

**1. Identification**

**Product identifier** Lithium-ion Battery Pack, 50Gv2 18 Module Pack  
**Other means of identification** M11-594090, M11-178746-00

**Recommended use of the chemical and restrictions on use**

**Recommended use** To store and provide energy to electrical vehicles.  
**Recommended restrictions** Use in accordance with manufacturer instructions..

**Manufacturer/Importer/Supplier/Distributor information**

**Company name** Lucid USA, Inc. dba Lucid Motors  
**Address** 7373 Gateway Blvd  
 Newark, CA 94560  
 United States of America  
**Telephone** +1-510-648-3553  
**Emergency telephone** VelocityEHS (24-hour)  
 +1-813-708-1083  
 Contract number: MIS6324881

**2. Hazards identification**

**Physical hazards** Not classified.  
**Health hazards** Not classified.  
**Environmental hazards** Not classified.

**Label elements**

**Hazard symbol** None.  
**Signal word** None.  
**Hazard statement** Exempt (manufactured article).

**Precautionary statement**

**Prevention** Keep out of reach of children. Use personal protective equipment as required.  
**Response** In the event of damage resulting in a leak of exposed materials, avoid contact with contents of an open or damaged cell or battery.  
**Storage** Store as indicated in Section 7.  
**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.

**Other hazards which do not result in classification**

Incorrect handling or storage of lithium Ion batteries may cause thermal runaway resulting in fire or explosion. Exposure to contents of an open or damaged battery: Contact with acids liberates toxic gas

**Supplemental information**

Under normal conditions of processing and use, exposure to the chemical constituents in this product is unlikely. Batteries may get hot, explode or ignite and cause serious injury if mishandled, crushed or abused. When exposed to heat, when short circuited, or when exposed to incompatible materials, the battery may rupture and release hazardous substances. These substances can explode and burn. Burning batteries may emit toxic fumes.

**3. Composition/information on ingredients**

**Mixture**

**Hazardous components**

Chemical name	CAS number	%
Cobalt lithium manganese nickel oxide	182442-95-1	>10 - <25
Ethylene carbonate	96-49-1	<10
Copper	7440-50-8	<10
Nickel	7440-02-0	<5

**Non-hazardous components**

Chemical name	CAS number	%
Graphite	7782-42-5	>10 - <15

## Non-hazardous components

Chemical name	CAS number	%
Aluminium	7429-90-5	>10 - <15
Aluminium oxide	1344-28-1	<5
Mica	12001-26-2	<5

**Composition comments** The ingredients listed in section 3 are contained in a sealed container. Risk of exposure only occurs if battery is mechanically, thermally or electrically abused. All concentrations are in percent by weight.

## 4. First-aid measures

<b>Inhalation</b>	Exposure to contents of an open or damaged battery: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a poison center or doctor/physician.
<b>Skin contact</b>	Exposure to contents of an open or damaged battery: Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.
<b>Eye contact</b>	Exposure to contents of an open or damaged battery: Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Exposure to contents of an open or damaged battery: Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.
<b>Most important symptoms/effects, acute and delayed</b>	Under normal conditions of intended use, this product is not expected to be a health risk. Exposure to contents of an open or damaged battery: Nausea. Vomiting. Coughing. Difficulty in breathing. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	If exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	ABC fire extinguisher powder. Dry sand. Carbon dioxide (CO <sub>2</sub> ). Graphite powder. Sodium carbonate. Water in large quantities. A fire blanket can be used to cover a medium-sized battery that presents a risk of thermal runaway.
<b>Unsuitable extinguishing media</b>	No restrictions known.
<b>Specific hazards arising from the chemical</b>	Lithium-ion battery cells can undergo a process called thermal runaway, which may cause a fire and/or explosion. The thermal decomposition produces both flammable gases and oxidants that are generated within the cell. External oxygen is not required for the ignition and combustion of batteries. During fire, hazardous combustion products are released that may include: Carbon oxides. Fumes of metal oxides. Nickel carbonyl, a highly toxic substance and known carcinogen. Toxic gases/vapours.
<b>Special protective equipment and precautions for firefighters</b>	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.
<b>Fire fighting equipment/instructions</b>	In the event of fire and/or explosion do not breathe fumes. Fight fire from protected location or safe distance. Keep upwind. If possible, move the batteries with a suitable tool or machine. Isolate away from combustible materials, preferably outdoors. Allow to burn if extinguishing conditions are not met. Avoid allowing material from exposed battery to contaminate soil, sanitary sewers, or waterways.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	Under normal use, the battery does not exhibit flammable properties. In the event that the battery is abused and disassembly of the battery occurs resulting in exposure of internal components, the exposed solution, may be flammable and/or corrosive. Exposure to excessive heat may lead to venting or rupture of the sealed battery, exposing the internal components which may be corrosive and/or flammable. Vented gas would be flammable when in sufficient concentration.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. In the event of damage resulting in a leak or exposed materials, avoid contact with contents of an open or damaged cell or battery. Do not breathe fumes or vapors. Provide adequate ventilation. Wear protective clothing as described in section 8 of this safety data sheet.
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**Methods and materials for containment and cleaning up**

