts of water may be used to cool a battery fire and extinguish any surrounding combustible fires.

Specific hazards arising from the chemical Product is or contains a sensitizer. May cause sensitization by skin contact. Lithium batteries are highly flammable.

Explosion data
Sensitivity to mechanical impact None.
Sensitivity to static discharge None.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid generation of dust. Do not breathe dust. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up This product should be considered as hazardous if the battery is compromised and starts to leak. During a release, ensure the Personal Protection listed in Section 8 is worn. Neutralize any electrolyte contaminated surfaces with baking soda, soda lime or sodium bicarbonate. Transfer damaged battery and any clean up materials to a sealed container with a neutralizing material as stated above. Ensure the container is properly labeled.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not breathe dust. Avoid generation of dust. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Do not crush, pierce, short circuit (+) and (-) battery terminals with conductive (metal) goods. Do not directly heat or solder. Do not throw into fire. Do not mix batteries of different types and brands. Do not mix new and used batteries. Keep batteries in non-conductive (plastic) trays. Cells or batteries that have been dropped or experience mechanical shock should be isolated and monitored for approximately 5 days to identify a possible internal short circuit and resulting fire. Jewelry, and all metal, should be removed before handling batteries to avoid short circuit.

General hygiene considerations Avoid contact with skin, eyes or clothing. Do not breathe dust. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

8. Exposure controls/personal protection

Control Parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Lithium cobalt nickel oxide 113066-89-0	TWA: 0.02 mg/m³ Co inhalable particulate matter TWA: 0.2 mg/m³ Ni inhalable particulate matter RS	TWA: 1 mg/m³ Ni (vacated) TWA: 1 mg/m³ Ni	TWA: 0.015 mg/m³; except Nickel carbonyl Ni IDLH: 10 mg/m³ Ni
Graphite 7782-42-5	TWA: 2 mg/m³ respirable particulate matter all forms except graphite fibers	TWA: 15 mg/m³ total dust synthetic TWA: 5 mg/m³ respirable fraction synthetic TWA: 15 mppcf respirable dust natural (vacated) TWA: 2.5 mg/m³ respirable dust natural (vacated) TWA: 10 mg/m³ total dust synthetic (vacated) TWA: 5 mg/m³ respirable fraction synthetic TWA: 15 mppcf natural	TWA: 2.5 mg/m³; natural respirable dust IDLH: 1250 mg/m³
Copper 7440-50-8	TWA: 0.2 mg/m³ fume	TWA: 0.1 mg/m³ fume TWA: 1 mg/m³ dust and mist (vacated) TWA: 0.1 mg/m³ Cu dust, fume, mist	TWA: 1 mg/m³; dust and mist TWA: 0.1 mg/m³; fume IDLH: 100 mg/m³ dust, fume and mist
Aluminum 7429-90-5	TWA: 1 mg/m³ respirable particulate matter	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 15 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction	TWA: 10 mg/m³; total dust TWA: 5 mg/m³; respirable dust
Phosphate(1-), hexafluoro-, lithium 21324-40-3	TWA: 2.5 mg/m³ F	TWA: 2.5 mg/m³ F (vacated) TWA: 2.5 mg/m³	IDLH: 250 mg/m³ F

Chemical name	Alberta	British Columbia	Ontario	Quebec
Lithium cobalt nickel oxide 113066-89-0	TWA: 0.2 mg/m³; TWA: 0.02 mg/m³;	TWA: 0.02 mg/m³; inhalable TWA: 0.05 mg/m³; DS	TWA: 0.2 mg/m³; inhalable fraction TWA: 0.02 mg/m³;	TWAEV: 0.2 mg/m³; inhalable dust TWAEV: 0.02 mg/m³; inhalable aerosol fraction

