Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations Date of Issue: 08/26/2022

### **SECTION 1: IDENTIFICATION**

#### 1.1. **Product Identifier**

#### Product Form: Mixture

Product Name: 6T Battery Pack 78 Ah; P/N 300-109471; Finished P/N 4-0722-0002

Additional Information: This product contains a sealed battery assembly. The battery contains hazardous substances, which under normal conditions of use are not in contact with the user unless the battery is altered or there is a spill, leak, or other emergency. This Safety Data Sheet applies to the hazards of the internal contents of the battery, specifically the hazardous substances encased within it.

#### 1.2. **Intended Use of the Product**

Use of the Substance/Mixture: Secondary Lithium-Ion Battery Pack containing 14 Lithium-ion, Kokam SLPB cells, Model KDX17006-6. Full Capacity Rating @ 1C rate: 2000 Wh (78 Ah)

#### Name, Address, and Telephone of the Responsible Party 1.3.

Stryten Energy LLC 5925 Cabot Pkwy Alpharetta, GA 30005 678-566-9000

1.4. **Emergency Telephone Number** 

**Emergency Number** 

: VelocityEHS (800)255-3924 (North America)

+1 (813)248-0585 (International)

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2.1. Classification of the Substance or Mixture         GHS-US Classification         Acute toxicity (oral) Category 3       H301         Acute toxicity (inhalation:dust,mist) Category 2       H330         Skin corrosion/irritation Category 1A       H314         Serious eye damage/eye irritation Category 1       H318         Carcinogenicity Category 1B       H350         Specific target organ toxicity (repeated exposure) Category 1       H372         Hazardous to the aquatic environment - Chronic Hazard Category 3       H412         2.2. Label Elements       GHS-US         GHS-US Labeling       Hazard Pictograms (GHS-US)         Hazard Vord (GHS-US)       : Danger         Hazard Statements (GHS-US)       : Danger         Hazard Statements (GHS-US)       : H301 - Toxic if swallowed.
GHS-US Classification   Acute toxicity (oral) Category 3   Acute toxicity (inhalation:dust,mist) Category 2   H330   Skin corrosion/irritation Category 1A   Serious eye damage/eye irritation Category 1   H314   Serious eye damage/eye irritation Category 1   H318   Carcinogenicity Category 1B   H350   Specific target organ toxicity (repeated exposure) Category 1   H372   Hazardous to the aquatic environment - Chronic Hazard Category 3   H412   2.2. Label Elements   GHS-US Labeling   Hazard Pictograms (GHS-US)   : Danger   Hazard Statements (GHS-US)   : H301 - Toxic if swallowed.   H314 - Causes savere skin hurre and eve damage
Acute toxicity (oral) Category 3 H301 Acute toxicity (inhalation:dust,mist) Category 2 H330 Skin corrosion/irritation Category 1A H314 Serious eye damage/eye irritation Category 1 H318 Carcinogenicity Category 1B H350 Specific target organ toxicity (repeated exposure) Category 1 H372 Hazardous to the aquatic environment - Chronic Hazard Category 3 H412 <b>2.2. Label Elements</b> <b>GHS-US Labeling</b> Hazard Pictograms (GHS-US) : $V = V = V = V = V = V = V = V = V = V $
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<ul> <li>2.2. Label Elements</li> <li>GHS-US Labeling</li> <li>Hazard Pictograms (GHS-US)</li> <li>Signal Word (GHS-US)</li> <li>E Danger</li> <li>Hazard Statements (GHS-US)</li> <li>E H301 - Toxic if swallowed.</li> <li>H314 - Causes severe skip humps and eve damage</li> </ul>
GHS-US Labeling         Hazard Pictograms (GHS-US)         :
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Hazard Statements (GHS-US) : H3U1 - TOXIC IT SWallowed. H314 - Causes severe skin hurns and eve damage
11314 - Causes severe skill burns and eye damage.
H220 Estal if inhalad
H350 - Faldi II IIIIideu. H250 - May cause cancer (inhalation)
H272 Causes damage to organs through prolonged or repeated evensure
H412 - Harmful to aquatic life with long lasting effects
<b>Precautionary Statements (GHS-US)</b> • P201 - Obtain special instructions before use
Precautionary statements (Gris-Os) . P201 - Obtain special instructions before use.
P260 - Do not heathe vanors, mist, or snrav
P264 - Wash bands forearms and other exposed areas thoroughly after bandling
P270 - Do not eat drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, and eve protection.
P284 - [In case of inadequate ventilation] wear respiratory protection.
P301+P310 - If swallowed: Immediately call a poison center or doctor.
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.

