# SAFETY DATA SHEET

Issuing Date 17-Dec-2019

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**Revision Number** 2

NGHS / English

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# 1. IDENTIFICATION

**Product identifier** 

Product Name CHARGETAB LITHIUM ION BATTERY

Other means of identification

Product Code(s) 1496646

Recommended use of the chemical and restrictions on use

Recommended Use LITHIUM ION BATTERIES

Restrictions on use No information available

Details of the supplier of the safety data sheet

Supplier Identification CHARGETAB INC

Address PO BOX 32515 LUCERNE

MOUNT-ROYAL QUEBEC H3R3L7 CA

Telephone Phone:8887551222

**E-mail** mark@chargetab.com

Emergency telephone number

**Company Emergency Phone** 

Number

5143351930

# 2. HAZARDS IDENTIFICATION

#### Classification

Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 1



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

Appearance Silver Physical state Solid Odor No data available

### GHS Label elements, including precautionary statements

#### **Danger**

#### **Hazard statements**

Toxic in contact with skin

Causes severe skin burns and eye damage

Suspected of causing 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 breathe dust/fume/gas/mist/vapors/spray

Do not eat, drink or smoke when using this product

### **Precautionary Statements - Response**

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

Immediately call a POISON CENTER or doctor

#### **Eves**

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

# Inhalation

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

Immediately call a POISON CENTER or doctor

# Ingestion

IF SWALLOWED: 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

May be harmful if swallowed. Very toxic to aquatic life with long lasting effects.

Unknown acute toxicity 100 % of the mixture consists of ingredient(s) of unknown toxicity

55 % of the mixture consists of ingredient(s) of unknown acute oral toxicity



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91 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

100 % 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 (CoLiO2)	12190-79-3	35	-	-
Phosphate(1-), hexafluoro-, lithium	21324-40-3	9	-	-
Copper	7440-50-8	6	-	-
Aluminum	7429-90-5	6	-	-

# 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.

**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.



#### Indication of any immediate medical attention and special treatment needed

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.

# 5. FIRE-FIGHTING MEASURES

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.

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.

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

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

Protect from moisture. Keep out of the reach of children. Store away from other materials.

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

Exposure Limits

Chemical name		ACGIH T	LV	0	SHA PEL		NIOSH IDLH
Lithium Cobalt Oxide (CoLiC 12190-79-3	)2)	TWA: 0.02 mg/m <sup>3</sup>		-			
Phosphate(1-), hexafluoro lithium 21324-40-3	-,	TWA: 2.5 mg/m³ F		TWA: 2.5 mg/m³ F (vacated) TWA: 2.5 mg/m³			IDLH: 250 mg/m <sup>3</sup> F
Copper 7440-50-8		TWA: 0.2 mg/m³ fume		TWA: 0.1 mg/m³ fume TWA: 1 mg/m³ dust and mist (vacated) TWA: 0.1 mg/m³ Cu dust, fume, mist		TWA	d: 100 mg/m³ dust, fume and mist : 1 mg/m³ dust and mist WA: 0.1 mg/m³ fume
Aluminum 7429-90-5		TWA: 1 mg/m³ particulate r	respirable TWA: 15 mg/m³ total dust			A: 10 mg/m³ total dust 5 mg/m³ respirable dust	
Chemical name		Alberta	British C	Columbia	Ontario TWAE	V	Quebec
Lithium Cobalt Oxide (CoLiO2) 12190-79-3	TV	VA: 0.02 mg/m <sup>3</sup>	TWA: 0.0	.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 21324-40-3	T	TWA: 2.5 mg/m <sup>3</sup> TWA: 2.		2.5 mg/m³ TWA: 2.5 mg/		n <sup>3</sup>	TWA: 2.5 mg/m <sup>3</sup>
Copper	T	ΓWA: 0.2 mg/m <sup>3</sup> TWA: 1		l mg/m³	mg/m <sup>3</sup> TWA: 0.2 mg/r		TWA: 0.2 mg/m <sup>3</sup>
7440-50-8	1			0.2 mg/m <sup>3</sup> TWA: 1 mg/m		3	TWA: 1 mg/m <sup>3</sup>
Aluminum 7429-90-5	Т	WA: 10 mg/m <sup>3</sup>	TWA: 1.	.0 mg/m <sup>3</sup>	TWA: 1 mg/m	3	TWA: 10 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.



No protective equipment is needed under normal use conditions. If exposure limits are Respiratory protection

exceeded or irritation is experienced, ventilation and evacuation may be required.

