

SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
US OSHA Hazard Communication Standard (29 CFR 1910.1200) and Canada WHMIS which includes the amended Hazardous
Products Act (HPA) and the Hazardous Products Regulation (HPR)

Issuing Date 06-Jun-2025

Revision date 09-Jun-2025

Revision Number 1

1. Identification

Product identifier

Product Name Li-ion Battery M070-20

Other means of identification

Product Code(s) 1857484

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use Lithium Ion Battery

Restrictions on use No information available

Details of the supplier of the safety data sheet

Supplier Name Spark Connect Inc

Supplier Address

171 Tradition Trail, Suite 101-103
Holly Springs
NC
27540
US

Emergency telephone number

Supplier Phone Number Phone:9192683898

24 Hour Emergency Phone Number 9727959368

Emergency Telephone No information available

2. Hazard(s) identification

Classification of the substance or mixture

Acute toxicity - Dermal	Category 3
Acute toxicity - Inhalation (Vapors)	Category 2
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 1A
Specific target organ toxicity (repeated exposure)	Category 1

Label elements

**Danger****Hazard statements**

Toxic in contact with skin.
Fatal if inhaled.
Causes skin irritation.
Causes serious eye irritation.
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.
Do not eat, drink or smoke when using this product.

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention.
Specific treatment (see supplemental first aid instructions on this label).
Specific treatment is urgent (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.
Call a POISON CENTER or doctor if you feel unwell.
Take off immediately all contaminated clothing and wash it before reuse.
If skin irritation occurs: Get medical advice and attention.
Take off contaminated clothing and wash it before reuse.

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

98.3 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
61.58 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).

Hazards classified under paragraph (d)(1)(ii) of 1910.1200

No information available.

Other information

Very toxic to aquatic life. Toxic to aquatic life with long lasting effects. This is a battery. In case of rupture: the above hazards exist.

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)
Cobalt lithium manganese nickel oxide	182442-95-1	38.42	-	-
Graphite	7782-42-5	20.01	-	-
Copper	7440-50-8	5.3	-	-
Aluminum	7429-90-5	2.7	-	-
Ethylene carbonate	96-49-1	2.2	-	-
Phosphate(1-), hexafluoro-, lithium	21324-40-3	1.7	-	-

4. First-aid measures**Description of first aid measures**

General advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. IF exposed or concerned: Get medical advice/attention. First aid is upon rupture of sealed battery.
Inhalation	Remove to fresh air. Get medical attention immediately if symptoms occur.
Eye contact	Get immediate medical attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.
Skin contact	Get immediate medical attention. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention.
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. Wear personal protective clothing (see section 8). Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms	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	Treat symptomatically.
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5. Fire-fighting measures

<u>Suitable Extinguishing Media</u>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical No information available.

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 Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas.

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 Pick up and transfer to properly labeled containers.

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. Ensure adequate ventilation. Take off contaminated clothing and wash before reuse. Do not eat, drink or smoke when using this product. In case of rupture:

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

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

8. Exposure controls/personal protection

Control Parameters

Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
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Cobalt lithium manganese nickel oxide 182442-95-1	TWA: 0.02 mg/m ³ Co inhalable particulate matter TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter DS RS	(vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	TWA: 1 mg/m ³ ; Mn TWA: 0.015 mg/m ³ ; except Nickel carbonyl Ni STEL: 3 mg/m ³ Mn IDLH: 500 mg/m ³ Mn IDLH: 10 mg/m ³ Ni
Graphite 7782-42-5	TWA: 2 mg/m ³ respirable particulate matter all forms except graphite fibers	TWA: 15 mg/m ³ total dust synthetic TWA: 5 mg/m ³ respirable fraction synthetic TWA: 15 mppcf respirable dust natural (vacated) TWA: 2.5 mg/m ³ respirable dust natural (vacated) TWA: 10 mg/m ³ total dust synthetic (vacated) TWA: 5 mg/m ³ respirable fraction synthetic TWA: 15 mppcf natural	IDLH: 1250 mg/m ³ TWA: 2.5 mg/m ³ respirable dust
Copper 7440-50-8	TWA: 0.2 mg/m ³ fume	TWA: 0.1 mg/m ³ fume TWA: 1 mg/m ³ dust and mist (vacated) TWA: 0.1 mg/m ³ Cu dust, fume, mist	TWA: 1 mg/m ³ ; dust and mist TWA: 0.1 mg/m ³ ; fume IDLH: 100 mg/m ³ dust, fume and mist
Aluminum 7429-90-5	TWA: 1 mg/m ³ respirable particulate matter	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	TWA: 10 mg/m ³ ; total dust TWA: 5 mg/m ³ ; respirable dust
Phosphate(1-), hexafluoro-, lithium 21324-40-3	TWA: 2.5 mg/m ³ F	TWA: 2.5 mg/m ³ F (vacated) TWA: 2.5 mg/m ³	IDLH: 250 mg/m ³ F