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P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 - If inhaled: Remove person to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313 - If exposed or concerned: Get medical advice/attention.

P310 - Immediately call a poison center or doctor.

P314 - Get medical advice/attention if you feel unwell.

P320 - Specific treatment is urgent (see section 4 on this SDS).

P330 - Rinse mouth.

P363 - Wash contaminated clothing before reuse.

P403+P233 - Store in a well-ventilated place. Keep container tightly closed.

P405 - Store locked up.

P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

#### 2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

#### 2.4. Unknown Acute Toxicity (GHS-US)

No data available

#### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

- 3.1. Substance
- Not applicable

#### 3.2. Mixture

Name	Synonyms	Product Identifier	%	GHS US classification
Cobalt lithium manganese nickel oxide	Lithium cobalt manganese nickel oxide	(CAS-No.) 182442-95-1	20 – 50	Acute Tox. 2 (Inhalation), H330 Carc. 1B, H350 STOT RE 1, H372 Aquatic Chronic 3, H412
lithium manganese iron phosphate	Phosphoric acid, iron(2+) lithium manganese(2+) salt (10:3:10:7)	(CAS-No.) 1354700-46- 1	20 – 50	Acute Tox. 4 (Inhalation:dust,mist), H332
Graphite	C.I. Pigment Black 10 / C.I. 77265 / graphite	(CAS-No.) 7782-42-5	15 – 35	Comb. Dust
Phosphate(1-), hexafluoro-, lithium	Lithium hexafluorophosphate(1-) / Lithium phosphohexafluoride / Phosphate(1-), hexafluoro-, lithium (1:1) / Lithium hexafluorophosphate	(CAS-No.) 21324-40-3	10 – 20	Acute Tox. 3 (Oral), H301 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT RE 1, H372
Copper	Copper, metallic / Pigment Metal 2 / Copper metal / CI 77400 / Copper, elemental / CI. Pigment Metal 2 / C.I. 77400 / Granulated copper / copper	(CAS-No.) 7440-50-8	3 – 12	Comb. Dust
Aluminum	Aluminium / Aluminium metal / Aluminium, metal / Aluminum metal / Aluminum, elemental / Aluminum, metal / C.I. 77000 / Cl 77000 / Aluminium powder (stabilised) / Aluminium powder / Pigment Metal 1 / Aluminum powder / Aluminium metal, powder / aluminum	(CAS-No.) 7429-90-5	3 – 12	Comb. Dust
Carbon	Carbon, activated / CARBON / Activated carbon / Carbon Black / Graphite / Active carbon	(CAS-No.) 7440-44-0	≤ 10	Comb. Dust

