

Safety Data Sheets (SDSs)

Fiche de données de sécurité (FDS)

For

Shenzhen Chengyan Energy Development Technology Co., Ltd
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Guangdong, P.R. China
Shenzhen Chengyan Energy Development Technology Co., Ltd.
6e étage, bâtiment b, no 18 Jincheng Road, zone industrielle de Jinfenghuang, ville de Fenggang,
ville de Dongguan, Guangdong, pr. Chine

Model /Type reference Référence du modèle/type	CY303759
Trademark Marque	N/A
Nominal Voltage Tension nominale	3.7V
Typical Capacity Capacité type	650mAh 2.405Wh
Version Number Numéro de version	V1.0
Preparation Date Date de préparation	2024-11-15
Revision Date Date de révision	N/A

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING
Préparations et préparations de sociétés**Product Identifier**

Product name: Li-ion Battery

Model: CY303759

Identifiant du produit

Nom du produit: Batterie litio-ion

Modèle: CY303759

Other means of identification

Synonyms:none

Autres moyens d'identification

Synonymes: néant

Recommended use of the chemical and restrictions on use

Recommended Use:Used in portabl electronic equipments;

Uses advised 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.

Restrictions d'utilisation des produits chimiques recommandés

Utilisation recommandée: pour l'électronique portuaire;

Recommandations d'utilisation:

- a) Ne pas démonter, ouvrir ou déchirer les piles secondaires ou les piles.
- b) Ne pas exposer les piles ou les batteries à la chaleur ou au feu. Éviter de conserver en plein soleil.
- c) Ne court-circuitez pas la batterie ou la batterie. Ne rangez pas les piles ou les batteries au hasard dans des boîtes ou des tiroirs, car elles peuvent être court-circuitées les unes par rapport aux autres ou par d'autres objets métalliques.
- d) Ne retirez pas les piles ou les piles de leur emballage d'origine avant de les utiliser.
- e) Ne soumettez pas les piles ou batteries à des chocs mécaniques.
- f) En cas de fuite cellulaire, ne laissez pas le liquide entrer en contact avec la peau ou les yeux. Si elle a déjà été exposée, laver abondamment la zone touchée avec de l'eau et consulter un médecin.
- g) Aucun chargeur ne doit être utilisé, à l'exception de celui fourni spécifiquement dans l'appareil.
- h) Observez les marques positives (+) et négatives (-) sur les piles, les batteries et les appareils et assurez-vous de les utiliser correctement.
- i) N'utilisez pas de piles ou de batteries qui ne sont pas conçues avec l'appareil.
- j) Ne mélangez pas de batteries de différentes marques, capacités, tailles ou types dans l'appareil.
- k) L'utilisation des piles par les enfants doit être surveillée.
- l) Si une cellule ou une batterie a été avalée, consultez immédiatement un médecin.
- m) Achetez toujours la batterie recommandée par le fabricant de l'appareil pour votre appareil.
- n) Gardez les piles et les batteries propres et sèches.
- o) Si la batterie ou les bornes de la batterie se salissent, essuyez les bornes de la batterie avec un chiffon propre et sec.
- p) Les piles et batteries secondaires doivent être rechargées avant utilisation. Utilisez toujours le bon chargeur et consultez les instructions du fabricant ou le manuel de l'appareil pour obtenir les instructions de charge appropriées.
- q) Ne laissez pas la batterie se recharger longtemps lorsqu'elle n'est pas utilisée.
- r) Après une longue période de stockage, il peut être nécessaire de charger et de

décharger la batterie ou la batterie plusieurs fois pour obtenir des performances maximales.

- s) Conserver la documentation originale du produit pour référence future.
- t) Utilisez la batterie ou la batterie uniquement dans l'application à laquelle elle est destinée.
- u) Si possible, retirez la batterie de l'appareil lorsqu'elle n'est pas utilisée.
- v) Décisions appropriées.

Coordonnées du fournisseur

Details of the supplier of the safety data sheet:

Supplier Name : Shenzhen Chengyan Energy Development Technology Co. Ltd.

Address : 6th Foor, B Building, No.18 Jincheng Road, Jinfenghuang Industrial Zone, Fenggang Town, Dongguan City, Guangdong, P.R. China

Telephone number of the supplier : +86-0755-36327668

mail address: qinyouan@126.com

Emergency telephone number : +86-0755-36327668

Company Emergency Phone Number : +86-0755-36327668

C'est un honneur pour le quad.

