

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Chemical Product Identification

Sample Name: Li-ion Polymer Battery

Sample Model: 393658

Manufacturer: Soontop Technology Co., Ltd.

Address: No. 20, Lane 769, Wern-Hua Rd., Chia-Yi City, Taiwan 600 R.O.C.

Phone Number: 886-5-233-2729

Emergency Phone Number: 886-5-233-2729

FAX: 886-5-233-3216

SECTION 2 : HAZARDS IDENTIFICATION

Emergency Overview: This product is a battery. Intended use of the product should not result in exposure to the chemical substances. In case of rupture the below hazards exist.

Classification according to GHS

Acute toxicity, oral(4)

Skin corrosion/irritation (2)

Serious eye damage/eye irritation(2A)

Specific target organ toxicity, single exposure; Respiratory tract irritation(3)

Label elements

Hazard pictogram(s): 

Signal word: Harmful

Hazard statement(s):

H302 Harmful if swallowed

H315 Causes skin irritation

H319 Causes serious eye irritation

H335 May cause respiratory irritation

Precautionary statement(s):

Prevention:

P264 Wash skin and clothing thoroughly after handling.

P270 do not eat, drink or smoke when using this product.

P280 Wear protective gloves, protective clothing, eye protection, face protection.

P261 Avoid breathing dust, fume, gas, mist, vapors, spray.

P271 Use only outdoors or in a well-ventilated area.

Soontop Technology Co., Ltd.

Material Safety Data Sheet

Lithium-ion Rechargeable Battery Cell

Response:

P301 + P312 IF SWALLOWED: Call a POISON CENTER if you feel unwell.

P330 Rinse mouth

P302 + P352 IF ON SKIN: Wash with plenty water.

P321 Specific treatment (See additional emergency instructions).

P333 + P313 If skin irritation or rash occurs: Get medical advice.

P362 + P364 Take off contaminated clothing and wash it before reuse.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical advice.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 Call a POISON CENTER, if you feel unwell.

Storage

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

Disposal:

P501 Send contents to approved waste treatment plants.

Other hazards

Physical and chemical hazards: See SECTION 10

Human health hazards: See SECTION 11

Environment hazards: See SECTION 12

SECTION 3 : INGREDIANT

Chemical Characterization: Mixture

Chemical Composition	CAS No.	EC#	Weight (%)
Cobaltate, lithium	12190-79-3	235-362-0	35~40
Graphite	7782-42-5	231-955-3	10~30
Phosphate(1-), hexafluoro-, lithium	21324-40-3	244-334-7	10~30
Copper	7440-50-8	231-159-6	7~13
Aluminium	7429-90-5	231-072-3	5~10
Nickel	7440-02-0	231-111-4	1~5

SECTION 4 : FIRST AID MEASURES

Description of first aid measures

General information No special measures required.

After eye contact

Flush eyes with plenty of water for several minutes while holding eyelids open. Get medi-

Soontop Technology Co., Ltd.

Material Safety Data Sheet

Lithium-ion Rechargeable Battery Cell

cal attention if irritation persists.

After skin contact

Remove contaminated clothing and shoes. Immediately wash with water and soap and rinse thoroughly. Wash clothing and shoes before reuse. If irritation occurs, get medical attention.

After inhalation

Remove victim to fresh area. Administer artificial respiration if breathing is difficult. Seek medical attention.

After swallowing

Do not induce vomiting. Get medical attention.

Personal protective equipment for first-aid responders: No data available.

Most important symptoms/effects, acute and delayed: No data available.

Indication of immediate medical attention and special treatment needed:

Treat symptomatically.

SECTION 5 : FIRE FIGHTING MEASURES

Suitable extinguishing media:

Small Fire: Dry chemical , CO₂, water spray or regular foam. Large fire: Water spray, fog or regular foam. Move container from fire area if you can do it without risk.

Unsuitable extinguishing media:

No data available.

Specific Hazards arising from the chemical:

Special hazards arising from the substance or mixture

Battery may burst and release hazardous decomposition products when exposed to a fire situation.

Lithium ion batteries contain flammable electrolyte that may vent, ignite and produce spark when subjected to high temperature (>150 °C(302 °F)), when damaged or abused (e. g. mechanical damage or electrical overcharging); may burn rapidly with flare-burning effect; may ignite other batteries in close proximity.

Specific protective actions for fire-fighters:

Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personal precautions:

As an immediate precautionary measure, isolated spill or leak area for at least 25 meters (75 feet) in all directions. Keep unauthorized personnel away. Stay upwind, uphill and/or upstream. Ventilate closed spaces before entering.