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1,1-Difluoroethylene polymer	Ethene, 1,1-difluoro-, homopolymer / Homopolymer, ethene, 1,1-difluoro- / Polyvinylidene fluoride / Polyvinylidene fluoride resin / Poly(vinylidene fluoride) / Poly(1,1-difluoroethene) / POLYVINYLIDENE DIFLUORIDE / Vinylidene fluoride homopolymer / Polymer of 1,1-difluoroethene	(CAS-No.) 24937-79-9	≤ 8	Comb. Dust
Phosphoric acid, iron(2+) lithium salt (1:1:1)	Ferrous lithium phosphate / Lithium iron(II) phosphate / LiFePO4 / Iron Lithium Phosphate / Iron(II) lithium phosphate	(CAS-No.) 15365-14-7	≤1	Not classified
Titanium dioxide	C.I. 77891 / C.I. Pigment White 6 / Titanium oxide (TiO2) / CI 77891 / Titanium(IV) oxide / C.I. Pigment White 7 / Pigment White 6 / Titanium dioxide nanoparticles / Titanium oxide	(CAS-No.) 13463-67-7	≤1	Carc. 2, H351
Lithium titanium oxide	Tetralithium pentatitanium dodecaoxide / Tetralithium pentatitanium oxide (Li4Ti5O12)	(CAS-No.) 12031-95-7	< 1	Not classified
Full text of H-phrases: see section 16				

Full text of H-phrases: see section 16

### SECTION 4: FIRST AID MEASURES

### 4.1. Description of First-aid Measures

**First-aid Measures General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

**First-aid Measures After Inhalation:** For exposure to battery contents: First, take proper precautions to ensure your own safety before attempting rescue (e.g. wear appropriate respiratory protective equipment, use the buddy system), then remove the exposed person to fresh air. Keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.

**First-aid Measures After Skin Contact:** For exposure to battery contents: Immediately remove contaminated clothing. Immediately flush skin with plenty of water for at least 30 minutes. Get immediate medical advice/attention.

**First-aid Measures After Eye Contact:** For exposure to battery contents: Immediately rinse with water for at least 30 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

**First-aid Measures After Ingestion:** For exposure to battery contents: Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor. Obtain emergency medical attention.

#### 4.2. Most Important Symptoms and Effects Both Acute and Delayed

**Symptoms/Injuries:** None expected under normal conditions of use. Exposure to battery contents may result in the following: Causes damage to organs through prolonged or repeated exposure. Toxic if swallowed. Causes severe skin burns and eye damage. Fatal if inhaled. May cause cancer (inhalation).

**Symptoms/Injuries After Inhalation:** Exposure to materials housed in battery: May be corrosive to the respiratory tract. Inhalation of this material can cause serious health effects in small amounts, leading to unconsciousness and death.

**Symptoms/Injuries After Skin Contact:** For exposure to the internal contents of the battery: Causes severe irritation which will progress to chemical burns.

**Symptoms/Injuries After Eye Contact:** For exposure to the internal contents of the battery: Causes permanent damage to the cornea, iris, or conjunctiva.

**Symptoms/Injuries After Ingestion:** For exposure to the internal contents of the battery: This material is toxic in small amounts orally, and can cause adverse health effects or death: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

**Chronic Symptoms:** For exposure to the internal contents of the battery: May cause cancer (inhalation). Causes damage to organs through prolonged or repeated exposure. Copper: Overexposure to fumes may cause metal fume fever (chills, muscle aches, nausea, fever, dry throat, cough, weakness, lassitude); metallic or sweet taste; discoloration of skin and hair. Tissue damage of mucous membranes may follow chronic dust exposure.

#### 4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

### SECTION 5: FIRE-FIGHTING MEASURES

#### 5.1. Extinguishing Media

Suitable Extinguishing Media: Dry chemical powder.

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Unsuitable Extinguishing Media: Do NOT use water on live electrical circuits.

#### 5.2. Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Batteries may explode in fire. Damaged batteries can result in rapid heating and the release of flammable vapors. **Explosion Hazard:** Battery may rupture/explode when exposed to excessive heat or fire, if overcharged, short circuited, punctured, or crushed.

Reactivity: Batteries are non-reactive under normal conditions of use, storage and transport.

#### 5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection. **Hazardous Combustion Products:** Lithium Compounds. Hydrogen Fluoride (HF): Carbon oxides (CO, CO<sub>2</sub>). Metal oxide fumes. **Other Information:** Do not allow run-off from fire fighting to enter drains or water courses.

#### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** If the battery is damaged: Do not get in eyes, on skin, or on clothing. Do not breathe dust. Avoid prolonged contact with eyes, skin and clothing.

#### 6.1.1. For Non-Emergency Personnel

**Protective Equipment:** Use appropriate personal protective equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### 6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

**Emergency Procedures:** Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

#### 6.2. Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

#### 6.3. Methods and Materials for Containment and Cleaning Up

**For Containment:** Contain solid spills with appropriate barriers and prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions. Ventilate area.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. Recover the product by vacuuming, shoveling or sweeping. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill. Cautiously neutralize spilled solid.

#### 6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

#### SECTION 7: HANDLING AND STORAGE

#### 7.1. Precautions for Safe Handling

Additional Hazards When Processed: Batteries are designed to be recharged. However, improperly charging may cause the battery to flame. Use only approved chargers and procedures. Never disassemble a battery or bypass any safety device. Do not crush, pierce, short (+) and (-) battery terminals with conductive (i.e. metal) goods. Do not directly heat or solder. Do not throw into fire. Do not mix batteries of different types and brands. May release corrosive vapors.

**Precautions for Safe Handling:** Since this product is a sealed battery, normal handling hazards are minimal unless the battery is damaged or the internal contents are exposed. If the battery is damaged: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Avoid contact with eyes, skin and clothing. Handle empty containers with care because they may still present a hazard.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

#### 7.2. Conditions for Safe Storage, Including Any Incompatibilities

#### **Technical Measures:** Comply with applicable regulations.

**Storage Conditions:** Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store locked up/in a secure area. Store in original container or corrosive resistant and/or lined container.

**Incompatible Materials:** For exposure to the internal contents of the battery: Water. Oxidizers. Acids.

#### 7.3. Specific End Use(s)

Secondary Lithium-Ion Battery Pack containing 14 Lithium-ion, Kokam SLPB cells, Model KDX17006-6. Full Capacity Rating @ 1C rate: 2000 Wh (78 Ah)

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#### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

Titanium dio	xide (13463-67-7)		
USA ACGIH	ACGIH OEL TWA	10 mg/m <sup>3</sup>	
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen	
USA NIOSH	NIOSH REL (TWA)	2.4 mg/m <sup>3</sup> (CIB 63-fine)	
		0.3 mg/m <sup>3</sup> (CIB 63-ultrafine, including engineered nanoscale)	
USA IDLH	IDLH	5000 mg/m <sup>3</sup>	
USA OSHA	OSHA PEL (TWA) [1]	15 mg/m <sup>3</sup> (total dust)	
Graphite (77	82-42-5)		
USA ACGIH	ACGIH OEL TWA	2 mg/m <sup>3</sup> (all forms except graphite fibers-respirable particulate	
		matter)	
USA NIOSH	NIOSH REL (TWA)	2.5 mg/m <sup>3</sup> (natural-respirable dust)	
USA IDLH	IDLH	1250 mg/m <sup>3</sup> (Graphite (natural))	
USA OSHA	OSHA PEL (TWA) [1]	15 mg/m <sup>3</sup> (synthetic-total dust)	
		5 mg/m <sup>3</sup> (synthetic-respirable fraction)	
USA OSHA	OSHA PEL (TWA) [2]	15 mppcf (natural)	
		(See 29 CFR 1910.1000 TABLE Z-3)	
Copper (7440	)-50-8)		
USA ACGIH	ACGIH OEL TWA	0.2 mg/m <sup>3</sup> (fume)	
USA NIOSH	NIOSH REL (TWA)	1 mg/m <sup>3</sup> (dust and mist)	
		0.1 mg/m <sup>3</sup> (fume)	
USA IDLH	IDLH	100 mg/m <sup>3</sup> (dust, fume and mist)	
USA OSHA	OSHA PEL (TWA) [1]	0.1 mg/m³ (fume)	
		1 mg/m <sup>3</sup> (dust and mist)	
Aluminum (7	Aluminum (7429-90-5)		
USA ACGIH	ACGIH OEL TWA	1 mg/m <sup>3</sup> (respirable particulate matter)	
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen	
USA NIOSH	NIOSH REL (TWA)	10 mg/m <sup>3</sup> (total dust)	
		5 mg/m <sup>3</sup> (respirable dust)	
USA OSHA	OSHA PEL (TWA) [1]	15 mg/m <sup>3</sup> (total dust)	
		5 mg/m <sup>3</sup> (respirable fraction)	

