Safety Data Sheet (SDS)

For

HUNAN HUAHUI NEW ENERGY CO., LTD.

and for their product

Li-ion Battery

Model/type reference .....:	1450 3.7V 500mAh 1.85Wh
Nominal Voltage…….:	3.7V
Typical Capacity…….....……..:	500mAh,1.85Wh
Weight…….....…….....……:	16.5g
Preparation Date……..……:	Mar. 03. 2020

Compiled by (name+ signature) .....: Mary Li

Approved by (name+ signature) ..... : Peter Wu

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product name: Li-ion Battery

Model: 1450 3.7V 500mAh 1.85Wh

Other means of identification

Synonyms:none

Recommended use of the chemical and restrictions on use

Recommended Use:Used in portabl electronic equipments;

Uses advidsed against:

a) Do not dismantle, open or shred secondary cells or batteries.

b) Do not expose cells or batteries to heat or fire. Avoid storage in direct sunlight.

c) Do not short-circuit a cell or a battery. Do not store cells or batteries haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects.

d) Do not remove a cell or battery from its original packaging until required for use.

e) Do not subject cells or batteries to mechanical shock.

f) In the event of a cell leaking, do not allow the liquid to come in contact with the skin or eyes. If contact has been made, wash the affected area with copious amounts of water and seek medical advice.

g) Do not use any charger other than that specifically provided for use with the equipment.

h) Observe the plus (+) and minus (–) marks on the cell, battery and equipment and ensure correct use.

i) Do not use any cell or battery which is not designed for use with the equipment.

j) Do not mix cells of different manufacture, capacity, size or type within a device.

k) Battery usage by children should be supervised.

l) Seek medical advice immediately if a cell or a battery has been swallowed.

m) Always purchase the battery recommended by the device manufacturer for the equipment.

n) Keep cells and batteries clean and dry.

o) Wipe the cell or battery terminals with a clean dry cloth if they become dirty.

p) Secondary cells and batteries need to be charged before use. Always use the correct charger and refer to the manufacturer’s instructions or equipment manual for proper charging instructions.

q) Do not leave a battery on prolonged charge when not in use.

r) After extended periods of storage, it may be necessary to charge and discharge the cells or batteries several times to obtain maximum performance.

s) Retain the original product literature for future reference.

t) Use only the cell or battery in the application for which it was intended.

u) When possible, remove the battery from the equipment when not in use.

v) Dispose of properly.

Details of the supplier of the safety data sheet:

Supplier Name: HUNAN HUAHUI NEW ENERGY CO., LTD.

Address: No.7, TONGZIBA LANE, JINXIU RAOD, YIYANG, HUNAN

Telephone number of the supplier: 0086-0769-81601938

Emergency Telephone No.(24h): 0086-0769-81601938

Postcode: 413000

E-mail address: cqq@huahuinewenergy.com

Emergency telephone number

Company Emergency Phone Number: 0086-0769-81601938

2. HAZARDS IDENTIFICATION

Classification

No harm at the normal use. If contact the Electrolyte liquid in the Lithium Polymer Battery, reference as follows:

Classification of the substance or mixture

Classification according to GHS

Self-heating substances and mixtures （Hazard category 2）

Acute Toxicity, Oral(Hazard category 4)

Acute Toxicity, Dermal(Hazard category 3)

Skin, irritate(Cagegory 1B)

Eye Irritate (Hazard category 1)

GHS Label elements, including precautionary statements:

GHS02

GHS05

GHS06

Signal word: Warning

Hazard statement(s):

H252: Self-heating in large quantities; may catch fire;

H311: Toxic in contact with skin;

H314: Causes severe skin burns and eye damage;

H302: Harmful if swallowed;

precautionary statements:

Prevention:

P264 Wash thoroughly after handling.

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

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

Response:

P312:Call a Poison center or doctor/physician if you feel unwell.

P302+P350-IF ON SKIN: Gently wash with plenty of soap and water

P301+P330+P331-IF SWALLOWED: rise mouth. Do NOT induce vomiting

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

Storage:

None

Disposal

P501: Dispose of contents/container in accordance with local/national regulations

Hazards not otherwise classified (HNOC)

Not Applicable

Other information

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterixation: Mixtures

Description:

Product: Consisting of the following components.