Recover and recycle, if practical. Leak from a damaged or opened battery: Contain spillage with sand or earth. Place in a designated labeled waste container, dispose as hazardous waste. For waste disposal, see Section 13 of the SDS.

**Environmental precautions**

Avoid allowing material from exposed battery to contaminate soil, sanitary sewers, or waterways.

**7. Handling and storage****Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Store in a well-ventilated place. Maintain sealed containment. Control access. CAUTION: Do not dispose in fire, mix with other battery types, charge above specified rate, connect improperly, or short-circuit, which may result in overheating, explosion or leakage of cell contents. Do not open, disassemble, crush or burn battery. Do not expose battery to extreme heat or fire. Do not allow conductive material to touch the battery terminals. A dangerous short circuit may occur and cause battery failure and fire. Batteries are designed to be recharged. However, improperly charging a cell or battery may cause the product to flame or leak. Use only approved chargers and procedures. Extended short-circuiting creates high temperatures in the cell. Avoid reversing the battery polarity within the battery assembly. To do so may cause the cell to flame or leak. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities**

Store locked up. Keep out of reach of children. Keep away from heat, sparks and open flame. Batteries should be separated from other materials and stored in a non-combustible, well ventilated structure with sufficient clearance between walls and battery stacks. Do not place batteries near heating equipment. Store in a cool, dry place. Protect from extreme temperatures. Avoid contact with water and moisture. Protect from humidity. Do not store batteries in a manner that allows terminals to short-circuit. Store away from incompatible materials (See Section 10).

**8. Exposure controls/personal protection****Occupational exposure limits****US. ACGIH Threshold Limit Values (TLV)**

Components	Type	Value	Form
Aluminium (CAS 7429-90-5)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.
Copper (CAS 7440-50-8)	TWA	1 mg/m <sup>3</sup>	Dust and mist.
		0.2 mg/m <sup>3</sup>	Fume.
Graphite (CAS 7782-42-5)	TWA	2 mg/m <sup>3</sup>	Respirable fraction.
Mica (CAS 12001-26-2)	TWA	0.1 mg/m <sup>3</sup>	Respirable fraction.
Nickel (CAS 7440-02-0)	TWA	1.5 mg/m <sup>3</sup>	Inhalable fraction.

**Bahrain. TLVs. Resolution No. 4 Regarding the Management of Hazardous Chemicals, Exposure Limits for Dangerous and Poisonous Chemicals, Annex. 3, as amended**

Components	Type	Value	Form
Aluminium (CAS 7429-90-5)	TWA	10 mg/m <sup>3</sup>	
Aluminium oxide (CAS 1344-28-1)	TWA	10 mg/m <sup>3</sup>	
Copper (CAS 7440-50-8)	TWA	1 mg/m <sup>3</sup>	Dust.
		0.2 mg/m <sup>3</sup>	Fume.
Graphite (CAS 7782-42-5)	TWA	2 mg/m <sup>3</sup>	
Mica (CAS 12001-26-2)	TWA	3 mg/m <sup>3</sup>	
Nickel (CAS 7440-02-0)	TWA	0.05 mg/m <sup>3</sup>	