Large Spill: Consider initial downwind evacuation for at least 100 meters(330 feet).

Protection equipment:

No data available.

Emergency procedures:

ELMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch or walk through spilled material. Absorb with earth, sand or other non-combustible material. Leaking batteries and contaminated absorbent material should be placed in metal containers.

Environment precautions:

Do not allow material to be released to the environment without proper governmental permits.

Methods and materials for containment and clean up:

For all waste handling must refer to United Nations, National and Local Regulations for disposal.

See SECTION 7 for information on safe handling.

See SECTION 8 for information on personal protection equipment.

See SECTION 13 for disposal information.

SECTION 7 : HANDLING AND STORAGE

Precaution for safe handling:

Avoid short circuiting the battery. Avoid mechanical damage of the battery. Do not open or disassemble. Batteries may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity. Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps.

Condition for safe storage, including any incompatibilities:

Store in a cool, dry, well-ventilated place. Keep away from heat, avoiding the longtime of sunlight.

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

No.	ACGIH	NIOSH	OSHA
12190-79-3	N/A	N/A	N/A
7782-42-5	TLV-TWA 2mg/m ³	REL-TWA 2.5mg/m ³	PEL-TWA 15mppcf PEL-TWA 20mppcf
21324-40-3	N/A	N/A	N/A
7440-50-8	TLV-TWA 0.2mg/m ³ TLV-TWA 1mg/m ³	REL-TWA 1mg/m ³ REL-TWA 0.1mg/m ³	PEL-TWA 0.1mg/m ³ PEL-TWA 1mg/m ³
7429-90-5	TLV-TWA 1mg/m ³	REL-TWA 2mg/m ³ REL-TWA 5mg/m ³ REL-TWA 10mg/m ³	PEL-TWA 5mg/m ³ PEL-TWA 15mg/m ³
7440-02-0	TLV-TWA 1.5mg/m ³	REL-TWA 0.015mg/m ³	PEL-TWA 1mg/m ³

Appropriate engineering controls:

The usual precautionary measures for handling chemicals should be followed.
 Keep away from foodstuffs, beverages and feed.
 Remove all soiled and contaminated clothing immediately.
 Wash hands before breaks and at the end of work.

Personal Protective Equipment:

Respiratory Protection: Wear suitable protective mask. For a large number of battery leakages, wear chemical protective clothing, including self-contained breathing apparatus.

Hand Protection: Wear appropriate protective gloves to reduce skin contact.

Eye Protection: Wear safety goggles or eye protection combined with respiratory protection.

Skin and Body Protection: Working environment required, wear suitable protective clothing to minimize contact with skin. The type of protective equipment must be according to the concentration and the content of certain hazardous substances in the workplace.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Colour:	Blue
Physical States:	Prismatic
Odour:	Not available
Odour threshold:	Not available
pH:	Not available
Melting point/freezing point:	Not available

Initial boiling point and boiling range:	Not available
Flash point:	Not available
Evaporation rate:	Not available
Flammability (solid, gas):	Not available
Explosion limits (vol% in air):	Not available
Vapour pressure, kPa at 20°C:	Not available
Vapour density:	Not available
Density/relative density (water = 1):	Not available
Solubility(ies):	Not available
Partition coefficient: n-octanol/water:	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity:	Not available

Other information

Voltage:	3.7V
Electric capacity:	850 mAh

SECTION 10 : STABILITY AND REACTIVITY

Reactivity: No data available.

Chemical Stability: Stable.

Possibility of Hazardous Reactions: No data available.

Condition to Avoid: Flames, sparks and other sources of ignition, incompatible materials.

Incompatible Material: Oxidizing agents, acid base.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, lithium oxide fumes.

SECTION 11 : TOXICOLOGICAL INFORMATION

CAS No.	LC50/LD50
12190-79-3	No data available.
7782-42-5	No data available.
21324-40-3	No data available.
7440-50-8	No data available.
7429-90-5	No data available.
7440-02-0	No data available.

Soontop Technology Co., Ltd.

Material Safety Data Sheet

Lithium-ion Rechargeable Battery Cell

Skin Corrosion/Irritation: No data available.

Serious eye Damage/Irritation: No data available.

Respiratory or Skin sensitization: No data available.

Germ Cell Mutagenicity: No data available.

Carcinogenicity: No data available.

Reproductive Toxicity: No data available.

