

# SAFETY DATA SHEET

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NGHS / English



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## 1. IDENTIFICATION

### Product identifier

**Product Name** Rechargeable Li-ion Battery - L20M3PF0

### Other means of identification

**Product Code(s)** 1615083

### 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 Identification** Lenovo LNB laptops

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### Emergency telephone number

**Company Emergency Phone Number** 18116118603

## 2. HAZARDS IDENTIFICATION

### Classification

|                         |            |
|-------------------------|------------|
| Acute toxicity - Oral   | Category 4 |
| Acute toxicity - Dermal | Category 3 |



|  |                           |
|--|---------------------------|
| Skin corrosion/irritation                          | Category 1 Sub-category B |
| Serious eye damage/eye irritation                  | Category 1                |
| Skin sensitization                                 | Category 1                |
| Carcinogenicity                                    | Category 1B               |
| Specific target organ toxicity (repeated exposure) | Category 1                |

This is a battery. In case of rupture: the above hazards exist.

**Appearance** Solid

**Physical state** Solid

**Odor** No information available

### GHS Label elements, including precautionary statements

#### Danger

#### Hazard statements

Harmful if swallowed

Toxic in contact with skin

Causes severe skin burns and eye damage

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/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Contaminated work clothing must not be allowed out of the workplace

Do not breathe dust/fume/gas/mist/vapors/spray

#### Precautionary Statements - Response

Specific treatment (see supplemental first aid instructions on this label)

Immediately call a POISON CENTER or doctor

#### Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Immediately call a POISON CENTER or doctor

#### Skin

Call a POISON CENTER or doctor if you feel unwell

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower

Wash contaminated clothing before reuse

If skin irritation or rash occurs: Get medical advice/attention

#### Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing

Immediately call a POISON CENTER or doctor

#### Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

Do NOT induce vomiting

#### Precautionary Statements - Storage

Store locked up

#### Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

#### Other information

Very toxic to aquatic life with long lasting effects.

**Unknown acute toxicity** 98.19 % of the mixture consists of ingredient(s) of unknown toxicity

78.19 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

78.19 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

98.19 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

98.19 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

98.19 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

### 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 Oxide (CoLiO <sub>2</sub> ) | 12190-79-3 | 26.45    | -  | -   |
| Phosphate(1-), hexafluoro-, lithium        | 21324-40-3 | 20       | -  | -   |
| Graphite                                   | 7782-42-5  | 17.07    | -  | -   |
| Aluminum                                   | 7429-90-5  | 15.77    | -  | -   |
| Copper                                     | 7440-50-8  | 13.98    | -  | -   |
| Nickel                                     | 7440-02-0  | 0.98     | -  | -   |

### 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. 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. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention.

##### Eye contact

Get immediate medical advice/attention. Rinse immediately with plenty of water, also under



the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing.

**Skin contact**

Get immediate medical advice/attention. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. May cause an allergic skin reaction.

**Ingestion**

Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/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**

Burning sensation. Itching. Rashes. Hives.

**Indication of any immediate medical attention and special treatment needed****Note to physicians**

Product is a corrosive material. 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 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.

**Large Fire**

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

**Unsuitable extinguishing media**

Do not scatter spilled material with high pressure water streams.

**Specific hazards arising from the chemical**

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. Product is or contains a sensitizer. May cause sensitization by skin contact.

**Hazardous Combustion Products**

Carbon oxides.

**Explosion Data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

**Special protective equipment 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. Attention! Corrosive material. 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** Pick up and transfer to properly labeled containers.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** In case of rupture: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Take off contaminated clothing and wash before reuse. 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.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up. Protect from moisture. Store away from other materials.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Exposure Limits