Common Chemical Name	Concentration (%)	CAS Number
Cobaltate, Lithium	35	12190-79-3
Graphite	30	7782-42-5
Phosphate(1-), hexafluoro-, lithium	15	21324-40-3
Copper	10	7440-50-8
Polyvinylidene fluoride resin	5	24937-79-9
Aluminum foil	5	7429-90-5

Note: CAS number is Chemical Abstract Service Registry Number.

N/A=Not apply.

4. FIRST-AID MEASURES

First aid measures

Eye Contact Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.

Skin Contact Remove contaminated clothing and shoes. Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

Inhalation Move to fresh air. If symptoms persist, call a physician.

Ingestion Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed

Swallowing Do not induce vomiting. Get medical attention.

Most Important Symptoms/Effects No information available.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

CO_2, dry chemical powder, water spray.

Unsuitable Extinguishing Media:No information available.

Specific Hazards Arising from the Chemical

Formation of toxic gases is possible during heating or in case of fire.

In case of fire, the following can be released:

Carbon monoxide(CO)

Carbon dioxide

Other irritating and toxic gases.

Hazardous Combustion Products

Carbon oxides.

Explosion Data

Sensitivity to Mechanical Impact No

Sensitivity to Static Discharge No

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. For example: Wear self-contained respiratory protective device. Wear suitable protective clothing and eye/face protection.

Special hazards arising from the substance or mixture:

Battery may burst and release hazardus decomposition products when exposed to a fire situation. Lithium ion batteries contain flammable electrolyte that may vent, ignite and produce sparks when subjected to high temperature(>150℃), When damaged or abused(e.g. mechanical damage or electrical overcharging); may burn rapidly with flare-burning effect; may ignite other batteries in clothes proximity.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Avoid contact with eyes.

Refer to section 8 for personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.

Evacuate personnel to safe areas.

Environmental precautions

Environmental Precautions Refer to protective measures listed in Sections 7 and 8.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

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 Use personal protective equipment. Dam up. Cover liquid spill with sand, earth or other Non combustible absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Wear personal protective equipment.
Wash thoroughly after handling. Use this material with adequate ventilation.
The product is not explosive.

Conditions for safe storage, including any incompatibilities

If the Li-ion Battery is subject to storage for such a long term as more than 3 months, it is recommended to recharge the Lithium-ion Polymer Battery periodically.
3 months: -10℃~+40℃, 45 to 85%RH
And recommended at 0℃~+35℃ for long period storage.
The capacity recovery rate in the delivery state (50% capacity of fully charged) after storage is assumed to be 80% or more.
The voltage for a long time storage shall be 3.60V~4.25V range.
Do not storage Li-ion Battery haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects.
Keep out of reach of children.
Do not expose Lithium-ion Polymer Battery to heat or fire. Avoid storage in direct sunlight.
Do not store together with oxidizing and acidic materials.
Keep ignition sources away- Do not smoke.
Store in cool, dry and well-ventilated place.

Incompatible Products None known.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control parameters

Ingredients with limit values that require monitoring at the workplace:	
12190-79-3 Lithium Cobalt Oxide	
TLV (USA)	0.02mg/m^3
MAK (Germany)	0.1mg/m^3

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962(11th Cir., 1992).

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Ensure adequate ventilation.

Individual protection measures, such as personal protective equipment

Eye/Face Protection:

Tightly sealed goggles

Body protection:

Protective work clothing.

Skin protection:

Protective gloves

Material of gloves:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material:

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

Respiratory Protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Form: cylinder	
	Color: Blue	
	Odour: Odourless	
	Odor Threshold: No information available	
Change in condition:		
pH, with indication of the concentration		Not determined.
Melting point/freezing point		Not determined.
Initial boiling point and Boiling range:		Not determined.
Flash Point		Not determined.
Evaporation rate		Not determined.
Flammability (solid, gas)		Not determined.
Upper/lower flammability or explosive limits		Not determined.
Vapor Pressure:		Not determined.
Vapor Density:		Not determined.
relative density:		Not determined.
Solubility in Water:		Not determined.
Solubility in other solvents		Not determined.
n-octanol/water partition coefficient		Not determined.