#### 8.2. Exposure Controls

Appropriate Engineering Controls

- : Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Gas detectors should be used when toxic gases may be released.
- **Personal Protective Equipment**

**Materials for Protective Clothing** 

 Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection. Face shield.



- : Chemically resistant materials and fabrics. Corrosion-proof clothing.
- : Wear protective gloves.
- : Chemical safety goggles and face shield.
- : Wear suitable protective clothing.
- : If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.
- : When using, do not eat, drink or smoke.

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**Other Information** 

Hand Protection

**Eve and Face Protection** 

**Respiratory Protection** 

**Skin and Body Protection** 

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SECTION 9: PHYSICAL AND CHEMICAL PROP	EKIIES		
9.1. Information on Basic Physical and Chemical Properties			
Physical State	: Solid		
Appearance	: No data available		
Odor	: No data available		
Odor Threshold	: No data available		
рН	: No data available		
Evaporation Rate	: No data available		
Melting Point	: No data available		
Freezing Point	: No data available		
Boiling Point	: No data available		
Flash Point	: No data available		
Auto-ignition Temperature	: No data available		
Decomposition Temperature	: No data available		
Flammability	: No data available		
Vapor Pressure	: No data available		
Relative Vapor Density at 20°C	: No data available		
Relative Density	: No data available		
Solubility	: No data available		
Partition Coefficient: N-Octanol/Water	: No data available		
Viscosity	: No data available		
9.2. Other Information			

No additional information available

### SECTION 10: STABILITY AND REACTIVITY

#### 10.1. Reactivity

Batteries are non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical Stability

Stable under recommended handling and storage conditions (see section 7).

#### 10.3. Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

#### 10.4. Conditions to Avoid

Do not heat, expose to fire, disassemble, short circuit, immerse in water, or overcharge batteries. Direct sunlight, extremely high or low temperatures, and incompatible materials.

#### 10.5. Incompatible Materials

For exposure to the internal contents of the battery: Water. Oxidizers. Acids.

**10.6.** Hazardous Decomposition Products

#### None expected under normal conditions of use.

#### SECTION 11: TOXICOLOGICAL INFORMATION

**11.1.** Information on Toxicological Effects

Acute Toxicity (Oral): Toxic if swallowed.

Acute Toxicity (Dermal): Not classified

Acute Toxicity (Inhalation): Fatal if inhaled.

6T Battery Pack 78 Ah; P/N 300-109471; Finished P/N 4-0722-0002		
ATE (Oral)	250.00 mg/kg body weight	
ATE (Dust/Mist)	0.10 mg/l/4h	
Cobalt lithium manganese nickel oxide (182442-95-1)		
ATE (Gases)	100.00 ppmV/4h	
ATE (Vapors)	0.50 mg/l/4h	
ATE (Dust/Mist)	0.05 mg/l/4h	
Phosphoric acid, iron(2+) lithium salt (1:1:1) (15365-14-7)		
LD50 Dermal Rat	> 2000 mg/kg	
Titanium dioxide (13463-67-7)		
LD50 Oral Rat	> 10000 mg/kg	
LC50 Inhalation Rat	5.09 mg/l/4h	