**Egypt. OELs. Threshold limits of air pollutants in the workplace (Decree No. 338, Annex 8), as amended**

Components	Type	Value	Form
Aluminium (CAS 7429-90-5)	TWA	5 mg/m <sup>3</sup>	Welding fume.
		5 mg/m <sup>3</sup>	Pyrophoric powder.
		10 mg/m <sup>3</sup>	Dust.
Copper (CAS 7440-50-8)	TWA	1 mg/m <sup>3</sup>	Dust and mist.
		0.2 mg/m <sup>3</sup>	Fume.
Graphite (CAS 7782-42-5)	TWA	15 mp/ft <sup>3</sup>	
Mica (CAS 12001-26-2)	TWA	20 mp/ft <sup>3</sup>	
Nickel (CAS 7440-02-0)	TWA	1.5 mg/m <sup>3</sup>	Total dust.

**GCC. OELs. Occupational Exposure Limits for Hazardous Chemical Substances (Common System for the Management of Hazardous Chemicals in the Gulf Cooperation Council for the Arab States of the Gulf, Annex 3)**

Components	Type	Value	Form
Aluminium (CAS 7429-90-5)	TWA	10 mg/m <sup>3</sup>	

**GCC. OELs. Occupational Exposure Limits for Hazardous Chemical Substances (Common System for the Management of Hazardous Chemicals in the Gulf Cooperation Council for the Arab States of the Gulf, Annex 3)**

Components	Type	Value	Form
Aluminium oxide (CAS 1344-28-1)	TWA	10 mg/m3	
Copper (CAS 7440-50-8)	TWA	1 mg/m3 0.2 mg/m3	Dust. Fume.
Graphite (CAS 7782-42-5)	TWA	2 mg/m3	
Mica (CAS 12001-26-2)	TWA	3 mg/m3	
Nickel (CAS 7440-02-0)	TWA	0.05 mg/m3	

**Jordan. Resolution No. 43 (1998) Safety and Protection from Industrial Equipment, Machinery and Workplaces (Table of Permissible Threshold Limits of Workers Exposure to Chemicals)**

Components	Type	Value	Form
Aluminium (CAS 7429-90-5)	TWA	5 mg/m3	Fume.
Cobalt lithium manganese nickel oxide (CAS 182442-95-1)	TWA	0.35 mg/m3 0.5 ppm	
Copper (CAS 7440-50-8)	TWA	1 mg/m3 0.2 mg/m3	Dust. Fume.
Graphite (CAS 7782-42-5)	TWA	2.5 mg/m3	Respirable dust.
Nickel (CAS 7440-02-0)	TWA	0.1 mg/m3	

**Kuwait. Maximum Limits for Occupational Exposure to Chemical Substances (TLVs) Articles 19 and 20 of the Environmental Protection Law No. 42 of 2014, as amended**

Components	Type	Value	Form
Aluminium (CAS 7429-90-5)	TWA	5 mg/m3	
Aluminium oxide (CAS 1344-28-1)	TWA	5 mg/m3 10 mg/m3	Inhalable dust. Total dust.
Copper (CAS 7440-50-8)	TWA	1 mg/m3 0.1 mg/m3	Dust. Fume.
Graphite (CAS 7782-42-5)	TWA	5 mg/m3 15 mg/m3	Inhalable particulate. Particulate.
Mica (CAS 12001-26-2)	TWA	5 mg/m3 15 mg/m3	Inhalable particulate. Particulate.
Nickel (CAS 7440-02-0)	TWA	1 mg/m3	

**UAE. OELs. Maximum Allowable Limits for Air Pollutants in Working Areas [Law to Protect the Air from Pollution, Resolution of the Cabinet of Ministers No. 12 of 2006], as amended**