Coordonnées du fournisseur de la fiche de données de sécurité:

Nom du fournisseur: Shenzhen Chengyan Energy Development Technology Co. Ltd.

Adresse: 6e étage, bâtiment b, no 18 Jincheng Road, zone industrielle de Jinfenghuang, ville de Fenggang, ville de Dongguan, Guangdong, pr. Chine

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2. HAZARDS IDENTIFICATION

Identification des dangers

Classification

No harm at the normal use. If contact the Electrolyte in the Polymer Li-ion Battery, reference as follows:

Classification of the substance or mixture

Classification according to GHS

Classification

Aucune blessure en utilisation normale. En cas de contact avec un électrolyte dans une batterie lithium-ion polymère, la référence est la suivante:

Classification de la substance ou du mélange

Selon la classification SGH

Toxic if swallowed (Hazard category 3)

Toxique en cas d'ingestion (classe de danger 3)

Hazard category
3

Signal word
Danger

Hazard statement
Toxic if swallowed



Precautionary statements			
Prevention	Response	Storage	Disposal
Wash ... thoroughly after handling. ... Chemical manufacturer, importer, or distributor to specify parts of the body to be washed after handling.	If swallowed: Immediately call a poison center/doctor/... ... Chemical manufacturer, importer, or distributor to specify the appropriate source of emergency medical advice.	Store locked up.	Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified).
Do not eat, drink or smoke when using this product.	Specific treatment (see ... on this label) ... Reference to supplemental first aid instruction. - if immediate administration of antidote is required. Rinse mouth.		

Causes serious eye damage (Hazard category 1)

Provoque des lésions oculaires graves (classe de danger 1)

Hazard category
1

Symbol
Corrosion



Signal word
Danger

Hazard statement
H318 Causes serious eye damage

Precautionary statements			
Prevention	Response	Storage	Disposal
P280 Wear eye protection/face protection. Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate.	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER/doctor/... ... Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice.		

3. COMPOSITION/INFORMATION ON INGREDIENTS

Composition/information sur les ingrédients

Chemical characterixation: Mixtures

Description:

Product: Consisting of the following components.

Caractéristiques chimiques: Mélange

Description du :

Produit: Composé des pièces suivantes

Common Chemical Name Nom chimique commun	CAS Number Numéro CAS	Concentration (%) Concentration (%)
Lithium Cobalt Oxide	12190-79-3	38.6
Copper	7440-50-8	6.4
Graphite	7782-42-5	38.2
Lithium hexafluorophosphate	21324-40-3	4.1
Aluminum	7429-90-5	12.7

Note: CAS number is Chemical Abstract Service Registry Number.

Remarque: Le numéro CAS est le numéro de registre du service abstrait chimique.

4. FIRST-AID MEASURES

Mesures de premiers secours

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 corrosion 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

Mesures de premiers secours

Contact oculaire Rincer abondamment avec suffisamment d'eau, également sous les paupières. Appelez un médecin si les symptômes persistent.

Méthode de contact avec la peau Enlever les vêtements et les chaussures contaminés. Lavez la peau à l'eau et au savon. Consultez un médecin en cas de corrosion cutanée ou de réaction allergique.

Inhalation Amener à l'air frais. Appelez un médecin si les symptômes persistent.

L'ingestion ne provoque pas de vomissements. Buvez beaucoup d'eau. Appelez un médecin si les symptômes persistent. Symptômes et effets les plus importants, y compris aigus et retardés

La déglutition ne provoque pas de vomissements. Obtenez une attention médicale.

Symptômes/effets les plus importants: Aucune information pertinente n'est disponible.

Indique la nécessité de consulter immédiatement un médecin et un traitement spécial

Instructions à donner au médecin pour traiter les symptômes

5. FIRE-FIGHTING MEASURES

Mesures de lutte contre l'incendie

Suitable Extinguishing Media

CO₂, dry chemical powder, water spray.

Unsuitable Extinguishing Media: No information available.

Médias d'extinction appropriés

Dioxyde de carbone, poudre chimique sèche, spray d'eau.

Moyens d'extinction d'incendie inappropriés: aucune information pertinente.