Chemical name	Alberta	British Columbia	Ontario	Quebec
Cobalt lithium manganese nickel oxide 182442-95-1	TWA: 0.02 mg/m ³ ; TWA: 0.2 mg/m ³ ;	TWA: 0.02 mg/m ³ ; inhalable TWA: 0.02 mg/m ³ ; respirable TWA: 0.1 mg/m ³ ; inhalable Adverse reproductive effect DS RS	TWA: 0.02 mg/m ³ ; TWA: 0.02 mg/m ³ ; respirable particulate matter TWA: 0.1 mg/m ³ ; inhalable particulate matter	TWAEV: 0.2 mg/m ³ ; inhalable aerosol fraction TWAEV: 0.05 mg/m ³ ; respirable aerosol fraction TWAEV: 0.02 mg/m ³ ; inhalable aerosol fraction
Graphite 7782-42-5	TWA: 2 mg/m ³ ; respirable	TWA: 2 mg/m ³ ; respirable	TWA: 2 mg/m ³ ; respirable particulate matter	TWAEV: 2 mg/m ³ ; respirable dust
Copper 7440-50-8	TWA: 0.2 mg/m ³ ; fume TWA: 1 mg/m ³ ; dust and mist	TWA: 1 mg/m ³ ; dust and mist TWA: 0.2 mg/m ³ ; fume	TWA: 0.2 mg/m ³ ; fume TWA: 1 mg/m ³ ; dust and mist	TWAEV: 0.2 mg/m ³ ; fume TWAEV: 1 mg/m ³ ; dust and mist
Aluminum 7429-90-5	TWA: 10 mg/m ³ ; dust	TWA: 1.0 mg/m ³ ; respirable	TWA: 1 mg/m ³ ; respirable particulate matter	TWAEV: 10 mg/m ³ ;
Phosphate(1-), hexafluoro-, lithium 21324-40-3	TWA: 2.5 mg/m ³ ;	TWA: 2.5 mg/m ³ ;	TWA: 2.5 mg/m ³ ;	TWAEV: 2.5 mg/m ³ ;

Chemical name	Manitoba	New Brunswick	Newfoundland and Labrador	Nova Scotia
Cobalt lithium manganese nickel oxide	TWA: 0.02 mg/m ³ ; inhalable particulate matter TWA: 0.02 mg/m ³ ; respirable particulate matter TWA: 0.1 mg/m ³ ; inhalable particulate matter DS RS	TWA: 0.02 mg/m ³ ; TWA: 0.02 mg/m ³ ; respirable fraction TWA: 0.1 mg/m ³ ; inhalable fraction	TWA: 0.02 mg/m ³ ; inhalable particulate matter TWA: 0.02 mg/m ³ ; respirable particulate matter TWA: 0.1 mg/m ³ ; inhalable particulate matter DS RS	TWA: 0.02 mg/m ³ ; inhalable particulate matter TWA: 0.02 mg/m ³ ; respirable particulate matter TWA: 0.1 mg/m ³ ; inhalable particulate matter DS RS
Graphite	TWA: 2 mg/m ³ ; respirable particulate matter	TWA: 2 mg/m ³ ; respirable fraction	TWA: 2 mg/m ³ ; respirable particulate matter	TWA: 2 mg/m ³ ; respirable particulate matter
Copper	TWA: 0.2 mg/m ³ ; fume	TWA: 0.2 mg/m ³ ; fume	TWA: 0.2 mg/m ³ ; fume	TWA: 0.2 mg/m ³ ; fume
Aluminum	TWA: 1 mg/m ³ ; respirable particulate matter	TWA: 1 mg/m ³ ; respirable fraction	TWA: 1 mg/m ³ ; respirable particulate matter	TWA: 1 mg/m ³ ; respirable particulate matter
Phosphate(1-), hexafluoro-, lithium	TWA: 2.5 mg/m ³ ;	TWA: 2.5 mg/m ³ ;	TWA: 2.5 mg/m ³ ;	TWA: 2.5 mg/m ³ ;