Auto-ignition temperature	Product is not self-igniting.
Decomposition temperature	Not determined.
Odout threshold	Not determined.
Evaporation rate	Not determined.
Viscosity	Not determined.
Other Information	No further relevant information available.

10. STABILITY AND REACTIVITY

Reactivity: Stable under recommended storage and handling conditions (see section 7, Handling and storage).

Chemical stability: Stable under normal conditions of use, storage and transport.

Thermal decomposition/conditions to be avoided: No decomposition if used according to specifications.

Possibility of Hazardous Reactions: None under normal processing.

Hazardous Polymerization: Hazardous polymerization does not occur.

Conditions to avoid: Strong heating, fire, Incompatible materials.

Incompatible materials: Strong oxidizing agents. Strong acids.Base metals.

Hazardous Decomposition Products: Carbon oxides, Other irritating and toxic gases.

11. TOXICOLOGICAL INFORMATION

Acute toxiciy: No data available.

LD/LC50 values relevant for classification:
Not available.

Skin corrosion/irritation: No irritant effect.

Serious eye damage/irritation: Cause serious eye irritation.

Respiratory or skin sensitization: No sensitizing effects known.

Specific target organ system toxicity: No information available.

CMR effects(carcinogenity, mutagenicity and toxicity for reproduction): No information available.

12. Ecological Information

Toxicity:

Acquatic toxicity:
No further relevant information available.

Persistence and degradability: No further relevant information available.

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects: No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Recommendation: Must not be disposed together with household garbage.

Do not allow product to reach sewage system

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

Land transport

ADR/RID class: Not regulated.

UN-Number: UN3480 or UN3481.

Maritime transport

IMDG Class: Class 9.

UN Number: UN3480 or UN3481.

Marine pollutant: No

Air transport

ICAO/IATA Class: Class 9

UN/ID Number: UN3480 or UN3481

Environmental hazards: Not applicable.

Special precautions for user: Not applicable.

Transport/Additional information: Not restricted goods according to the above specifications.

The Li-ion Battery had been tested according to the requirements of the UN manual of tests and Criteria, Part III, subsection 38.3;

The Li-ion Battery was protected so as to prevent short circuits. This includes protection against contact with conductive materials within the same packaging that could lead to short circuit;

The Li-ion Battery according to Section II/Section IB of PACKING INSTRUCTION 965, or Section II of PACKING INSTRUCTION 966~967 of the 2020 IATA Dangerous Goods regulations 61st Edition may be transported. and applicable U.S. DOT regulations for the safe transport of Li-ion Battery.

Meets requirements of DOT Special Provision 188 to be transported as non-dangerous goods (Prior to the deadline set by HM 224F, February 6, 2015)

Meets the requirements of 49CFR173.185 to be transported as non-dangerous goods for road, rail, air, and vessel (Effective August 6, 2014 per HM224F)

Meets the requirements of TDG special provision 34 to be transported as non-dangerous goods.

The package must be handled with care and that a flammability hazard exists if the package is damaged;

15. REGULATORY INFORMATION

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

EU Regulation:

Authorisations: No information available.

Restrictions on use: No information available.

Regulatory information

CAS No.	EU (EINECS)	**US (TSCA)**	**Japan (ENCS)**	**Canada (DSL/ NDSL)**	**Austrlia (AICS)**	**Korea (ECL)**	**China (IECSC)**
12190-79-3	Listed	Not listed	Not listed	NDSL	Not listed	Not listed	Not listed
7782-42-5	Listed	Listed	Listed	DSL	Listed	Listed	Listed
21324-40-3	Listed	Listed	Listed	DSL	Listed	Listed	Listed
7440-50-8	Not listed	Listed	Not listed	DSL	Listed	Listed	Listed
24937-79-9	Not listed	Listed	Not listed	DSL	Listed	Listed	Listed
7429-90-5	Listed	Listed	Listed	DSL	Listed	Listed	Listed

Chemical safety assessment A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases:

R20/22: Harmful by inhalation and if swallowed.