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.

Dangers spécifiques causés par les produits chimiques

Des gaz toxiques peuvent se former pendant le chauffage ou en cas d'incendie. En cas d'incendie, les éléments suivants peuvent être dégagés:

Monoxyde de carbone (CO)

Dioxyde de carbone

Autres gaz irritants et toxiques.

Hazardous Combustion Products

Carbon oxides.

Explosion Data

Sensitivity to Mechanical Impact No

Sensitivity to Static Discharge No

Produits de combustion dangereux

Oxyde de carbone.

Données d'explosion

Sensibilité aux chocs mécaniques Non

Sensibilité aux décharges électrostatiques Non

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.

Équipement de protection et précautions pour les pompiers

En cas d'incendie, porter un appareil respiratoire indépendant prescriptif, MSHA/NIOSH (approuvé ou équivalent) et un équipement de protection complet. Par exemple: porter une protection

respiratoire séparée. Porter des vêtements de protection appropriés et une protection oculaire/faciale.

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 °C), 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.

Dangers particuliers découlant de la substance ou du mélange:

Lorsqu'elles sont exposées à un incendie, les batteries peuvent se fissurer et libérer des produits de décomposition dangereux. Les batteries au lithium-ion contiennent des électrolytes inflammables qui, lorsqu'ils sont endommagés ou mal utilisés à des températures élevées (>150 °C), peuvent s'échapper, s'enflammer et produire des étincelles. Dommages mécaniques ou surcharge électrique); Peut brûler rapidement et avoir des effets brûlants; Peut enflammer d'autres piles à proximité des vêtements.

6. ACCIDENTAL RELEASE MEASURES

Mesures de rejet accidentel

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.

Précautions individuelles, équipement de protection et procédures d'urgence

Précautions personnelles Éviter tout contact avec les yeux.

Voir la section 8 pour plus de détails sur les équipements de protection individuelle.

Assurez-vous que la ventilation est adéquate. Retirez toutes les sources d'incendie.

Évacuez le personnel dans une zone sécurisée.

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.

Précautions environnementales

Précautions pour l'environnement Voir les mesures de protection listées aux rubriques 7 et 8.

Absorbe les liants liquides (sable, diatomite, liants acides, liants universels, sciure). Les matières contaminées sont traitées comme des déchets conformément au point 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.

Méthodes et matériaux de scellement et de nettoyage

Méthodes de contrôle S'il est sûr, il peut empêcher de nouvelles fuites ou déversements.

Méthode de nettoyage Utilisez un équipement de protection individuelle. Le barrage monte.

Couvrir les déversements liquides de sable, de terre ou d'autres matériaux absorbants incombustibles. Prendre et transférer dans le récipient correctement étiqueté. Nettoyez soigneusement les surfaces contaminées.

7. HANDLING AND STORAGE

Manipulation et stockage

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.

Précautions de manipulation en toute sécurité

Utilisez la poignée conformément aux bonnes règles d'hygiène et de sécurité industrielles. Éviter tout contact avec la peau, les yeux et les vêtements. Veuillez porter un équipement de protection individuelle.

Laver soigneusement après le traitement. Utilisez ce matériau bien ventilé. Ce produit n'est pas un produit explosif.

Conditions for safe storage, including any incompatibilities

If the Lithium-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°C~+40°C, 45 to 85%RH

And recommended at 0°C~+35°C 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 3.7V~4.2V range.

Do not storage Lithium-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.

Conditions de stockage sûr, y compris toute incompatibilité

Si la batterie lithium-ion est stockée pendant une longue période de plus de 3 mois, il est recommandé de recharger régulièrement la batterie lithium-ion polymère.
3 mois: -10°C à +40°C, 45 à 85% d'HR
Il est également recommandé pour un stockage à long terme à 0 °C ~ + 35 °C.
Supposons que le taux de récupération de capacité (50% de la capacité totale) à l'état de livraison après stockage soit de 80% ou plus.
La tension stockée pendant une longue période doit être de 3,7 V à 4,2 V.
Ne rangez pas les batteries lithium-ion au hasard dans des boîtes ou des tiroirs, car elles peuvent se court-circuiter les unes les autres ou être court-circuitées par d'autres objets métalliques.
Tenir hors de portée des enfants.
Ne pas exposer la batterie au lithium-ion polymère à la chaleur ou au feu. Éviter de conserver en plein soleil. Ne pas conserver avec des matériaux oxydants et acides.
Gardez l'allumage éveillé et ne fumez pas. Conserver dans un endroit frais, sec et bien ventilé.