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Graphite (7782-42-5)		
LD50 Oral Rat	> 2000 mg/kg	
LC50 Inhalation Rat	> 2000 mg/m <sup>3</sup> (Exposure time: 4 h)	
Carbon (7440-44-0)		
LD50 Oral Rat	> 10000 mg/kg	
Phosphate(1-), hexafluoro-, lithium (21324-40-3)		
LD50 Oral Rat	50 – 300 mg/kg	
Copper (7440-50-8)		
LC50 Inhalation Rat	> 5.11 mg/l/4h	
Aluminum (7429-90-5)		
Aluminum (7429-90-5) LC50 Inhalation Rat	> 0.888 mg/L/4h (No deaths)	
Aluminum (7429-90-5) LC50 Inhalation Rat Lithium titanium oxide (12031-95-7)	> 0.888 mg/L/4h (No deaths)	
Aluminum (7429-90-5) LC50 Inhalation Rat Lithium titanium oxide (12031-95-7) LD50 Oral Rat	> 0.888 mg/L/4h (No deaths) > 2000 mg/kg	
Aluminum (7429-90-5) LC50 Inhalation Rat Lithium titanium oxide (12031-95-7) LD50 Oral Rat LC50 Inhalation Rat	> 0.888 mg/L/4h (No deaths) > 2000 mg/kg > 5.04 mg/l/4h	
Aluminum (7429-90-5) LC50 Inhalation Rat Lithium titanium oxide (12031-95-7) LD50 Oral Rat LC50 Inhalation Rat lithium manganese iron phosphate (1354700-46-1	> 0.888 mg/L/4h (No deaths) > 2000 mg/kg > 5.04 mg/l/4h	
Aluminum (7429-90-5) LC50 Inhalation Rat Lithium titanium oxide (12031-95-7) LD50 Oral Rat LC50 Inhalation Rat lithium manganese iron phosphate (1354700-46-1 LD50 Oral Rat	> 0.888 mg/L/4h (No deaths) > 2000 mg/kg > 5.04 mg/l/4h .) > 2000 mg/kg	
Aluminum (7429-90-5) LC50 Inhalation Rat Lithium titanium oxide (12031-95-7) LD50 Oral Rat LC50 Inhalation Rat lithium manganese iron phosphate (1354700-46-1 LD50 Oral Rat LC50 Inhalation Rat	<pre>&gt; 0.888 mg/L/4h (No deaths) &gt; 2000 mg/kg &gt; 5.04 mg/l/4h .) &gt; 2000 mg/kg &gt; 3.0 mg/l</pre>	

Skin Corrosion/Irritation: Causes severe skin burns.

Serious Eye Damage/Irritation: Causes serious eye damage.

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: May cause cancer (inhalation).

IARC group	2B	
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.	

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): Causes damage to organs through prolonged or repeated exposure.

Aspiration Hazard: Not classified

**Symptoms/Injuries After Inhalation:** Exposure to materials housed in battery: May be corrosive to the respiratory tract. Inhalation of this material can cause serious health effects in small amounts, leading to unconsciousness and death.

**Symptoms/Injuries After Skin Contact:** For exposure to the internal contents of the battery: Causes severe irritation which will progress to chemical burns.

**Symptoms/Injuries After Eye Contact:** For exposure to the internal contents of the battery: Causes permanent damage to the cornea, iris, or conjunctiva.

**Symptoms/Injuries After Ingestion:** For exposure to the internal contents of the battery: This material is toxic in small amounts orally, and can cause adverse health effects or death: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

**Chronic Symptoms:** For exposure to the internal contents of the battery: May cause cancer (inhalation). Causes damage to organs through prolonged or repeated exposure. Copper: Overexposure to fumes may cause metal fume fever (chills, muscle aches, nausea, fever, dry throat, cough, weakness, lassitude); metallic or sweet taste; discoloration of skin and hair. Tissue damage of mucous membranes may follow chronic dust exposure.