Components	Type	Value	Form
Aluminium (CAS 7429-90-5)	TWA	10 mg/m3	
Aluminium oxide (CAS 1344-28-1)	TWA	10 mg/m3	
Copper (CAS 7440-50-8)	TWA	1 mg/m3 0.2 mg/m3	Dust. Fume.
Graphite (CAS 7782-42-5)	TWA	2 mg/m3	
Mica (CAS 12001-26-2)	TWA	3 mg/m3	
Nickel (CAS 7440-02-0)	TWA	0.05 mg/m3	

**UAE. Abu Dhabi. TLVs. Maximum Allowable Limits for Air Pollutants in Working Areas (AD EHSMS RF - Occupational Standards and Guideline Values, Schedule A)**

Components	Type	Value	Form
Aluminium (CAS 7429-90-5)	TWA	1 mg/m3	Respirable fraction.
Aluminium oxide (CAS 1344-28-1)	TWA	1 mg/m3	Respirable fraction.
Copper (CAS 7440-50-8)	TWA	0.2 mg/m3	

**UAE. Abu Dhabi. TLVs. Maximum Allowable Limits for Air Pollutants in Working Areas (AD EHSMS RF - Occupational Standards and Guideline Values, Schedule A)**

Components	Type	Value	Form
Graphite (CAS 7782-42-5)	TWA	2 mg/m <sup>3</sup>	Respirable fraction.
Mica (CAS 12001-26-2)	TWA	3 mg/m <sup>3</sup>	Respirable fraction.
Nickel (CAS 7440-02-0)	TWA	1.5 mg/m <sup>3</sup> 0.5 mg/m <sup>3</sup>	Inhalable fraction.

**U.A.E. Dubai. OELs. Maximum Allowable Limits for Indoor Air Pollutants (Regulation IO-4.0, Appendix 12, Tables 2 & 2A)**

Components	Type	Value	Form
Aluminium (CAS 7429-90-5)	TWA	10 mg/m <sup>3</sup>	
Aluminium oxide (CAS 1344-28-1)	TWA	10 mg/m <sup>3</sup>	
Copper (CAS 7440-50-8)	TWA	1 mg/m <sup>3</sup> 0.2 mg/m <sup>3</sup>	Dust. Fume.

**Biological limit values**

**ACGIH Biological Exposure Indices (BEI)**

Components	Value	Determinant	Specimen	Sampling Time
Cobalt lithium manganese nickel oxide (CAS 182442-95-1)	15 µg/l	Cobalt	Urine	*
Nickel (CAS 7440-02-0)	5 µg/l	Nickel	Urine	*

\* - For sampling details, please see the source document.

**Kuwait. BEIs. Maximum Allowable Limits of Exposure to Biological Effect (Decision No. 5 of 2017, Appendix 1-4)**

Components	Value	Determinant	Specimen	Sampling Time
Cobalt lithium manganese nickel oxide (CAS 182442-95-1)	15 µg/l	Cobalt	Urine	*
	1 µg/l	Cobalt	Blood	*

\* - For sampling details, please see the source document.

**Exposure guidelines**

Airborne exposures to hazardous substances are not expected when product is used for its intended purpose. The OELs listed above are only applicable if the internal components of the battery cell are released.

**Qatar. OELs. Maximum Concentrations of Hazardous Chemicals in the Workplace (Resolution No. 4 of 2005, Standards Permissible in Confined Workplaces, Annex 3; VI)**

Cobalt lithium manganese nickel oxide (CAS 182442-95-1)  
Copper (CAS 7440-50-8)  
Nickel (CAS 7440-02-0)

**Appropriate engineering controls**

Ventilation is not normally required. Leak from a damaged or opened battery: Provide adequate ventilation if fumes or vapours are generated.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

None under normal conditions. Wear chemical goggles if handling an open or leaking battery.

**Skin protection**

**Hand protection**

None under normal conditions. Leak from a damaged or opened battery: Wear chemical-resistant, impervious gloves. Glove material: Nitrile. Use gloves with breakthrough time of 240 minutes. Minimum glove thickness 0.1 mm. Other suitable gloves can be recommended by the glove supplier.