Incompatible Products None known.

Incompatibilité PRODUITS Je ne sais pas.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Contrôle de l'exposition et protection individuelle

Control parameters

Paramètres de contrôle

Ingredients with limit values that require monitoring at the workplace: Ingrédients soumis à des valeurs limites qui doivent être surveillés sur le lieu de travail:	
12190-79-3 Lithium Cobalt Oxide	
TLV (USA) TIV (États-Unis)	0.02mg/m ³
MAK (Germany) MAK (Allemagne)	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).

Autres lignes directrices sur l'exposition

Limite invalide annulée par la Cour d'appel dans AFL-CIO c. Occupational Safety and Health Administration, 965 F.2d 962 (11th Circuit, 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.

Contrôle technique approprié

Mesures techniques Affichage

Station de nettoyage

Système de ventilation

Utiliser une ventilation générale ou localisée suffisante pour maintenir la concentration de l'air en dessous des limites d'exposition admissibles. Assurez-vous que la ventilation est adéquate.

Individual protection measures, such as personal protective equipment**Mesures de protection individuelle, telles que les équipements de protection individuelle****Eye/Face Protection:**

Protection des yeux/du visage:



Tightly sealed goggles

Lunettes scellées

Body protection:**Protection physique:**

Protective work clothing.

Vêtements de protection.

Skin protection:**Protection de la peau:**

Protective gloves

Gants de protection

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.

Matériau du gant:

Le choix du gant approprié dépend non seulement du matériau, mais aussi d'autres marques de qualité et varie d'un fabricant à l'autre. Parce que le produit produit est L Pour les substances, la résistance du matériau du gant ne peut pas être calculée à l'avance et doit donc être vérifiée avant utilisation.

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.

Temps de pénétration du matériau du gant:

Le fabricant du gant de protection doit trouver le moment exact de la rupture de la fente et doit l'observer.

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.

Protection respiratoire

Dans des conditions normales d'utilisation, aucun équipement de protection n'est requis. En cas de dépassement des limites d'exposition ou d'irritation, une ventilation et une évacuation peuvent être nécessaires.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

Mesures sanitaires

Suivez les bonnes procédures d'hygiène et de sécurité industrielles.

9. PHYSICAL AND CHEMICAL PROPERTIES**Propriétés physiques et chimiques**

Physical State État physique	Form: Approximate cuboid Forme: Cuboïde approximatif
	Color: Silvery Couleurs: Argenté
	Odour: Odourless Odeur: aucune odeur
	Odor Threshold: No information available Seuil d'odeur: aucune information disponible
	Change in condition: Changements dans les conditions:
pH, with indication of the concentration PH, avec indication de sa concentration	Not determined. ndéterminé.
Melting point/freezing point Point de fusion/point de congélation	Not determined. ndéterminé.
Initial boiling point and Boiling range: Point d'ébullition initial et plage d'ébullition:	Not determined. ndéterminé.
Flash Point Point d'éclair	Not determined. ndéterminé.
Evaporation rate Taux d'évaporation	Not determined. ndéterminé.
Flammability (solid, gas) Inflammabilité (matières solides, gaz)	Not determined. ndéterminé..
Upper/lower flammability or explosive limits Limite supérieure et inférieure	Not determined. ndéterminé.

d'inflammabilité ou d'explosivité	
Vapor Pressure: Pression de vapeur:	Not determined. ndéterminé.
Vapor Density: Densité de la vanne:	Not determined. ndéterminé.
relative density: Densité relative:	Not determined. ndéterminé.
Solubility in Water: Solubilité dans l'eau:	Not determined. ndéterminé.
Solubility in other solvents Solubilité des autres solvants	Not determined. ndéterminé.
n-octanol/water partition coefficient Coefficient de partage n-octanol/eau	Not determined. ndéterminé.
Auto-ignition temperature Température d'allumage automatique	Product is not self-igniting. Le produit ne s'enflamme pas.
Decomposition temperature Température de décomposition	Not determined. ndéterminé.
Odour threshold Seuil de sortie	Not determined. ndéterminé.
Evaporation rate Taux d'évaporation	Not determined. ndéterminé.
Viscosity Viscosité	Not determined. ndéterminé.
Other Information Autres informations	No further relevant information available. Aucune autre information pertinente n'est disponible.