| Chemical name  | ACGIH TLV   | OSHA PEL   | NIOSH IDLH  |
|--|---|--|---|
| Lithium Cobalt Oxide (CoLiO <sub>2</sub> )<br>12190-79-3 | TWA: 0.02 mg/m <sup>3</sup>   | -  |   |
| Phosphate(1-), hexafluoro-, lithium<br>21324-40-3        | TWA: 2.5 mg/m <sup>3</sup> F  | TWA: 2.5 mg/m <sup>3</sup> F<br>(vacated) TWA: 2.5 mg/m <sup>3</sup>   | IDLH: 250 mg/m <sup>3</sup> F   |
| Graphite<br>7782-42-5                                    | TWA: 2 mg/m <sup>3</sup> respirable<br>particulate matter all forms<br>except graphite fibers | TWA: 15 mg/m <sup>3</sup> total dust<br>synthetic<br>TWA: 5 mg/m <sup>3</sup> respirable<br>fraction synthetic<br>(vacated) TWA: 2.5 mg/m <sup>3</sup><br>respirable dust natural<br>(vacated) TWA: 10 mg/m <sup>3</sup> total<br>dust synthetic<br>(vacated) TWA: 5 mg/m <sup>3</sup><br>respirable fraction synthetic<br>TWA: 15 mppcf natural | IDLH: 1250 mg/m <sup>3</sup><br>TWA: 2.5 mg/m <sup>3</sup> respirable<br>dust       |
| Aluminum<br>7429-90-5                                    | TWA: 1 mg/m <sup>3</sup> respirable<br>particulate matter                                     | TWA: 15 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable<br>fraction  | TWA: 10 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable<br>dust |

|  |  | (vacated) TWA: 15 mg/m <sup>3</sup> total dust<br>(vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction                              |  |  |
|--|--|---|--|--|
| Copper<br>7440-50-8                                      | TWA: 0.2 mg/m <sup>3</sup> fume                        | TWA: 0.1 mg/m <sup>3</sup> fume<br>TWA: 1 mg/m <sup>3</sup> dust and mist<br>(vacated) TWA: 0.1 mg/m <sup>3</sup> Cu dust, fume, mist | IDLH: 100 mg/m <sup>3</sup> dust, fume and mist<br>TWA: 1 mg/m <sup>3</sup> dust and mist<br>TWA: 0.1 mg/m <sup>3</sup> fume |  |
| Nickel<br>7440-02-0                                      | TWA: 1.5 mg/m <sup>3</sup>                             | TWA: 1 mg/m <sup>3</sup><br>(vacated) TWA: 1 mg/m <sup>3</sup>  | IDLH: 10 mg/m <sup>3</sup><br>TWA: 0.015 mg/m <sup>3</sup>   |  |
| Chemical name  | Alberta  | British Columbia  | Ontario TWAEV  | Quebec   |
| Lithium Cobalt Oxide (CoLiO <sub>2</sub> )<br>12190-79-3 | TWA: 0.02 mg/m <sup>3</sup>                            | TWA: 0.02 mg/m <sup>3</sup>   | TWA: 0.02 mg/m <sup>3</sup>  | TWA: 0.02 mg/m <sup>3</sup>                            |
| Phosphate(1-), hexafluoro-, lithium<br>21324-40-3        | TWA: 2.5 mg/m <sup>3</sup>                             | TWA: 2.5 mg/m <sup>3</sup>  | TWA: 2.5 mg/m <sup>3</sup>   | TWA: 2.5 mg/m <sup>3</sup>                             |
| Graphite<br>7782-42-5                                    | TWA: 2 mg/m <sup>3</sup>                               | TWA: 2 mg/m <sup>3</sup>  | TWA: 2 mg/m <sup>3</sup>   | TWA: 2 mg/m <sup>3</sup>                               |
| Aluminum<br>7429-90-5                                    | TWA: 10 mg/m <sup>3</sup>                              | TWA: 1.0 mg/m <sup>3</sup>  | TWA: 1 mg/m <sup>3</sup>   | TWA: 10 mg/m <sup>3</sup>                              |
| Copper<br>7440-50-8                                      | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 1 mg/m <sup>3</sup> | TWA: 1 mg/m <sup>3</sup><br>TWA: 0.2 mg/m <sup>3</sup>  | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 1 mg/m <sup>3</sup>   | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 1 mg/m <sup>3</sup> |
| Nickel<br>7440-02-0                                      | TWA: 1.5 mg/m <sup>3</sup>                             | TWA: 0.05 mg/m <sup>3</sup>   | TWA: 1 mg/m <sup>3</sup>   | TWA: 1.5 mg/m <sup>3</sup>                             |

**Other Exposure Guidelines**

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992). See section 15 for national exposure control parameters.

**Appropriate engineering controls****Engineering controls**

Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Face protection shield.

**Hand protection**

Wear suitable gloves. Impervious gloves.