Specific Target Organ Toxicity – Single Exposure: No data available.

Specific Target Organ Toxicity – Repeated Exposure: No data available.

Aspiration Hazard: No data available.

Information on The Likely Routes of Exposure: No data available.

Eye: No data available.

Skin: No data available.

Ingestion: No data available.

Inhalation: No data available.

SECTION 12 : ECOLOGICAL INFORMATION

Ecological Toxicity: No data available.

Persistence and Degradability: No data available.

Bioaccumulative Potential: No data available.

Ecological Toxicity: No data available.

Persistence and Degradability: No data available.

Bioaccumulative Potential: No data available.

Mobility in Soil: No data available.

Other Adverse Effects: No data available.

SECTION 13 : DISPOSAL CONSIDERATIONS

Disposal Methods:


Recommendation:

Consult state, local or national regulations to ensure proper disposal.

Uncleaned Packaging

Recommendation: Disposal must be made according to official regulations.

SECTION 14 : TRANSPORT INFORMATION

UN or ID Number	
IATA	UN3480/3481
IMDG	UN3480/3481
Model Regulation	
Proper Shipping Name/Description	
IATA	Lithium-ion batteries
IMDG	Lithium-ion batteries
Model Regulation	Lithium-ion batteries
Class or Div. (Sub Hazard)	
IATA	9
Packing Group	
IATA	N/A
IMDG	N/A
Model Regulation	N/A
Hazard Label	
IATA	
IMDG	N/A
Model Regulation	N/A
Environment Hazard	
Marine Pollutant	No
Special Precautions for User No information available	

Transport Information: The Li-ion Polymer Battery 393658 have aggregate equivalent lithium content below the 8g and the Watt hour is not more than 100Wh. And shipment contains no item listed under IATA DGR Packing instruction PI-965 to PI-967 Section II and meets all requirements under UN Manual of Tests and Criteria Part III, subsection 38.3

he product is not classified as dangerous under the current edition of the 62nd Edition IATA dangerous goods regulations. The products are safe for air transportation and not regulated by IATA DGR. Also they comply with the PI-965 to PI-967 Section II accordingly. from high temperature and open flames.

Notes: State of Charge (SoC) not exceeding 30% of their rated capacity. (By air, lithium ion batteries)

Transport Fashion: By air, by sea, by railway, by road.

SECTION 15 : REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

CAS No.	TSCA	IECSC	DSL/NDSL	EINECS/ELINCS/ NLP
12190-79-3	Listed	Listed	Listed DSL	Listed
7782-42-5	Listed	Listed	Listed DSL	Listed
21324-40-3	Listed	Listed	Listed DSL	Listed
7440-50-8	Listed	Listed	Listed DSL	Listed
7429-90-5	Listed	Listed	Listed DSL	Listed
7440-02-0	Listed	Listed	Listed DSL	Listed

SECTION 16 : OTHER INFORMATION

Issue Date: 2021-08-05
Issue Department: Technical Department
Modification Record:

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Other information:

CAS: (Chemical Abstracts Service)
EC: (European Commission)
ACGIH: (American Conference of Governmental Industrial Hygienists)
NIOSH: (US National Institute for Occupational Safety and Health)
OSHA: (US Occupational Safety and Health)
TLV: (Threshold Limit Value)

Soontop Technology Co., Ltd.

Material Safety Data Sheet

Lithium-ion Rechargeable Battery Cell

TWA: (Time Weighted Average)

STEL: (Short Term Exposure Limit)

PEL: (Permissible Exposure Limit)

REL: (Recommended Exposure Limit)

PC-STEL: (Permissible Concentration-short time exposure limit)

PC-TWA: (Permissible Concentration-time weighted average)

LC50: (Lethal Concentration, 50 percent kill)

LD50: (Lethal Dose, 50 percent kill)

IARC: (International Agency for Research on Cancer)

EC50: (Median Effective Concentration)

BCF: (Bio-Concentration Factor)

BOD: (Biochemical Oxygen Demand)

NOEC: (No Observed Effect Concentration)

NTP: (US National Toxicology Program)

RTECS: (Registry of Toxic Effects of Chemical Substances)

IATA: (International Air Transport Association)

IMDG: (International Maritime Dangerous Goods)

TDG: (Recommendation on the Transport of Dangerous Goods)

TOC: (Total Organic Carbon)

TSCA: (Toxic Substances Control Act of USA)

DSL: (Domestic Substances List of Canada)

NDSL: (Non-Domestic Substances List of Canada)