10. STABILITY AND REACTIVITY

Stabilité et réactivité

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.

Réactivité: rester stable dans les conditions de conservation et de manipulation recommandées (voir rubrique 7, Manipulation et entreposage).

Stabilité chimique: Reste stable dans les conditions normales d'utilisation, d'entreposage et de transport.

Conditions à éviter: Ne pas décomposer si utilisé conformément aux spécifications.

Possibilité de réaction dangereuse: Pas sous manipulation normale. Polymérisation dangereuse:

Aucune polymérisation dangereuse ne se produit. Conditions à éviter: chaleur forte, feu, matériaux incompatibles.

Matières incompatibles: oxydant puissant. Acide fort. Genre de fonds.

Produits de décomposition dangereux: oxydes de carbone, autres gaz irritants et toxiques.

11. TOXICOLOGICAL INFORMATION

Renseignements toxicologiques

Acute toxicity: No data available.

Toxicité aiguë: pas de données pertinentes.

LD/LC50 values relevant for classification:

Valeurs LD/CL50 en fonction de la classification:

Not available.

Non disponible.

Skin corrosion/irritation: No information available.

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(carcinogenicity, mutagenicity and toxicity for reproduction): No information available.

Corrosion/irritation cutanée: Aucune information disponible.

Lésions/irritation oculaires graves: Provoque une irritation oculaire sévère.

Sensibilisation respiratoire ou cutanée: aucun effet sensibilisant connu.

Toxicité systémique pour certains organes cibles: aucune information pertinente.

Effets CMR (cancérogénicité, mutagénicité et toxicité pour la reproduction): aucune information pertinente n'est disponible.

12. Ecological Information

Information écologique

Toxicity:

Toxicité:

Acquatic toxicity:

Obtenir la toxicité:

No further relevant information available.

Aucune autre information pertinente n'est disponible.

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.

Persistante et dégradabilité: Aucune autre information pertinente n'est disponible.

Potentiel de bioaccumulation: Aucune autre information pertinente n'est disponible.

Mobilité dans le sol: aucune autre information pertinente n'est disponible.

Résultats de l'évaluation PBT et vPvB

PBT: Sans objet.

VPvB: Sans objet.

Autres effets indésirables: aucune information pertinente.

13. DISPOSAL CONSIDERATIONS

Considérations relatives à l'élimination

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.

Méthodes d'élimination des déchets

Recommandation: Ne pas jeter avec les ordures ménagères.

Ne pas permettre aux produits d'atteindre le système de traitement des eaux usées

Emballage non nettoyé:

Recommandation: La manipulation doit être effectuée conformément à la réglementation officielle.

14. TRANSPORT INFORMATION

Information sur le transport

Land transport

ADR/RID class: Not regulated.

UN-Number: UN3480 or UN3481.

Transports terrestres

Classe ADR/RID: Non réglementé.

No ONU: No ONU 3480 ou No ONU 3481.

Maritime transport

IMDG Class: Class 9.

UN Number: UN3480 or UN3481.

Marine pollutant: No

Transport maritime

Classe IMDG: Classe 9.

No ONU: ONU 3480 ou ONU 3481.

Polluants marins: nombre

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

The lithium ion batteries according to Section IB of PACKING INSTRUCTION 965, or Section II of PACKING INSTRUCTION 966~967 of the Dangerous Goods regulations 65th Edition may be transported.

The packaging shall be adequate to avoid mechanical damage during transport, handling and stacking. The materials and pack design shall be chosen so as to prevent the development of unintentional electrical conduction, corrosion of the terminals and ingress of moisture.

Meets requirements of DOT Special Provision 188 to be transported as non-dangerous goods

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)

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

Transport aérien

Niveau OACI/AITA: 9

No ONU: No ONU 3480 ou No ONU 3481 DANGERS POUR L'ENVIRONNEMENT: Sans objet.

Précautions particulières pour l'utilisateur: Sans objet.

Expédition/Informations supplémentaires: Les marchandises ne sont pas restreintes conformément aux spécifications ci-dessus.