		RS		
Graphite 7782-42-5	TWA: 2 mg/m³; respirable	TWA: 2 mg/m³; respirable	TWA: 2 mg/m³; respirable particulate matter	TWAEV: 2 mg/m³; respirable dust
Copper 7440-50-8	TWA: 0.2 mg/m³; fume TWA: 1 mg/m³; dust and mist	TWA: 1 mg/m³; dust and mist TWA: 0.2 mg/m³; fume	TWA: 0.2 mg/m³; fume TWA: 1 mg/m³; dust and mist	TWAEV: 0.2 mg/m³; fume TWAEV: 1 mg/m³; dust and mist
Aluminum 7429-90-5	TWA: 10 mg/m³; dust	TWA: 1.0 mg/m³; respirable	TWA: 1 mg/m³; respirable particulate matter	TWAEV: 5 mg/m³;
Phosphate(1-), hexafluoro-, lithium 21324-40-3	TWA: 2.5 mg/m³;	TWA: 2.5 mg/m³;	TWA: 2.5 mg/m³;	TWAEV: 2.5 mg/m³;

Chemical name	Manitoba	New Brunswick	Newfoundland and Labrador	Nova Scotia
Lithium cobalt nickel oxide	RS	-	RS	RS
Graphite	TWA: 2 mg/m³; respirable particulate matter	TWA: 2 mg/m³; respirable fraction	TWA: 2 mg/m³; respirable particulate matter	TWA: 2 mg/m³; respirable particulate matter
Copper	TWA: 0.2 mg/m³; fume	TWA: 0.2 mg/m³; fume	TWA: 0.2 mg/m³; fume	TWA: 0.2 mg/m³; fume
Aluminum	TWA: 1 mg/m³; respirable particulate matter	TWA: 1 mg/m³; respirable fraction	TWA: 1 mg/m³; respirable particulate matter	TWA: 1 mg/m³; respirable particulate matter

Chemical name	Nunavut	Prince Edward Island	Saskatchewan	Yukon
Graphite	TWA: 2 mg/m³; respirable fraction STEL: 4 mg/m³; respirable fraction	TWA: 2 mg/m³; respirable particulate matter	TWA: 2 mg/m³; respirable fraction STEL: 4 mg/m³; respirable fraction	TWA: 20 mppcf; TWA: 30 mppcf; TWA: 10 mg/m³;
Copper	TWA: 0.2 mg/m³; fume TWA: 1 mg/m³; dust and mist STEL: 3 mg/m³; dust and mist STEL: 0.6 mg/m³; fume	TWA: 0.2 mg/m³; fume	TWA: 0.2 mg/m³; fume TWA: 1 mg/m³; dust and mist STEL: 0.6 mg/m³; fume STEL: 3 mg/m³; dust and mist	TWA: 0.2 mg/m³; fume TWA: 1 mg/m³; dust and mist STEL: 0.2 mg/m³; fume STEL: 2 mg/m³; dust and mist
Aluminum	TWA: 10 mg/m³; dust STEL: 20 mg/m³; dust	TWA: 1 mg/m³; respirable particulate matter	TWA: 10 mg/m³; dust STEL: 20 mg/m³; dust	-

Note See section 16 for terms and abbreviations.
Other information on limit values Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Biological occupational exposure limits

Chemical name	ACGIH
Lithium cobalt nickel oxide 113066-89-0	15 µg/L - urine (Cobalt) - end of shift at end of workweek 5 µg/L - urine (Nickel) - post-shift at end of workweek
Phosphate(1-), hexafluoro-, lithium 21324-40-3	2 mg/L - urine (Fluoride) - prior to shift 3 mg/L - urine (Fluoride) - end of shift

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection	None required for normal handling of the finished product. If necessary to handle damaged product where exposure to the electrolyte is a possibility, chemical splash goggles and a face shield are recommended.
Hand protection	None required for normal handling of the finished product. If necessary to handle damaged product where exposure to the electrolyte is a possibility, chemically resistant gloves are recommended.
Skin and body protection	None required for normal handling of the finished product. If necessary to handle damaged product where exposure to the electrolyte is a possibility, a chemically resistant apron is recommended.
Respiratory protection	Use appropriate respiratory protection. No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance	
Physical state	Solid
Color	Black and green
Odor (includes odor threshold)	Odorless