**Skin and body protection**

Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

**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.

**General hygiene considerations**

Handle in accordance with good industrial hygiene and safety practice. 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. Contaminated work clothing should not be allowed out of the workplace.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties****Physical state**

Solid



|                |                          |
|----------------|--------------------------|
| Appearance     | Solid                    |
| Odor           | No information available |
| Color          | No information available |
| Odor Threshold | No information available |

| <u>Property</u>                                     | <u>Values</u>      | <u>Remarks</u> | <u>Method</u> |
|---|--------------------|----------------|---------------|
| pH  | No data available  | None known     |               |
| Melting / freezing point                            | No data available  | None known     |               |
| Boiling point / boiling range                       | No data available  | None known     |               |
| Flash Point   | No data available  | None known     |               |
| Evaporation Rate                                    | No data available  | None known     |               |
| Flammability (solid, gas)                           | No data available  | None known     |               |
| Flammability Limit in Air                           |                    | None known     |               |
| Upper flammability limit                            | No data available  |                |               |
| Lower flammability limit                            | No data available  |                |               |
| Vapor pressure                                      | No data available  | None known     |               |
| Vapor density                                       | No data available  | None known     |               |
| Relative density                                    | No data available  | None known     |               |
| Water Solubility                                    | Insoluble in water |                |               |
| Solubility(ies)                                     | No data available  | None known     |               |
| Partition coefficient: n-octanol/water <sup>1</sup> |                    |                |               |
| Autoignition temperature                            | No data available  | None known     |               |
| Decomposition temperature                           | No data available  | None known     |               |
| Kinematic viscosity                                 | No data available  | None known     |               |
| Dynamic viscosity                                   | No data available  | None known     |               |

**Other Information**

|                            |                          |
|----------------------------|--------------------------|
| Explosive properties       | No information available |
| Oxidizing properties       | No information available |
| Softening Point            | No information available |
| Molecular Weight           | No information available |
| VOC Content (%)            | No information available |
| Liquid Density             | No information available |
| Bulk Density               | No information available |
| Particle Size              | No information available |
| Particle Size Distribution | No information available |

## 10. STABILITY AND REACTIVITY

|                                    |   |
|------------------------------------|---|
| Reactivity                         | No information available.                           |
| Chemical stability                 | Stable under normal conditions.                     |
| Possibility of Hazardous Reactions | None under normal processing.                       |
| Hazardous Polymerization           | Hazardous polymerization does not occur.            |
| Conditions to avoid                | Exposure to air or moisture over prolonged periods. |
| Incompatible materials             | Acids. Bases. Oxidizing agent.                      |
| Hazardous Decomposition Products   | Carbon oxides.                                      |

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

|                            |   |
|----------------------------|---|
| <b>Product Information</b> | Product does not present an acute toxicity hazard based on known or supplied information. In case of rupture:   |
| <b>Inhalation</b>          | Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal.                                   |
| <b>Eye contact</b>         | Specific test data for the substance or mixture is not available. Causes burns. (based on components). Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes.   |
| <b>Skin contact</b>        | Specific test data for the substance or mixture is not available. Corrosive. (based on components). Causes burns. May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Toxic in contact with skin.  |
| <b>Ingestion</b>           | Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. |

**Symptoms related to the physical, chemical and toxicological characteristics**

|                 |   |
|-----------------|---|
| <b>Symptoms</b> | Redness. Burning. May cause blindness. Coughing and/ or wheezing. Itching. Rashes. Hives. |
|-----------------|---|

**Numerical measures of toxicity****Acute toxicity**

The following values are calculated based on chapter 3.1 of the GHS document .

|                        |              |
|------------------------|--------------|
| <b>ATEmix (oral)</b>   | 545.20 mg/kg |
| <b>ATEmix (dermal)</b> | 327.20 mg/kg |

|                               |   |
|-------------------------------|---|
| <b>Unknown acute toxicity</b> | 98.19 % of the mixture consists of ingredient(s) of unknown toxicity                              |
|                               | 78.19 % of the mixture consists of ingredient(s) of unknown acute oral toxicity                   |
|                               | 78.19 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity                 |
|                               | 98.19 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)       |
|                               | 98.19 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)     |
|                               | 98.19 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist) |