R36: Irritating to eyes.

H302: Harmful if swallowed.

H332: Harmful if inhaled.

**********End of SDS**********

Article Information Sheet

Product name: Lithium-ion button cell **Printing date:** 06-Mar-2020

Article Information Sheet (AIS)

This Article Information Sheet (AIS) provides relevant battery information to retailers, consumers, OEMs and other users requesting a GHS‐compliant SDS. Articles, such as batteries, are exempt from GHS SDS classification criteria. The GHS criteria is not designed or intended to be used to classify the physical, health and environmental hazards of an article. Branded consumer batteries are defined as electro‐technical devices. The design, safety, manufacture, and qualification of Energizer branded consumer batteries follow ANSI and IEC battery standards.

1. DOCUMENT INFORMATION

Product name:	Lithium-ion button cell
Model:	LIR1254, LIR1454, LIR1240, LIR854, LIR940, LIR1040, LIR1050, LIR1054, LIR1230, LIR1250, LIR1238, LIR1248, LIR1430, LIR1448, LIR1140, LIR1455, LIR1450, LIR1648, LIR1654, LIR1025, LIR1220, LIR1620, LIR1632, LIR2016, LIR2025, LIR2032, LIR2050, LIR2430, LIR2440, LIR2450, LIR2477
Issue Date:	06-Mar-2020

2. COMPANY INFORMATION

Company name(China)	DONGGUAN LIDEA ELECTRONICS CO., LTD.
Address:	2nd Floor Building A2, Zhongpin Fucheng Industrial Park, No.393,Yangxin Road, Yangyong Village Dalang Town, Dongguan City, Guangdong Province, China.
E-mail:	LYH@lideapower.com
Telephone:	+86-769-89399137

Fiche d'information Article

Nom du produit: Pile bouton au lithium-ion **Date d'impression:** 06-Mar-2020

Article Feuillet d'information (AIS)

Cette fiche d'information Article (AIS) fournit des informations sur la batterie correspondant aux détaillants, aux consommateurs, aux OEM et aux autres utilisateurs qui demandent un SDS SGH-conforme. Les articles, tels que les piles, sont exemptés de critères de classification SGH SDS. Les critères du SGH ne sont pas conçus ou destinés à être utilisés pour classer les risques physiques, la santé et l'environnement d'un article. batteries de consommation de marque sont définis comme des dispositifs électro-technique. La conception, la sécurité, la fabrication, et la qualification des batteries de consommation de marque Energizer sont conformes aux normes de la batterie ANSI et IEC.

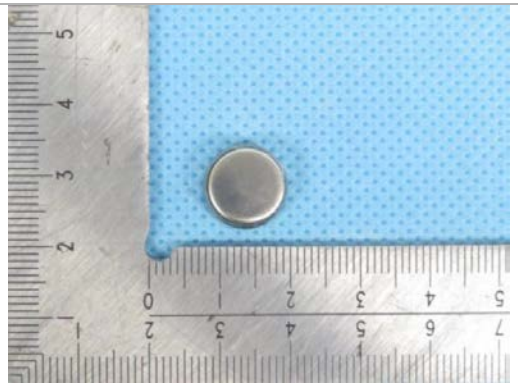
1. DOCUMENT D'INFORMATION

Produit Nom:	Pile bouton au lithium-ion
Modèle:	LIR1254, LIR1454, LIR1240, LIR854, LIR940, LIR1040, LIR1050, LIR1054, LIR1230, LIR1250, LIR1238, LIR1248, LIR1430, LIR1448, LIR1140, LIR1455, LIR1450, LIR1648, LIR1654, LIR1025, LIR1220, LIR1620, LIR1632, LIR2016, LIR2025, LIR2032, LIR2050, LIR2430, LIR2440, LIR2450, LIR2477
Date d'émission:	06-Mar-2020

2. INFORMATIONS SUR LA SOCIÉTÉ

Nom de l'entreprise (Chine)	DONGGUAN LIDEA ELECTRONICS CO., LTD.
Adresse:	2e étage, bâtiment A2, parc industriel Zhongpin Fucheng, n ° 393, route Yangxin, village de Yangyong, ville de Dalang, ville de Dongguan, province du Guangdong, Chine.
Email:	LYH@lideapower.com
Téléphone:	+86-769-89399137