Property	**Values**	**Remarks • Method**
Melting point / freezing point		No data available
Boiling point (or initial boiling point or boiling range)		No data available
Flammability		No data available
Flammability Limit in Air		
Upper flammability or explosive limits		No data available
Lower flammability or explosive limits		No data available
Flash point		No data available
Autoignition temperature		No data available
Decomposition temperature		No data available
SADT (°C)		No data available
pH		No data available
pH (as aqueous solution)		No data available
Kinematic viscosity		No data available
Dynamic viscosity		No data available
Solubility		No data available
Water solubility		No data available
Partition coefficient n-octanol/water (log value)		No data available
Vapor pressure (includes evaporation rate)		No data available
Evaporation rate		No data available
Density and/or relative density		No data available
Bulk density		No data available
Liquid Density		No data available
Relative vapor density		No data available
Particle characteristics		
Particle Size		No data available
Particle Size Distribution		No data available

Other information

Molecular weight	No information available

VOC content	No information available
Softening point	No information available

Information with regard to physical hazard classes

Explosives	
Explosive properties	No information available
Oxidizing properties	No information available

10. Stability and reactivity

Reactivity	None under normal use conditions.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Excessive heat. Do not heat, crush, disassemble or short circuit. Do not exceed manufacturer's recommendation for charging or use battery for an application for which it was not specifically designed.
Incompatible materials	Under normal use, batteries are not incompatible. The electrolyte is incompatible with:, Strong acids, Strong bases, Strong oxidizing agents, Battery electrolyte (acid): Combustible materials, strong reducing agents, most metals, carbides, organic materials, chlorates, nitrates, picrates, and fulminates.
Hazardous decomposition products	Batteries may burst and release hazardous decomposition products when exposed to fire.

11. Toxicological information

Information on likely routes of exposure

Product Information	Exposure is not expected for product under normal conditions of use. In the event of an exposure to electrolyte the following toxicological information is provided:.
Inhalation	Specific test data for the substance or mixture is not available. Fatal if inhaled (based on components). May cause irritation of respiratory tract.
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye irritation (based on components). May cause redness, itching, and pain.
Skin contact	Specific test data for the substance or mixture is not available. May cause sensitization by skin contact (based on components). Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Causes skin irritation.
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Coughing and/ or wheezing. Difficulty in breathing. Itching. Rashes. Hives. Redness. May cause redness and tearing of the eyes.
Acute toxicity	Fatal if inhaled.

Numerical measures of toxicity

The following ATE values have been calculated for the mixture:

ATEmix (oral)	8,333.30 mg/kg
ATEmix (inhalation-dust/mist)	0.117 mg/l

Unknown acute toxicity

10 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Graphite	-	-	> 2000 mg/m³ (Rat) 4 h
Copper	-	-	> 5.11 mg/L (Rat) 4 h
Aluminum	-	-	> 0.888 mg/L (Rat) 4 h
Ethylene carbonate	= 10 g/kg (Rat)	> 26420 mg/kg (Rabbit)	> 730 mg/m³ (Rat) 8 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Classification based on data available for ingredients. Causes skin irritation.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye irritation.