Chemical name	Nunavut	Prince Edward Island	Saskatchewan	Yukon
Cobalt lithium manganese nickel oxide	TWA: 0.02 mg/m ³ ; TWA: 0.2 mg/m ³ ; STEL: 0.06 mg/m ³ ; STEL: 0.6 mg/m ³ ; Designated substance	TWA: 0.02 mg/m ³ ; inhalable particulate matter TWA: 0.02 mg/m ³ ; respirable particulate matter TWA: 0.1 mg/m ³ ; inhalable particulate matter	TWA: 0.02 mg/m ³ ; TWA: 0.2 mg/m ³ ; STEL: 0.06 mg/m ³ ; STEL: 0.6 mg/m ³ ; Designated Chemical Substance	Ceiling: 5 mg/m ³ ;
Graphite	TWA: 2 mg/m ³ ; respirable fraction STEL: 4 mg/m ³ ; respirable fraction	TWA: 2 mg/m ³ ; respirable particulate matter	TWA: 2 mg/m ³ ; respirable fraction STEL: 4 mg/m ³ ; respirable fraction	TWA: 20 mppcf; TWA: 30 mppcf; TWA: 10 mg/m ³ ;
Copper	TWA: 0.2 mg/m ³ ; fume TWA: 1 mg/m ³ ; dust and mist STEL: 3 mg/m ³ ; dust and mist STEL: 0.6 mg/m ³ ; fume	TWA: 0.2 mg/m ³ ; fume	TWA: 0.2 mg/m ³ ; fume TWA: 1 mg/m ³ ; dust and mist STEL: 0.6 mg/m ³ ; fume STEL: 3 mg/m ³ ; dust and mist	TWA: 0.2 mg/m ³ ; fume TWA: 1 mg/m ³ ; dust and mist STEL: 0.2 mg/m ³ ; fume STEL: 2 mg/m ³ ; dust and mist
Aluminum	TWA: 10 mg/m ³ ; dust STEL: 20 mg/m ³ ; dust	TWA: 1 mg/m ³ ; respirable particulate matter	TWA: 10 mg/m ³ ; dust STEL: 20 mg/m ³ ; dust	-
Phosphate(1-), hexafluoro-, lithium	-	TWA: 2.5 mg/m ³ ;	TWA: 2.5 mg/m ³ ; STEL: 5 mg/m ³ ;	TWA: 2.5 mg/m ³ ; STEL: 2.5 mg/m ³ ;

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
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Cobalt lithium manganese nickel oxide 182442-95-1	15 µg/L - urine (Cobalt) - end of 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 Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

Respiratory protection Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. 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 Black
Physical state Solid
Color No information available
Odor (includes odor threshold) Odorless
Odor threshold No data available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point	No data available	None known
Boiling point (or initial boiling point or boiling range)	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
SADT (°C)	No data available	None known
pH	No data available	None known
pH (as aqueous solution)	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Solubility	No data available	None known
Water solubility	Insoluble in water	None known
Partition coefficient n-octanol/water (log value)	No data available	None known
Vapor pressure (includes evaporation rate)	No data available	None known
Evaporation rate	No data available	None known
Density and/or relative density	No data available	None known
Bulk density	No data available	

Liquid Density	No data available	
Relative vapor density	No data available	None known
Particle characteristics		None known
Particle Size	No data available	
Particle Size Distribution	No data available	

Other information

Miscible	No
Heat of combustion	3.75804

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	Strong acids. Strong bases. Strong oxidizing agents.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information**Information on likely routes of exposure**

Product Information	Product does not present an acute toxicity hazard based on known or supplied information. In case of rupture:
Inhalation	Specific test data for the substance or mixture is not available. 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. Causes skin irritation. (based on components). Toxic in contact with skin.
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	Redness. May cause redness and tearing of the eyes.
Acute toxicity	Fatal if inhaled. Toxic in contact with skin.

Numerical measures of toxicity

The following ATE values have been calculated for the mixture

ATEmix (oral)	7,835.10 mg/kg
ATEmix (dermal)	300.00 mg/kg
ATEmix (inhalation-gas)	99,999.00 ppm
ATEmix (inhalation-vapor)	0.501 mg/l
ATEmix (inhalation-dust/mist)	99,999.00 mg/l

Unknown acute toxicity

98.3 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

61.58 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Graphite 7782-42-5	-	-	> 2000 mg/m ³ (Rat) 4 h
Copper 7440-50-8	-	-	> 5.11 mg/L (Rat) 4 h
Aluminum 7429-90-5	-	-	> 0.888 mg/L (Rat) 4 h
Ethylene carbonate 96-49-1	= 10 g/kg (Rat)	> 26420 mg/kg (Rabbit)	> 730 mg/m ³ (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 No information available.