3. ARTICLE INFORMATION

Description	Lithium-ion button cell
Use	LITHIUM ION BATTERY
Brand	----
Image	

4. ARTICLE CONSTRUCTION

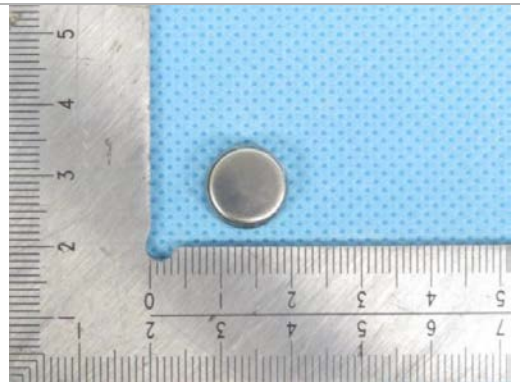
IMPORTANT NOTE: The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful.

Chemical name	CAS No.	Concentration%
Lithium Cobalt Oxide (CoLiO2)	12190-79-3	36.9
Graphite	7782-42-5	21.3
Phosphate(1-), hexafluoro-, lithium	21324-40-3	22.0
Copper	7440-50-8	9.1
Aluminum	7429-90-5	8.7
Nickel	7440-02-0	2.0

5. HEALTH AND SAFETY

Ingestion: Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an

3. ARTICLE D'INFORMATION

La description	Pile bouton au lithium-ion
Utilisation	BATTERIE AUX IONS LITHIUM
Marque	----
Image	

4. ARTICLE CONSTRUCTION

REMARQUE IMPORTANTE: La batterie ne doit pas être ouvert ou brûlé. L'exposition aux ingrédients contenus dans leurs produits ou de combustion pourrait être nocif.

Nom chimique	N ° CAS.	Concentration%
Lithium oxyde de cobalt (CoLiO2)	12190-79-3	36.9
Graphite	7782-42-5	21.3
Phosphate (1-), hexafluoro-, lithium	21324-40-3	22.0
Cuivre	7440-50-8	9.1
Aluminium	7429-90-5	8.7
Nickel	7440-02-0	2.0

5. SANTÉ ET SÉCURITÉ

	unconscious person. Call a physician or poison control center immediately.
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 medical attention immediately if symptoms occur.
Skin contact:	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required. May cause an allergic skin reaction.
Eye contact:	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. Seek immediate medical attention/advice.
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. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. Wear personal protective clothing (see section 8).

6. FIRE HAZARD & FIREFIGHTING

Fire Hazard	Batteries may rupture or leak if involved in a fire.
Extinguishing Media	Use any extinguishing media appropriate for the surrounding area.

Ingestion:	Ne pas faire vomir. Se rincer la bouche et boire beaucoup d'eau. Ne portez rien à la bouche d'une personne inconsciente. Appeler un centre de contrôle médecin ou de poison immédiatement.
Inhalation:	À l'air frais. Si la respiration est arrêtée, pratiquer la respiration artificielle. Consulter un médecin immédiatement. Ne pas utiliser le bouche-à-bouche si la victime a ingéré ou inhalé la substance; pratiquer la respiration artificielle à l'aide d'un masque de poche muni d'une valve à une voie ou d'un autre appareil médical approprié. Si la respiration est difficile, (du personnel qualifié devrait) donner de l'oxygène. œdème pulmonaire retardé peut se produire. Consulter un médecin si des symptômes apparaissent.
Contact avec la peau:	Laver immédiatement avec du savon et beaucoup d'eau tout en enlevant les vêtements contaminés et les chaussures. Une attention médicale immédiate est nécessaire. Peut provoquer une réaction allergique cutanée.
Lentilles de contact:	Rincer immédiatement et abondamment avec de l'eau, y compris sous les paupières, pendant au moins 15 minutes. Gardez l'œil ouvert pendant le rinçage. Ne pas frotter les zones touchées. lentilles de contact Retirer, si elle est présente et facile à faire. Continuer à rincer. Consulter un / des conseils médicaux immédiats.
Auto-protection du secouriste:	Veiller à ce que le personnel médical sont au courant de la matière (s) impliqués, prendre des précautions pour se protéger et prévenir la propagation de la contamination. Éviter tout contact avec la peau, les yeux ou les vêtements. Éviter tout contact direct avec la peau. Utilisez barrière pour donner la respiration artificielle bouche-à-bouche. Utiliser un équipement de protection individuel requis. Porter des vêtements de protection individuelle (voir la section 8).