Respiratory or skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No information available.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Lithium cobalt nickel oxide 113066-89-0	A1 - Confirmed human carcinogen A3 - Confirmed animal carcinogen (with unknown relevance to humans)	Group 1 - Carcinogenic to humans Group 2B - Possibly carcinogenic to humans	Known human carcinogen Reasonably anticipated to be a human carcinogen	Present
Aluminum 7429-90-5	A4 - Not classifiable as a human carcinogen	-	-	-
Phosphate(1-), hexafluoro-, lithium 21324-40-3	A4 - Not classifiable as a human carcinogen	-	-	-

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard No information available.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Graphite 7782-42-5	-	LC50: >100mg/L (96h, Danio rerio)	-	-
Copper 7440-50-8	EC50: 0.0426 - 0.0535mg/L (72h,	LC50: 0.0068 - 0.0156mg/L (96h,	-	EC50: =0.03mg/L (48h, Daphnia magna)

	Pseudokirchneriella subcapitata) EC50: 0.031 - 0.054mg/L (96h, Pseudokirchneriella subcapitata)	Pimephales promelas) LC50: <0.3mg/L (96h, Pimephales promelas) LC50: =0.2mg/L (96h, Pimephales promelas) LC50: =0.052mg/L (96h, Oncorhynchus mykiss) LC50: =1.25mg/L (96h, Lepomis macrochirus) LC50: =0.3mg/L (96h, Cyprinus carpio) LC50: =0.8mg/L (96h, Cyprinus carpio) LC50: =0.112mg/L (96h, Poecilia reticulata)		
Ethylene carbonate 96-49-1	-	LC50: >100mg/L (96h, Oncorhynchus mykiss)	-	-

Persistence and degradability No information available.

Bioaccumulation

Component Information

Chemical name	Partition coefficient
Ethylene carbonate 96-49-1	0.11

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Dispose of in accordance with local regulations, Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

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

14. Transport information

DOT

UN number or ID number UN3480
Proper shipping name Lithium ion batteries
Transport hazard class(es) 9
Reportable quantity (lbs) Copper: RQ (lb)= 5000.00
Reportable quantity (lbs) (calculated) Copper: RQ (lb)= 29412.00
Reportable quantity (kg) (Copper: RQ (kg)= 2270.00)
Reportable quantity (kg) (calculated) Copper: RQ (kg)= 13352.94
Special Provisions 388, 422, A54, A100

DOT Marine Pollutant	PP
Marine pollutant	Copper
Description	UN3480, Lithium ion batteries, 9
Emergency Response Guide Number	147

TDG

UN number or ID number	UN3480
Proper shipping name	Lithium ion batteries
Transport hazard class(es)	9
Description	UN3480, Lithium ion batteries, 9

IATA Forbidden for transport by Passenger Air.

UN number or ID number	UN3480
UN proper shipping name	Lithium ion batteries
Transport hazard class(es)	9
Packing group	Not assigned
Environmental hazards	Yes
Special Provisions	A88, A99, A154, A183, A201, A213, A331, A334, A802
ERG Code	12FZ
Description	UN3480, Lithium ion batteries, 9

IMDG

UN number or ID number	UN3480
UN proper shipping name	Lithium ion batteries
Transport hazard class(es)	9
Packing group	Not assigned
Marine pollutant indicator	P
Special Provisions	188, 230,310, 348, 376, 377, 384, 387
EmS-No.	F-A S-I
Description	UN3480, Lithium ion batteries, 9, Marine pollutant

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories
Contact supplier for inventory compliance status

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 %
Lithium cobalt nickel oxide - 113066-89-0	0.1
Copper - 7440-50-8	1.0
Aluminum - 7429-90-5	1.0

SARA 311/312 Hazard Categories
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

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
Lithium cobalt nickel oxide 113066-89-0	-	X	-	-
Copper 7440-50-8	-	X	X	-

CAA (Clean Air Act)
This product contains the following substances which are regulated pollutants to the Clean Air Act (CAA).

Chemical name	Hazardous air pollutants (HAPs)	Ozone-depleting substances (ODS)
Lithium cobalt nickel oxide 113066-89-0	Present	-

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Copper 7440-50-8	5000 lb / 2270 kg (final RQ)	-

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals:.