**Other**

None under normal conditions. Leak from a damaged or opened battery: Wear suitable coveralls to prevent exposure to the skin.

**Respiratory protection**

None under normal conditions. Leak from a damaged or opened battery: In case of insufficient ventilation, wear suitable respiratory equipment. Use filter type AB P2 according to EN 143. Check with respiratory protective equipment suppliers.

**Thermal hazards**

No protection is ordinarily required under normal conditions of use.

**General hygiene considerations**

Observe any medical surveillance requirements. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

**9. Physical and chemical properties**

**Appearance**

**Physical state** Solid.

<b>Form</b>	Battery.
<b>Colour</b>	No data available.
<b>Odour</b>	No data available.
<b>Odour threshold</b>	Not applicable unless individual components exposed.
<b>pH</b>	Not applicable unless individual components exposed.
<b>Melting point/freezing point</b>	Not applicable unless individual components exposed.
<b>Initial boiling point and boiling range</b>	Not applicable unless individual components exposed.
<b>Flash point</b>	Not applicable unless individual components exposed.
<b>Evaporation rate</b>	Not applicable unless individual components exposed.
<b>Flammability (solid, gas)</b>	Contains one or more components that will burn if involved in a fire.
<b>Upper/lower flammability or explosive limits</b>	
<b>Explosive limit - lower (%)</b>	Not applicable unless individual components exposed.
<b>Explosive limit – upper (%)</b>	Not applicable unless individual components exposed.
<b>Vapour pressure</b>	Not applicable unless individual components exposed.
<b>Vapour density</b>	Not applicable unless individual components exposed.
<b>Relative density</b>	Property has not been measured.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not applicable unless individual components exposed.
<b>Partition coefficient (n-octanol/water)</b>	Not applicable for mixtures.
<b>Auto-ignition temperature</b>	Not applicable unless individual components exposed.
<b>Decomposition temperature</b>	Not applicable unless individual components exposed.
<b>Viscosity</b>	Not applicable unless individual components exposed.
<b>Other information</b>	
<b>Density</b>	Property has not been measured.
<b>Explosive properties</b>	Not classified.
<b>Kinematic viscosity</b>	Not applicable unless individual components exposed.
<b>Oxidising properties</b>	Not oxidising.
<b>Particle size</b>	Property has not been measured.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport. Damaged non-discharged batteries could be at risk of overheating or a thermal runaway. This reaction gives off heat, fumes and vapors.
<b>Chemical stability</b>	Stable under the prescribed storage conditions.
<b>Possibility of hazardous reactions</b>	Exposure to contents of an open or damaged battery: Contact with acids liberates toxic gases.
<b>Conditions to avoid</b>	Heat, sparks, flames, elevated temperatures. Protect from temperatures above: 158°F/70°C. Protect against direct sunlight. Water, moisture. Humidity. Shocks and physical damage. Do not open, disassemble, crush or burn battery. Do not allow conductive material to touch the battery terminals. A dangerous short-circuit may occur and cause battery failure and fire.
<b>Incompatible materials</b>	Strong oxidising agents. Strong alkalis. Mineral acid. Halogenated hydrocarbons. Do not immerse in seawater or other high conductivity liquids.
<b>Hazardous decomposition products</b>	Irritating and/or toxic fumes and gases may be emitted upon the products decomposition. May form peroxides. For hazardous combustion products, see section 5.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Under normal conditions of intended use, this material is not expected to be an inhalation hazard. Exposure to contents of an open or damaged battery: Toxic if inhaled. Causes damage to organs through prolonged or repeated exposure by inhalation. May cause cancer by inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
<b>Skin contact</b>	Under normal conditions of intended use, this material does not pose a skin hazard. Exposure to contents of an open or damaged battery: May cause an allergic skin reaction.
<b>Eye contact</b>	Under normal conditions of intended use, this material does not pose an eye hazard. Exposure to contents of an open or damaged battery: Direct contact with eyes may cause temporary irritation.