**Component Information**

| Chemical name                              | Oral LD50            | Dermal LD50          | Inhalation LC50                      |
|--|----------------------|----------------------|--------------------------------------|
| Lithium Cobalt Oxide (CoLiO <sub>2</sub> ) | > 5000 mg/kg ( Rat ) | > 2000 mg/kg ( Rat ) | > 5.05 mg/L ( Rat ) 4 h              |
| Graphite                                   | -                    | -                    | > 2000 mg/m <sup>3</sup> ( Rat ) 4 h |
| Nickel                                     | > 9000 mg/kg ( Rat ) | -                    | > 10.2 mg/L ( Rat ) 1 h              |

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

|                                  |   |
|----------------------------------|---|
| <b>Skin corrosion/irritation</b> | Classification based on data available for ingredients. Causes burns. |
|----------------------------------|---|



|  |   |
|--|---|
| <b>Serious eye damage/eye irritation</b> | Classification based on data available for ingredients. Risk of serious damage to eyes. Causes burns.               |
| <b>Respiratory or skin sensitization</b> | May cause sensitization by skin contact.  |
| <b>Germ cell mutagenicity</b>            | No information available.   |
| <b>Carcinogenicity</b>                   | 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 Oxide<br>(CoLiO <sub>2</sub> )<br>12190-79-3 | A3    | Group 2B | Reasonably Anticipated | X    |
| Nickel<br>7440-02-0   | -     | Group 2B | Reasonably Anticipated | X    |

#### Legend

##### ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

##### IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

##### NTP (National Toxicology Program)

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

##### OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

|                                 |   |
|---------------------------------|---|
| <b>Reproductive toxicity</b>    | No information available.                                       |
| <b>STOT - single exposure</b>   | No information available.                                       |
| <b>STOT - repeated exposure</b> | Causes damage to organs through prolonged or repeated exposure. |
| <b>Aspiration hazard</b>        | No information available.                                       |

## 12. ECOLOGICAL INFORMATION

**Marine Pollutant** This product contains a chemical which is listed as a severe marine pollutant according to DOT

**Ecotoxicity** Very toxic to aquatic life with long lasting effects.

| Chemical name | Algae/aquatic plants  | Fish  | Toxicity to microorganisms | Crustacea                             |
|---------------|---|---|----------------------------|---------------------------------------|
| Graphite      | No data available   | 96h LC50: > 100 mg/L<br>(Danio rerio)   | No data available          | No data available                     |
| Copper        | 96h EC50: 0.031 - 0.054 mg/L<br>(Pseudokirchneriella subcapitata) 72h EC50: 0.0426 - 0.0535 mg/L<br>(Pseudokirchneriella subcapitata) | 96h LC50: 0.0068 - 0.0156 mg/L (Pimephales promelas) 96h LC50: < 0.3 mg/L (Pimephales promelas) 96h LC50: = 0.052 mg/L (Oncorhynchus mykiss) 96h LC50: = 0.112 mg/L (Poecilia reticulata) 96h | No data available          | 48h EC50: = 0.03 mg/L (Daphnia magna) |

|        |  |   |                   |  |
|--------|--|---|-------------------|--|
|        |  | LC50: = 0.2 mg/L<br>(Pimephales promelas)<br>96h LC50: = 0.3 mg/L<br>(Cyprinus carpio) 96h<br>LC50: = 0.8 mg/L<br>(Cyprinus carpio) 96h<br>LC50: = 1.25 mg/L<br>(Lepomis macrochirus) |                   |  |
| Nickel | 96h EC50: 0.174 - 0.311 mg/L<br>(Pseudokirchneriella subcapitata) 72h EC50: = 0.18 mg/L<br>(Pseudokirchneriella subcapitata) | 96h LC50: = 1.3 mg/L<br>(Cyprinus carpio) 96h<br>LC50: = 10.4 mg/L<br>(Cyprinus carpio) 96h<br>LC50: > 100 mg/L<br>(Brachydanio rerio)  | No data available | 48h EC50: = 1 mg/L<br>(Daphnia magna) 48h<br>EC50: > 100 mg/L<br>(Daphnia magna) |

**Persistence and Degradability** No information available.

**Bioaccumulation** No information available.

**Mobility** No information available.

**Other adverse effects** No information available.

### 13. DISPOSAL CONSIDERATIONS

**Waste treatment 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 Codes** 141

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

| Chemical name                               | California Hazardous Waste       |
|---|----------------------------------|
| Lithium Cobalt Oxide (CoLiO2)<br>12190-79-3 | Toxic                            |
| Aluminum<br>7429-90-5                       | Ignitable powder                 |
| Nickel<br>7440-02-0                         | Toxic powder<br>Ignitable powder |