SECTION 12: ECOLOGICAL INFORMATION			
12.1. Toxicity			
Ecology - General	: Not classified. Exposure to materials housed in battery: Harmful to aquatic life with long lasting effects.		
Graphite (7782-42-5)			
LC50 Fish 1	> 100 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static])		
EC50 - Crustacea [1]	> 100 mg/l (Exposure time: 48 h - Species: Daphnia magna [static])		
ErC50 (Algae)	> 100 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata [static])		
NOEC Chronic Fish	> 100 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static])		
NOEC Chronic Crustacea	> 100 mg/l (Exposure time: 48 h - Species: Daphnia magna [static])		

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NOEC Chronic Algae	> 100 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata [static])	
12.2. Persistence and Degradability	y	
6T Battery Pack 78 Ah; P/N 300-109471; F	inished P/N 4-0722-0002	
Persistence and Degradability	May cause long-term adverse effects in the environment.	
Copper (7440-50-8)		
Persistence and Degradability	Not readily biodegradable.	
12.3. Bioaccumulative Potential		
6T Battery Pack 78 Δh· P/N 300-109471· F	inished P/N 4-0722-0002	
Bioaccumulative Potential	Not established	
Phosphoric acid iron(2+) lithium salt (1:1:	1) (15365-14-7)	
Partition coefficient n-octanol/water (Log	> 0.564 (at 20 °C)	
Pow)	, 20.504 (at 20 C)	
12.4 Mobility in Soil		
No additional information available		
12.5 Other Adverse Effects		
Other Information	• Avoid release to the environment	
SECTION 13: DISPOSAL CONSIDERAT		
12.1 Waste Treatment Methods		
Waste Disposal Personmandations: Dispo	ose of contents/container in accordance with local regional national and international	
regulations	se of contents/container in accordance with local, regional, national, and international	
Additional Information: Batteries should I	he completely discharged prior to disposal and/or the terminals taped or capped to	
prevent short circuit. Container may remai	in hazardous when empty. Continue to observe all precautions.	
Ecology - Waste Materials: Avoid release	to the environment. This material is hazardous to the aquatic environment. Keep out	
of sewers and waterways.		
SECTION 14: TRANSPORT INFORMA	TION	
The shipping description(s) stated herein w	vere prepared in accordance with certain assumptions at the time the SDS was	
authored, and can vary based on a number	r of variables that may or may not have been known at the time the SDS was issued.	
14.1. In Accordance with DOT		
Proper Shipping Name : LITHIUI	M ION BATTERIES INCLUDING LITHIUM ION POLYMER BATTERIES	
Hazard Class : 9		
Identification Number : UN348		
Label Codes : 9		
ERG Number : 147	$\checkmark$	
14.2. In Accordance with IMDG		
Proper Shipping Name : LITHIUI	M ION BATTERIES	
Hazard Class : 9		
Identification Number : UN348	0	
Label Codes : 9		
EmS-No. (Fire) : F-A		
EmS-No. (Spillage) : S-I	9	
14.3. In Accordance with IATA		
Proper Shipping Name : LITHIUI	M ION BATTERIES	
Identification Number : UN348	0	
Hazard Class : 9		
Label Codes : 9A		
ERG Code (IATA) : 12FZ	,	
SECTION 15: REGULATORY INFORM	ATION	
15.1. US Federal Regulations		
6T Battery Pack 78 Ah: P/N 300-109471: Finished P/N 4-0722-0002		
SARA Section 311/312 Hazard Classes	Health hazard - Carcinogenicity	
	Health hazard - Specific target organ toxicity (single or repeated	
	exposure)	
	Health hazard - Acute toxicity (any route of exposure)	
	Health hazard - Serious eye damage or eye irritation	
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	Health hazard - Skin corrosion or Irritation		
Cobalt lithium manganese nickel oxide (182442-95-1)			
Listed on the United States TSCA (Toxic Substances Contr	ol Act) inventory - Status: Active		
EPA TSCA Regulatory Flag	PMN - PMN - indicates a commenced PMN substance.		
	S - S - indicates a substance that is identified in a final Significant New		
	Use Rule.		