Les batteries au lithium-ion ont été éprouvées conformément aux prescriptions de la section 38.3 de la troisième partie du Manuel d'épreuves et des critères de l'ONU;

Les batteries au lithium-ion conformément à la de la directive 965 sur les marchandises dangereuses ou à la section IB des instructions d'emballage 966 à 967 de la 65e édition peuvent être transportées.

L'emballage doit être suffisant pour éviter les dommages mécaniques au cours du transport, de la manutention et de l'empilage. Les matériaux et les emballages doivent être choisis de manière à empêcher la conduction électrique involontaire, la corrosion des bornes et l'entrée d'humidité.

Conforme à la disposition spéciale 188 du ministère des Transports pour le transport en tant que marchandises non dangereuses Conforme à 49CFR173.185 Exigences pour le transport en tant que marchandises non dangereuses par route, rail, air et navire (selon HM224F, en vigueur depuis le 6 août 2014)

Les emballages doivent être manipulés avec précaution et, s'ils sont endommagés, il existe un risque d'inflammabilité.

15. REGULATORY INFORMATION

Renseignements réglementaires

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

EU Regulation:

Authorisations: No information available.

Restrictions on use: No information available.

Règlements/législation en matière de sécurité, de santé et d'environnement propres à la substance ou au mélange

Réglementation européenne:

Autorisation: Aucune information disponible.

Restrictions d'utilisation: Aucune information disponible.

Regulatory information

Informations réglementaires

CAS No.	EU (EINECS)	US (TSCA)	Japan (ENCS)	Canada (DSL/ NDSL)	Austrlia (AICS)	Korea (ECL)	China (IECSC)
12190-79-3	Listed	Listed	Listed	DSL	Listed	Listed	Listed
7440-50-8	Listed	Listed	Listed	DSL	Listed	Listed	Listed
7782-42-5	Listed	Listed	Listed	DSL	Listed	Listed	Listed
21324-40-3	Listed	Listed	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.

Évaluation de la sécurité chimique Aucune évaluation de la sécurité chimique n'a été effectuée.

16. OTHER INFORMATION

Autres informations

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.

Cette information est basée sur nos connaissances actuelles. Toutefois, il ne constitue pas une garantie pour les caractéristiques particulières du produit et n'établit pas de relation contractuelle juridiquement valable.

Phrases associées:

R20/22: Nocif par inhalation et par ingestion.

R36: Rage des yeux.

H302: Si avalé, c'est terrible.

H332: blindé en cas d'inhalation.

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

*****Fin de la FDS*****

Material Safety Data Sheet

Section 1-Chemical Product and Company Identification

Product name: Lithium ion rechargeable battery cell

Details:

BATTER MODEL	Cell Voltage (V)	Battery Voltage (V)	Watt hour Rating (Wh)	Weight (grams)	Equivalent Lithium Content (grams)
PT852528 550mAh	3.7	3.7	2.035	11.6	

Manufacturer:

Guangdong Pow-tech New Power Co., Ltd.

Address: No.9,Hengdong 3Road,Hengkeng Shiling Industry Zone,Liaobu Town,Dongguan

Tel: (+86)0769-83527566, Fax: (+86)0769-83520288

E-mail : wangcong@szpowtech.com.cn



Section 2-Hazards Identification

Preparation hazards and classification

Not dangerous with normal use. Do not dismantle, open or shred Li-ion Battery

Exposure to the ingredients contained within or their ingredients products could be harmful.

Appearance, Color, and Odor: Solid object with no odor, no color.

Primary Route(s) of Exposure:

These chemicals are contained in a Aluminum-plastic composite membrane or hermetically sealed metal or metal laminated plastic case,

Risk of exposure occurs only if the cell is mechanically, thermally or electrically abused to the point of compromising the enclosure. If this occurs, exposure to the electrolyte solution contained within can occur by Inhalation, Ingestion, Eye contact and Skin contact.

Potential Health Effects:

Acute (short term): see Section 8 for exposure controls In the event that this battery has been ruptured, the electrolyte solution contained within the battery would be corrosive and can cause burns.

Inhalation: Inhalation of materials from a sealed battery is not an expected route of exposure. Vapors or mists from a ruptured battery may cause respiratory irritation.