Chemical name	California Proposition 65
Lithium cobalt nickel oxide - 113066-89-0	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Lithium cobalt nickel oxide 113066-89-0	X	-	X
Graphite 7782-42-5	X	X	X
Copper 7440-50-8	X	X	X
Aluminum 7429-90-5	X	X	X
Dimethyl carbonate 616-38-6	X	X	X
Phosphate(1-), hexafluoro-, lithium 21324-40-3	X	-	-
Ethylene carbonate 96-49-1	-	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	**Health hazards** 4	**Flammability** 0	**Instability** 0	**Special hazards** -
HMIS	**Health hazards** 3 *	**Flammability** 0	**Physical hazards** 0	**Personal protection** X

Chronic Hazard Star Legend ** = Chronic Health Hazard*

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

Legend

ACGIH	American Conference of Governmental Industrial Hygienists
ADN	Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe)
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)
AIIC	Australian Inventory of Industrial Chemicals
ATE	Acute Toxicity Estimate
ASTM	American Society for the Testing of Materials
bar	Biological Reference Values for Chemical Compounds in the Work Area
BAT	Biological tolerance values for occupational exposure
BEL	Biological exposure limits
bw	Body weight
Ceiling	Maximum limit value
CMR	Carcinogen, Mutagen or Reproductive Toxicant
DOT	Department of Transportation (United States)
DSL	Domestic Substances List (Canada)
EmS	Emergency Schedule
ENCS	Existing and New Chemical Substances (Japan)
EPA	U.S. Environmental Protection Agency
GHS	Globally Harmonized System
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO	International Civil Aviation Organization
IECSC	Inventory of Existing Chemical Substances in China
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISO	International Organization for Standardization
KECI	Korean Existing Chemicals Inventory
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
MARPOL	International Convention for the Prevention of Pollution from Ships
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
n.o.s.	Not Otherwise Specified
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOELR	No Observable Effect Loading Rate
NTP	National Toxicology Program (United States)
NZIoC	New Zealand Inventory of Chemicals
OECD	Organization for Economic Cooperation and Development
OEL	Occupational exposure limits
OSHA	Occupational Safety and Health Administration of the US Department of Labor

PBT	Persistent, Bioaccumulative and Toxic substance
PICCS	Philippines Inventory of Chemicals and Chemical Substances
PMT	Persistent, Mobile and Toxic
PPE	Personal protective equipment
QSAR	Quantitative Structure Activity Relationship
RID	Agreement concerning the International Carriage of Dangerous Goods by Rail (Europe)
SADT	Self-Accelerating Decomposition Temperature
SAR	Structure-activity relationship
SARA	Superfund Amendments and Reauthorization Act
SDS	Safety Data Sheet
SL	Surface Limit
STEL	Short Term Exposure Limit
STOT RE	Specific target organ toxicity - Repeated exposure
STOT SE	Specific target organ toxicity - Single exposure
TCSI	Taiwan Chemical Substance Inventory
TDG	Transport of Dangerous Goods (Canada)
TSCA	Toxic Substances Control Act (United States)
TWA	Time-Weighted Average
UN	United Nations
VOC	Volatile organic compounds
vPvB	Very Persistent and Very Bioaccumulative
vPvM	Very Persistent and Very Mobile
As	Allergenic substance
DS	Dermal Sensitizer
Ot	Ototoxicant
pOt	Ototoxicant - potential to cause hearing disorders
PS	Photosensitizer
RS	Respiratory Sensitizer
S	Sensitizer
poS	Sensitizer - capable of causing occupational asthma
Sa	Simple asphyxiant
Sd	Skin designation
pSd	Skin designation - potential for cutaneous absorption
Sdv	Skin designation - vacated
Sk	Skin notation
dSk	Skin notation - danger of cutaneous absorption
pSk	Skin notation - potential for cutaneous absorption

Key literature references and sources for data used to compile the SDS
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
U.S. Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications
International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program
International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set
United Nations World Health Organization (WHO)

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Disclaimer

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End of Safety Data Sheet