<b>Ingestion</b>	Under normal conditions of intended use, this material does not pose a risk to health. Harmful if swallowed.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Under normal conditions of intended use, this product is not expected to be a health risk. Exposure to contents of an open or damaged battery: Nausea, vomiting. Coughing. Difficulty in breathing. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.
<b>Information on toxicological effects</b>	
<b>Acute toxicity</b>	Exposure to contents of an open or damaged battery: Toxic if inhaled. Harmful if swallowed.
<b>Components</b>	<b>Species</b>
<hr/>	
Aluminium oxide (CAS 1344-28-1)	
<b>Acute</b>	
<b>Oral</b>	
LD50	Rat
	> 5000 mg/kg/day
Ethylene carbonate (CAS 96-49-1)	
<b>Acute</b>	
<b>Oral</b>	
LD50	Rat
	10 g/kg
Nickel (CAS 7440-02-0)	
<b>Acute</b>	
<b>Inhalation</b>	
NOAEC	Rat
	10200 mg/l, 1 hours
<b>Oral</b>	
LD50	Rat
	> 9000 mg/kg
<b>Skin corrosion/irritation</b>	Exposure to contents of an open or damaged battery: Prolonged skin contact may cause temporary irritation.
<b>Serious eye damage/eye irritation</b>	Exposure to contents of an open or damaged battery: Direct contact with eyes may cause temporary irritation.
<b>Respiratory or skin sensitisation</b>	
<b>Respiratory sensitisation</b>	Exposure to contents of an open or damaged battery: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
<b>Skin sensitisation</b>	Exposure to contents of an open or damaged battery: May cause an allergic skin reaction.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	Exposure to contents of an open or damaged battery: May cause cancer.
<b>Bahrain. OELs. Resolution No. 4 Regarding the Management of Hazardous Chemicals, Annex 3, (2006)</b>	
Nickel (CAS 7440-02-0)	Carcinogen category 1.
<b>Egypt OELs Carcinogen rating</b>	
Cobalt lithium manganese nickel oxide (CAS 182442-95-1)	C1 Confirmed human carcinogen.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>	
Nickel (CAS 7440-02-0)	2B Possibly carcinogenic to humans.
<b>Kuwait OELs (Decision No. 210/): Carcinogen Category</b>	
Nickel (CAS 7440-02-0)	A1 Confirmed human carcinogen.
<b>UAE - Abu Dhabi TLVs: Carcinogen Category</b>	
Cobalt lithium manganese nickel oxide (CAS 182442-95-1)	GROUP A3 Confirmed animal carcinogen with unknown relevance to humans.
Nickel (CAS 7440-02-0)	GROUP A5 Not suspected as a human carcinogen.
<b>UAE OELs Hazard Designation: Carcinogen category</b>	
Nickel (CAS 7440-02-0)	C1 Carcinogenic.
<b>Reproductive toxicity</b>	Exposure to contents of an open or damaged battery: May damage fertility or the unborn child.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Exposure to contents of an open or damaged battery: Causes damage to organs (lungs) through prolonged or repeated exposure by inhalation. May cause damage to organs ( ) through prolonged or repeated exposure.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	Exposure to contents of an open or damaged battery: Prolonged inhalation may be harmful. Causes damage to organs through prolonged or repeated exposure. Prolonged exposure may cause chronic effects.

**Further information** Exposure to hazardous ingredients is not anticipated under normal conditions of use.

## 12. Ecological information

**Ecotoxicity** Exposure to contents of an open or damaged battery: Very toxic to aquatic life with long lasting effects.

Components		Species	Test Results
Copper (CAS 7440-50-8)			
<b>Aquatic</b>			
<i>Chronic</i>			
Other	NOEC	Juga plicifera	6 µg/l
Graphite (CAS 7782-42-5)			
<b>Aquatic</b>			
Fish	LC50	Oncorhynchus mykiss	> 1000 mg/l

**Persistence and degradability** The product contains inorganic compounds which are not biodegradable.

**Bioaccumulative potential** No data available on bioaccumulation.

**Mobility in soil** Some components from a leaking battery may be mobile.

**Other adverse effects** No data available for this product.

## 13. Disposal considerations

**Disposal instructions** Recycle the batteries as the primary disposal method. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Waste from residues / unused products** Dispose in accordance with local regulations. This material and its container must be disposed of as hazardous waste.