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with **General hygiene considerations** 

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** Silver

Odor No data available No information available Color

**Odor Threshold** Not applicable

Remarks Method **Property** Values

No data available None known pН Melting / freezing point No data available None known Boiling point / boiling range No data available None known No data available Flash Point None known No data available **Evaporation Rate** None known Flammability (solid, gas) No data available None known None known

Flammability Limit in Air

Upper flammability limit No data available

Lower flammability limit No data available

Vapor pressure No data available None known None known Vapor density No data available Relative density No data available None known

Water Solubility Insoluble in water

Solubility(ies) No data available None known

Partition coefficient: n-octanol/water0

**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

No information available **Explosive properties** 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

**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. 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.

**Eye contact** 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.

**Skin contact** Specific test data for the substance or mixture is not available. Corrosive. (based on

components). Causes burns. Toxic in contact with skin.

**Ingestion** 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

Symptoms Redness. Burning. May cause blindness. Coughing and/ or wheezing.

Numerical measures of toxicity

**Acute Toxicity** 

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

 ATEmix (oral)
 2,276.30 mg/kg

 ATEmix (dermal)
 300.00 mg/kg

Unknown acute toxicity 100 % of the mixture consists of ingredient(s) of unknown toxicity

55 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

91 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas) 100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

100 % 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 (CoLiO2)	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 5.05 mg/L (Rat) 4 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 burns.

**Serious eye damage/eye irritation** Classification based on data available for ingredients. Risk of serious damage to eyes.

Causes burns.

**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. Suspected of causing cancer.

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

Chemical name	ACGIH	IARC	NTP	OSHA
Lithium Cobalt Oxide	A3	Group 2B	Reasonably Anticipated	X
(CoLiO2)			·	
12190-79-3				

### 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

Reproductive toxicity No information available.

**STOT - single exposure** No information available.

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

**Aspiration hazard** No information available.

# 12. ECOLOGICAL INFORMATION

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

Chemical name	Toxicity to Algae	Toxicity to Fish	Toxicity to	Daphnia Magna (Water
			Microorganisms	Flea)
Copper	72h EC50: 0.0426 -	96h LC50: = 0.052 mg/L	-	48h EC50: = 0.03 mg/L
	0.0535 mg/L	(Oncorhynchus mykiss)		
	(Pseudokirchneriella	96h LC50: = 0.3 mg/L		
	subcapitata) 96h EC50:	(Cyprinus carpio) 96h		
	0.031 - 0.054 mg/L	LC50: 0.0068 - 0.0156		
	(Pseudokirchneriella	mg/L (Pimephales		
	subcapitata)	promelas) 96h LC50: =		
		0.2 mg/L (Pimephales		
		promelas) 96h LC50: =		
		0.8 mg/L (Cyprinus		



carpio) 96h LC50: =
0.112 mg/L (Poecilia
reticulata) 96h LC50: =
1.25 mg/L (Lepomis
macrochirus) 96h LC50:
< 0.3 mg/L (Pimephales
promelas)

Persistence and Degradability No information available.

**Bioaccumulation** There is no data for this product.

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)	Toxic
12190-79-3	
Copper	Toxic
7440-50-8	
Aluminum	Ignitable powder
7429-90-5	

# 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"

DOTNOT REGULATEDProper Shipping NameNON-REGULATED



Hazard Class N/A Emergency Response Guide 147

Number

<u>TDG</u> Not regulated

MEX Not regulated

ICAO Not regulated

Not regulated

Proper Shipping Name NON REGULATED

Hazard Class N/A ERG Code 9F

IMDG/IMO Not regulated

Hazard Class N/A EmS-No. F-A, S-I

RID Not regulated

ADR Not regulated

Tunnel restriction code (E)

ADN 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** 

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.

KECL Contact supplier for inventory compliance status.

PICCS Contact supplier for inventory compliance status.

<u>Legend</u>

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 (CoLiO2) - 12190-79-3	12190-79-3	35	0.1
Copper - 7440-50-8	7440-50-8	6	1.0
Aluminum - 7429-90-5	7429-90-5	6	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. 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 7440-50-8		X	Х	

#### **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 7440-50-8	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

### **US State Regulations**

### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

### **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) 12190-79-3	Х		Х	Х	Х
Phosphate(1-), hexafluoro-, lithium 21324-40-3	Х				
Copper 7440-50-8	Х	X	Х	Х	Х
Aluminum 7429-90-5	Х	Х	Х	Х	

16. OTHER INFORMATION						
NFPA	Health hazards 1	Flammability 0	Instability 0	Physical and Chemical		
<u>HMIS</u>	Health hazards 0	Flammability 0	Physical hazards 0	Properties - Personal Protection X		



Prepared By Product Stewardship

23 British American Blvd. Latham, NY 12110 1-800-572-6501

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Revision Note No information available

### **Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet** 