6. RISQUE D'INCENDIE & POMPIERS

Special hazards arising from the chemical	In case of fire where lithium batteries are present, flood area with water or smother with a Class D fire extinguishant appropriate for lithium metal, such as Lith-X. Water may not extinguish burning batteries but will cool the adjacent batteries and control the spread of fire. Burning batteries will burn themselves out. Virtually all fires involving lithium batteries can be controlled by flooding with water. However, the contents of the battery will react with water and form hydrogen gas. In a confined space, hydrogen gas can form an explosive mixture. In this situation, smothering agents are recommended. A smothering agent will extinguish burning lithium batteries.
Precautions for fire-fighters	Emergency Responders should wear self-contained breathing apparatus. Burning lithium manganese dioxide batteries produce toxic and corrosive lithium hydroxide fumes.

7. HANDLING AND STORAGE

Storage	Store in a cool, well ventilated area. Elevated temperatures can result in shortened battery life. In locations that handle large quantities of lithium batteries, such as warehouses, lithium batteries should be isolated from unnecessary combustibles.
Handling	Avoid mechanical and electrical abuse. Do not short circuit or install incorrectly. Batteries may rupture or vent if disassembled, crushed, recharged or exposed to high temperatures. Install batteries in accordance with equipment instructions.
Spills of Large Quantities Batteries (unpackaged)	Notify spill personnel of large spills. Irritating and flammable vapors may be released from leaking or ruptured batteries. Spread batteries apart to stop shorting. Eliminate all

Risque d'incendie	Les piles peuvent se rompre ou fuir si elle est impliquée dans un incendie.
Moyens d'extinction	Utilisez tous les moyens d'extinction appropriés pour la région environnante.
Dangers particuliers résultant de la substance chimique	En cas d'incendie où des batteries au lithium sont présents, zone inondable avec de l'eau ou avec un ÉTOUFFER approprié incendie Classe d'extinction D pour le métal de lithium, comme Lith-X. L'eau ne peut pas éteindre les piles qui brûlent mais refroidir les batteries adjacentes et contrôler la propagation du feu. Les piles qui brûlent va se brûler. Pratiquement tous les feux impliquant des piles au lithium peuvent être contrôlées par les inondations avec de l'eau. Cependant, le contenu de la batterie réagiront avec l'eau et sous forme d'hydrogène gazeux. Dans un espace confiné, le gaz d'hydrogène peut former un mélange explosif. Dans cette situation, les agents étouffants sont recommandés. Un agent étouffant éteindra la combustion des batteries au lithium.
Précautions à prendre pour les pompiers	Équipe d'intervention doivent porter un appareil respiratoire autonome. La combustion des piles de dioxyde de manganèse au lithium produisent toxique et corrosif fumées lithium hydroxyde.

7. MANIPULATION ET STOCKAGE

Espace de rangement	Conserver dans un endroit frais et bien ventilé. Les températures élevées peuvent entraîner dans la vie de la batterie raccourcie. Dans les endroits qui traitent de grandes quantités de Les piles au lithium, tels que les entrepôts, les batteries au lithium doivent être isolés à partir de combustibles inutiles.

ignition sources. Evacuate area and allow vapors to dissipate. Clean-up personnel should
wear appropriate PPE to avoid eye and skin contact and inhalation of vapors or fumes.
Increase ventilation. Carefully collect batteries and place in appropriate container for
disposal. Remove any spilled liquid with absorbent material and contain for disposal.