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

### IATA

<b>UN number</b>	3480
<b>UN proper shipping name</b>	Lithium ion batteries
<b>Transport hazard class(es)</b>	
<b>Class</b>	9
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	9
<b>Packing group</b>	-
<b>Environmental hazards</b>	Yes
<b>ERG Code</b>	12FZ
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

### IMDG

<b>UN number</b>	3480
<b>UN proper shipping name</b>	LITHIUM ION BATTERIES
<b>Transport hazard class(es)</b>	
<b>Class</b>	9
<b>Subsidiary risk</b>	-
<b>Packing group</b>	-
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes
<b>EmS</b>	F-A, S-I
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

## 15. Regulatory information

**Safety, health and environmental regulations specific for the product in question** This SDS complies with the requirements of Egyptian Standard (ES) 8398/2020 on Safety Data Sheet for Chemical Products – Content and Order of Sections.

**Bahrain. Chemicals Subject to the Prior Informed Consent Procedure under the Rotterdam Convention (Law No. 14 of 2012, Annex III)**

Not applicable.

**Bahrain. CWC Chemical Substances (Decree No. 6 of 1997, Schedules 1, 2 and 3; Law No. 51 of 2009)**

Not listed.

**Bahrain. Prohibited Chemicals (Ministry of State for Municipal & Environmental Affairs, Resolution No 7 of 2002, On Control of Importing & Use of Prohibited & Restricted Chemicals, Table 1)**

Not listed.

**Bahrain. Severely Restricted Chemicals (Ministry of State for Municipal & Environmental Affairs, Resolution No 7 of 2002, On Control of Importing & Use of Prohibited & Restricted Chemicals, Table 2)**

Cobalt lithium manganese nickel oxide (CAS 182442-95-1)

Nickel (CAS 7440-02-0)

**Egypt. Non-Restricted Substances (Unified list of hazardous substances, List C)**

Nickel (CAS 7440-02-0)

**Oman. List of Prohibited Chemical Substances (MD 25/2009. Annex 2)**

Not listed.

**Oman. List of Restricted Chemical Substances (MD 25/2009. Annex 1)**

Not listed.

**Saudi Arabia. Jubail & Yanbu. Hazardous Air Pollutants (Royal Commission for Jubail & Yanbu Environmental Regulations, V.1. 2004, Table 2C)**

Nickel (CAS 7440-02-0)

**UAE. Abu Dhabi. CWC (Chemicals Weapons Convention) Banned from Entry/Import (Standard Operating Procedures for Permitting of Chemicals and Hazardous Materials)**

Not listed.

**UAE. Abu Dhabi. Narcotic Precursors Banned from Entry/Import (Standard Operating Procedures for Permitting of Chemicals and Hazardous Materials)**

Not listed.

**UAE. Ban on Importing and Circulation of Harmful Pesticides for Health and Environment (Ministerial Decree No. 193)**

Not listed.

**UAE. Dubai. CWC (Chemicals Weapons Convention) Federal Environmental Agency, Code of Practice**

Not listed.

**UAE. Dubai. Illicit Drug Traffic, scheduled substances (UN Convention against illicit traffic in narcotic drugs and psychotropic substances), Ministry of Health, Code of Practice**

Not listed.

**UAE. Dubai. Prohibited and restricted imports. Ministry of Environmental and Water, Code of Practice**

Not listed.

**International regulations**

**Stockholm Convention**

Not applicable.

**Rotterdam Convention**

Not applicable.

**Montreal Protocol**

Not applicable.

**Kyoto Protocol**

Not applicable.

**Basel Convention**

Not applicable.

**16. Other information, including date of preparation or last revision**

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