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
Cobalt lithium manganese nickel oxide 182442-95-1	A3 A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans A4 - Not Classifiable as a Human Carcinogen	Group 1 Group 2B	Known Reasonably Anticipated	X
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	-	-	-

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

A4 - Not classifiable as a human carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to humans

Group 2B - Possibly carcinogenic to humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

Occupational Safety and Health Administration of the US Department of Labor

X - Present

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. Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Graphite 7782-42-5	-	96h LC50: > 100 mg/L (Danio rerio)	-	-
Copper 7440-50-8	72h EC50: 0.0426 - 0.0535 mg/L (Pseudokirchneriella subcapitata) 96h EC50: 0.031 - 0.054 mg/L (Pseudokirchneriella subcapitata)	96h LC50: 0.0068 - 0.0156 mg/L (Pimephales promelas) 96h LC50: < 0.3 mg/L (Pimephales promelas) 96h LC50: = 0.2 mg/L (Pimephales promelas) 96h LC50: = 0.052 mg/L (Oncorhynchus mykiss) 96h LC50: = 1.25 mg/L (Lepomis macrochirus) 96h LC50: = 0.3 mg/L (Cyprinus carpio) 96h LC50: = 0.8 mg/L (Cyprinus carpio) 96h LC50: = 0.112 mg/L (Poecilia reticulata)	-	48h EC50: = 0.03 mg/L (Daphnia magna)
Ethylene carbonate 96-49-1	-	96h LC50: > 100 mg/L (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**Note:**

The transportation of primary lithium cells and batteries is regulated by the International Civil Aviation Organization, International Air Transport Association, International Maritime Dangerous Goods Code and the US Department of Transportation. The batteries must meet the following criteria for shipment: 1. Air shipments must meet the requirements listed in Special Provision A45 of the International Air Transport Association Dangerous Goods Regulations. 2. Meet the requirements for the US Department of Transportation listed in 49 CFR 173.185. 3. The transport of primary lithium batteries is prohibited aboard passenger aircraft. Refer to the Federal Register December 15, 2004 (Hazardous Materials; Prohibited on the Transportation of Primary Lithium Batteries and Cells Aboard Passenger Aircraft; Final Rule)

Lithium batteries shipped as "Lithium batteries", "Lithium batteries packed with equipment", or "Lithium batteries contained in equipment" may not be classified as "Dangerous Goods" when shipped in accordance with "special provision A45 of IATA-DGR" or "special provision 188 of IMO-IMDG Code"

DOT

NOT REGULATED

Hazard Class

N/A

DOT Marine Pollutant

PP

Marine pollutant

Copper

Emergency Response Guide Number

147

TDG

Not applicable

MEX

Not applicable

ICAO (air)

UN number or ID number

UN3480

UN proper shipping name

LITHIUM ION BATTERIES

Transport hazard class(es)

9

Description

UN3480, LITHIUM ION BATTERIES, 9

Special Provisions

A88, A99, A154, A183, A201, A213

IATA

UN number or ID number

UN3480

UN proper shipping name

LITHIUM ION BATTERIES

Transport hazard class(es)

9

Environmental hazards

Yes

ERG Code

12FZ

Description

UN3480, LITHIUM ION BATTERIES, 9

IMDG

Not applicable

Transport hazard class(es)

N/A

Marine pollutant indicator

NP F-A S-I

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

TSCA Contact supplier for inventory compliance status.

DSL/NDSL Contact supplier for inventory compliance status.
EINECS/ELINCS Contact supplier for inventory compliance status.
ENCS Contact supplier for inventory compliance status.
IECSC Contact supplier for inventory compliance status.
KECI Contact supplier for inventory compliance status.
PICCS Contact supplier for inventory compliance status.
AIIC Contact supplier for inventory compliance status.
NZIoC Contact supplier for inventory compliance status.
TCSI Contact supplier for inventory compliance status.

Legend:

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 Chemicals Inventory
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals
TCSI - Taiwan Chemical Substance Inventory

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 %
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
Cobalt lithium manganese nickel oxide 182442-95-1	-	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)
Cobalt lithium manganese nickel oxide	Present	-

Chemical name	Hazardous air pollutants (HAPs)	Ozone-depleting substances (ODS)
182442-95-1		

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	Reportable Quantity (RQ)
Copper 7440-50-8	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals:.

Chemical name	California Proposition 65
Cobalt lithium manganese nickel oxide - 182442-95-1	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Cobalt lithium manganese nickel oxide 182442-95-1	X	-	X
Graphite 7782-42-5	X	X	X
Dimethyl carbonate 616-38-6	X	X	X
Copper 7440-50-8	X	X	X
Aluminum 7429-90-5	X	X	X
Ethylene carbonate 96-49-1	-	X	X
Phosphate(1-), hexafluoro-, lithium 21324-40-3	X	-	-
Diethyl carbonate 105-58-8	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	Health hazards 1	Flammability 0	Instability 0	Special hazards -
HMIS	Health hazards 0	Flammability 0	Physical hazards 0	Personal protection X

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	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

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 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)
 National Institute of Technology and Evaluation (NITE)
 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)
 National Library of Medicine's PubMed database (NLM PUBMED)
 U.S. National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

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End of Safety Data Sheet