8. DISPOSAL CONSIDERATIONS

Dispose of used (or excess) batteries in compliance with federal, state/provincial and local regulations. Do not accumulate large quantities of used batteries for disposal as accumulations could cause batteries to short-circuit. Do not incinerate. In countries, such as Canada and the EU, where there are regulations for the collection and recycling of batteries, consumers should dispose of their used batteries into the collection network at municipal depots and retailers. They should not dispose of batteries with household trash.

9. Transport information

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

Manipulation	Éviter les abus mécaniques et électriques. Ne pas court-circuiter ou installer correctement. Les piles peuvent se rompre ou de ventilation si elles sont démontées, écrasées, rechargées ou exposé à une forte températures. Installez les piles conformément aux instructions du fabricant.
Déversements de grandes quantités	Informer le personnel de déversement de grands déversements. Irritant et vapeurs inflammables peuvent être libérés de fuites ou les piles endommagées. piles écartez pour arrêter les courts-circuits. éliminer tous les
Batteries (non emballés)	sources d'allumage. Évacuer la zone et laisser les vapeurs se dissipent. Le personnel de nettoyage devrait porter des EPI appropriés pour éviter les yeux et contact avec la peau et l'inhalation des vapeurs ou fumées. Augmenter la ventilation. batteries cueillent et les placer dans un récipient approprié pour disposition. Retirez tout liquide déversé avec une matière absorbante et contiennent pour l'élimination.

8. CONSIDERATIONS RELATIVES À L'ÉLIMINATION

Jetez les piles usagées (ou excédent) conformément aux règlements fédéraux, provinciaux / provinciaux et locaux. Ne pas accumuler de grandes quantités de piles usagées pour l'élimination comme accumulations pourraient provoquer un court-circuit. Ne pas incinérer. Dans les pays, comme le Canada et l'Union européenne, où il existe des règlements pour la collecte et le recyclage des batteries, les consommateurs devraient disposer de leurs piles usagées dans le réseau de collecte dans les dépôts municipaux et les détaillants. Ils ne doivent pas jeter les piles avec les ordures ménagères.

9. Informations de transport

Le transport des piles au lithium primaire et les batteries est réglementé par

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"

(a) UN number	3480&3481
(b) UN Proper shipping name	LITHIUM ION BATTERIES (including lithium ion polymer batteries) or; LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT or LITHIUM ION BATTERIES PACKED WITH EQUIPMENT (including lithium ion polymer batteries)
(c) Transport hazard class(es)	9
(d) Packing group (if applicable)	IA
(e) Marine pollutant (Yes/No)	No
(f) Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)	No information available.
(g) Special precautions	No information available.

(h) Organizations governing the transport of lithium batteries	**Area**	**Method**	**Organization**	**Special Provision**
	U.S.A	**Air, Rail, Road, Marine**	**DOT**	**49 CFR Section 173.185**

10. REGULATORY INFORMATION

(a) Safety, health and environmental regulations specific for the product in question

l'Organisation internationale de l'aviation civile, l'Association internationale du transport aérien, Code maritime international des marchandises dangereuses et le Département américain des Transports. Les batteries doivent répondre aux critères suivants pour l'expédition: 1. les livraisons d'air doivent satisfaire aux exigences énumérées à disposition spéciale A45 de l'Association internationale du transport aérien des marchandises dangereuses Règlement. 2. Répondre aux exigences du ministère américain des Transports répertoriés dans 49 CFR 173,185. 3. Le transport des piles au lithium primaire est interdit à bord des avions de passagers. Reportez-vous au Registre fédéral de 15 Décembre 2004 (matières dangereuses, interdites sur le transport des piles au lithium primaire et cellules Aboard passagers d'avion Règle finale)

Les piles au lithium expédiés comme « batteries au lithium », « Les piles au lithium emballées avec un équipement » ou « piles au lithium contenues dans l'équipement » ne peuvent pas être considérés comme des « marchandises dangereuses » lorsqu'ils sont expédiés conformément à la « disposition A45 spéciale de IATA-DGR » ou " disposition spéciale 188 du code de l'OMI-IMDG »

(A) Numéro ONU	3480 & 3481
(B) l'ONU Nom d'expédition	Batteries lithium-ion (y compris les piles de polymère au lithium-ion) ou; Batteries lithium-ion contenues dans un équipement ou LITHIUM ION batteries emballées avec un équipement (y compris les piles de polymère au lithium-ion)
(C) classe de danger pour le transport (s)	9
(D) des groupes d'emballage (le cas échéant)	IA
(E) Polluant marin (Oui / Non)	Non
(F) de transport	Pas d'information disponible.