	5E - 5E - indicates a substance that is the subject of a TSCA section 5E		
	order.		
Phosphoric acid, iron(2+) lithium salt (1:1:1) (15365-14-7	()		
Listed on the United States TSCA (Toxic Substances Contr	ol Act) inventory - Status: Active		
EPA TSCA Regulatory Flag	PMN - PMN - indicates a commenced PMN substance.		
	S - S - indicates a substance that is identified in a final Significant New		
	Use Rule.		
	5E - 5E - indicates a substance that is the subject of a TSCA section 5E		
	order.		
Titanium dioxide (13463-67-7)			
Listed on the United States TSCA (Toxic Substances Contr	ol Act) inventory - Status: Active		
Graphite (7782-42-5)	· · ·		
Listed on the United States TSCA (Toxic Substances Contr	ol Act) inventory - Status: Active		
Carbon (7440-44-0)			
Listed on the United States TSCA (Toxic Substances Contr	ol Act\ inventory - Status: Active		
1 1 Diffuereethylene netwoor (24027 70 0)	or Acy inventory Status. Active		
1,1-Diffuoroethylene polymer (24937-79-9)	al Aath in wanta my Chatway Aatiwa		
Listed on the United States ISCA (Toxic Substances Contr	ol Act) Inventory - Status: Active		
EPA ISCA Regulatory Flag	XU - XU - Indicates a substance exempt from reporting under the		
	Chemical Data Reporting Rule, (40 CFR 711).		
Phosphate(1-), hexafluoro-, lithium (21324-40-3)			
Listed on the United States TSCA (Toxic Substances Contr	ol Act) inventory - Status: Active		
EPA TSCA Regulatory Flag	PMN - PMN - Indicates a commenced PMN substance.		
Copper (7440-50-8)			
Listed on the United States TSCA (Toxic Substances Contr	ol Act) inventory - Status: Active		
Subject to reporting requirements of United States SARA Section 313			
CERCLA RQ	5000 lb no reporting of releases of this hazardous substance is		
	required if the diameter of the pieces of the solid metal released is		
	>100 μm		
SARA Section 313 - Emission Reporting	1%		
Aluminum (7429-90-5)			
Listed on the United States TSCA (Toxic Substances Contr	ol Act) inventory - Status: Active		
Subject to reporting requirements of United States SARA	Section 313		
SARA Section 313 - Emission Reporting	1 % (dust or fume only)		
15.2. US State Regulations			
Titanium dioxide (13463-67-7)			
U.S New Jersey - Right to Know Hazardous Substance Li	st		
U.S Pennsylvania - RTK (Right to Know) List			
U.S Massachusetts - Right To Know List			
Graphite (7782-42-5)			
U.S New Jersey - Right to Know Hazardous Substance List			
U.S Pennsylvania - RTK (Right to Know) List			
U.S Massachusetts - Right To Know List			
Copper (7440-50-8)			
U.S New Jersey - Right to Know Hazardous Substance List			
U.S Pennsylvania - RTK (Right to Know) List			
U.S Massachusetts - Right To Know List			
U.S Pennsylvania - RTK (Right to Know) - Environmental Hazard List			

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#### Aluminum (7429-90-5)

- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List
- U.S. Massachusetts Right To Know List

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

#### **California Proposition 65**

**WARNING:** This product can expose you to Titanium dioxide, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Chemical Name (CAS No.)	Carcinogenicity	Developmental Toxicity	Female Reproductive Toxicity	Male Reproductive Toxicity
Titanium dioxide (13463-67-7)	Х			
SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION				

### Date of Preparation or Latest Revision

**Other Information** 

: 08/26/2022

: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200

#### **GHS Full Text Phrases:**

H301	Toxic if swallowed	
H314	Causes severe skin burns and eye damage	
H318	Causes serious eye damage	
H330	Fatal if inhaled	
H332	Harmful if inhaled	
H350	May cause cancer	
H351	Suspected of causing cancer	
H372	Causes damage to organs through prolonged or repeated exposure	
H412	Harmful to aquatic life with long lasting effects	

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)