### 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"

|  |   |
|--|---|
| <b><u>DOT</u></b>                      | NOT REGULATED   |
| <b>Proper Shipping Name</b>            | NON-REGULATED   |
| <b>Hazard Class</b>                    | N/A   |
| <b>Marine Pollutant</b>                | This product contains a chemical which is listed as a severe marine pollutant according to DOT  |
| <b>Emergency Response Guide Number</b> | 147   |
| <b><u>TDG</u></b>                      | Not regulated   |
| <b>Marine Pollutant</b>                | This product contains a chemical which is listed as a severe marine pollutant according to TDG. |
| <b><u>MEX</u></b>                      | Not regulated   |
| <b><u>ICAO</u></b>                     | Not regulated   |
| <b><u>IATA</u></b>                     | Not regulated   |
| <b>Proper Shipping Name</b>            | NON REGULATED   |
| <b>Hazard Class</b>                    | N/A   |
| <b><u>IMDG/IMO</u></b>                 | Not regulated   |
| <b>Hazard Class</b>                    | N/A   |
| <b>EmS-No.</b>                         | F-A, S-I  |
| <b>Marine Pollutant</b>                | This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO    |
| <b><u>RID</u></b>                      | Not regulated   |
| <b><u>ADR</u></b>                      | Not regulated   |
| <b><u>ADN</u></b>                      | Not regulated   |

## 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

|                      |   |
|----------------------|---|
| <b>TSCA</b>          | Contact supplier for inventory compliance status. |
| <b>DSL/NDSL</b>      | Contact supplier for inventory compliance status. |
| <b>EINECS/ELINCS</b> | Contact supplier for inventory compliance status. |
| <b>ENCS</b>          | Contact supplier for inventory compliance status. |

**KECL** Contact supplier for inventory compliance status.  
**PICCS** Contact supplier for inventory compliance status.  
**AICS** 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  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

**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   | CAS No     | Weight-% | SARA 313 - Threshold Values % |
|---|------------|----------|-------------------------------|
| Lithium Cobalt Oxide (CoLiO <sub>2</sub> ) - 12190-79-3 | 12190-79-3 | 26.45    | 0.1                           |
| Aluminum - 7429-90-5                                    | 7429-90-5  | 15.77    | 1.0                           |
| Copper - 7440-50-8                                      | 7440-50-8  | 13.98    | 1.0                           |
| Nickel - 7440-02-0                                      | 7440-02-0  | 0.98     | 0.1                           |

**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. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard 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 |
|---------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Copper<br>7440-50-8 |                             | X                      | X                         |                            |
| Nickel<br>7440-02-0 |                             | X                      | X                         |                            |

**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 | RQ   |
|---------------------|--------------------------|------------------------------------|--|
| Copper<br>7440-50-8 | 5000 lb                  |                                    | RQ 5000 lb final RQ<br>RQ 2270 kg final RQ |
| Nickel<br>7440-02-0 | 100 lb                   |                                    | RQ 100 lb final RQ<br>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, 10/1/1989 (metallic) |

**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 | Rhode Island | Illinois |
|---|------------|---------------|--------------|--------------|----------|
| Lithium Cobalt Oxide (CoLiO2)<br>12190-79-3       | X          |               | X            | X            | X        |
| Phosphate(1-), hexafluoro-, lithium<br>21324-40-3 | X          |               |              |              |          |
| Graphite<br>7782-42-5                             | X          | X             | X            |              |          |
| Aluminum<br>7429-90-5                             | X          | X             | X            | X            |          |
| Copper<br>7440-50-8                               | X          | X             | X            | X            | X        |
| Nickel<br>7440-02-0                               | X          | X             | X            | X            | X        |

**16. OTHER INFORMATION**

|             |                  |                |                    |                                    |
|-------------|------------------|----------------|--------------------|------------------------------------|
| <b>NFPA</b> | Health hazards 1 | Flammability 0 | Instability 0      | Physical and Chemical Properties - |
| <b>HMIS</b> | Health hazards 0 | Flammability 0 | Physical hazards 0 | Personal Protection X              |

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**Disclaimer**

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**End of Safety Data Sheet**