CAS No.	USA TSCA	EU EINECS	Japan ENCS	Korea ECL	China IECSC	Canada DSL
12190-79-3	Listed	Listed	Listed	Listed	Listed	Listed
7782-42-5	Listed	Listed	Not listed	Listed	Not listed	Listed
21324-40-3	Not listed	Not listed	Listed	Not listed	Listed	Not listed
7440-50-8	Not listed	Not listed	Listed	Not listed	Listed	Not listed
7429-90-5	Listed	Listed	Listed	Not listed	Listed	Listed
7440-02-0	Not listed	Listed	Listed	Listed	Not listed	Not listed

11. OTHER INFORMATION

TSCA: Toxic Substances Control Act, The American chemical inventory.

DSL Domestic Substances List

EINECS: European Inventory of Existing Commercial chemical Substances

ENCS Japanese Existing and New Chemical Substances

ECL: Existing Chemicals List, the Korean chemical inventory.

IECSC: Inventory of existing chemical substances in China.

Because all of our batteries are defined as "articles", they are exempted from the requirements of the Hazard Communication Standard. The information in this AIS is provided all the relevant data fully and truly. However, the information is provided without any warranty on their absolute extensiveness and accuracy. This AIS was prepared to provide safety preventive measures for the users who have got professional training. The personal user who obtained this AIS should make independent judgment for the applicability of this AIS under special conditions. In these special cases, we do not assume responsibility for the damage.

---------- End of the AIS ----------

en vrac (selon l'Annexe II de MARPOL 73/78 et au recueil IBC)				
(g) Précautions particulières	Pas d'information disponible.			
(H) Les organisations régissant le transport des batteries au lithium	**Zone** **Etats-Unis**	**Méthode** **Aérien, ferroviaire, routier, maritime**	**Organisation** **POINT**	**Provision SPECIALE** **49 CFR Section 173,185**

10. INFORMATIONS RÉGLEMENTAIRES

(A) la sécurité, de santé et de l'environnement spécifique pour le produit en question

N ° CAS.	Etats-Unis TSCA	UE Einecs	Japon ENCS	Corée ECL	Chine IECSC	Canada DSL
12190-79-3	Listed	Listed	Listed	Listed	Listed	Listed
7782-42-5	Listed	Listed	Non listé	Listed	Non listé	Listed
21324-40-3	Non listé	Non listé	Listed	Non listé	Listed	Non listé
7440-50-8	Non listé	Non listé	Listed	Non listé	Listed	Non listé
7429-90-5	Listed	Listed	Listed	Non listé	Listed	Listed
7440-02-0	Non listé	Listed	Listed	Listed	Non listé	Non listé

11. LES AUTRES INFORMATIONS

TSCA: Toxic Substances Control Act, l'inventaire chimique américain.

DSL	Liste intérieure
Einecs:	Inventaire européen des substances chimiques existantes commerciales
ENCS	Existantes et nouvelles substances chimiques japonaises
ECL:	Liste des produits chimiques existants, l'inventaire chimique coréenne.
IECSC:	Inventaire des substances chimiques existantes en Chine.

Parce que toutes nos batteries sont définis comme des « articles », ils sont exemptés des exigences de la norme de communication des risques. Les informations contenues dans ce AIS est fourni tous les pleinement et véritablement les données pertinentes. Cependant, les informations sont fournies sans aucune garantie sur leur extensification absolue et la précision. Cet AIS a été préparé à des mesures préventives de sécurité pour les utilisateurs qui ont obtenu la formation professionnelle. L'utilisateur personnel qui a obtenu ce SIA devrait porter un jugement indépendant pour l'applicabilité de cette AIS dans des conditions particulières. Dans ces cas particuliers, nous n'assumons la responsabilité pour les dommages.

---------- Fin de l'AIS ---------- ----