Ingestion: Swallowing of materials from a sealed battery is not an expected route of exposure. Swallowing the contents of an open battery can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract

Skin: Contact between the battery and skin will not cause any harm. Skin contact with contents of an open battery can cause severe irritation or burns to the skin.

Eye: Contact between the battery and the eye will not cause any harm. Eye contact with contents of an open battery can cause severe irritation or burns to the eye.

Medical Conditions Aggravated by Exposure: Not applicable

Reported as carcinogen: Not applicable

Section 3-Composition/Information on Ingredients

Chemical Composition	Molecular Formula	Weight%	CAS No	OSHA(PEL)	ACGIH(TLV)
Lithium Cobalt Oxide	LiCoO ₂	39.64%	12190-79-3	N/A	N/A
Graphite powder	C	23.19%	7782-42-5	N/A	N/A
Electrolyte	LiPF ₆ C ₃ H ₄ O ₃ C ₄ H ₆ O ₃ C ₃ H ₁₀ O ₃	15.4%	21324-40-3	N/A	N/A
Polyethylene	(C ₂ H ₄) _n	0.05%	9002-88-4	N/A	N/A
Cu	Cu	9.7%	7440-50-8	N/A	N/A
Electrolyte (EC)	C ₃ H ₄ O ₃	2.72%	96-49-1	N/A	N/A
Polyvinylidene fluoride	(CH ₂ CF ₂) _n	1.71%	24937-79-9	N/A	N/A
Polypropylene	(C ₃ H ₆) _n	0.8%	9003-07-0	N/A	N/A
Aluminum foil	Al	5.54%	7429-90-5	N/A	N/A
SBR	(C ₈ H ₈ .C ₄ H ₆) _x	1.25%	9003-55-8	N/A	N/A

Section 4-First-aid Measures

Inhalation	If contents of an opened battery are inhaled, remove source of contamination or move victim to fresh air. Obtain medical advice.
Skin contact	If skin contact with contents of an open battery occurs, as quickly as possible remove contaminated clothing, shoes and leather goods. Immediately flush with lukewarm, gently flowing water for at least 30 minutes. If irritation or pain persists, seek medical attention. Completely decontaminate clothing, shoes and leather goods before reuse or discard.
Eye contact	If eye contact with contents of an open battery occurs, immediately flush the contaminated eye(s) with lukewarm, gently flowing water for at least 30 minutes while holding the eyelids open. Neutral saline solution may be used as soon as it is available. If necessary, continue flushing during transport to emergency care facility. Take care not to rinse contaminated water into the unaffected eye or onto face. Quickly transport victim to an emergency care facility.
Ingestion	If ingestion of contents of an open battery occurs, never give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink 60 to 240 mL (2-8 oz.) of water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Have victim rinse mouth with water again. Quickly transport victim to an emergency care facility.

Section 5-Fire Fighting Measures

Flammable Properties	In the event that this battery has been ruptured, the electrolyte solution contain within the battery would be flammable. Like any sealed container, battery cells may rupture when exposed to excessive heat; this could result in the release of flammable or corrosive materials.
Suitable extinguishing Media	Use extinguishing media suitable for the materials that are burning.

Unsuitable extinguishing Media	Not available
Explosion Data	Sensitivity to Mechanical Impact: This may result in rupture in extreme cases Sensitivity to Static Discharge: Not Applicable
Specific Hazards arising from the chemical	Fires involving Li-ion Battery can be controlled with water. When water is used, however, hydrogen gas may evolve. In a confined space, hydrogen gas can form an explosive mixture. In this situation, smothering agents are recommended to extinguish the fire
Protective Equipment and precautions for firefighters	As for any fire, evacuate the area and fight the fire from a safe distance. Wear a pressure-demand, self-contained breathing apparatus and full protective gear. Fight fire from a protected location or a safe distance. Use NIOSH/MSHA approved full-face self-contained breathing apparatus(SCBA) with full protective gear.
NFPA	Health: 0 Flammability: 0 Instability: 0

Section 6-Accidental Release Measures

Spilled internal cell materials, such as electrolyte leaked from a battery cell, are carefully dealt with according to the followings:

Precautions for human body:

Remove spilled materials with protective equipment (protective glasses and protective gloves).Do not inhale the gas as much as possible. Moreover, avoid touching with as much as possible.

Environmental precautions:

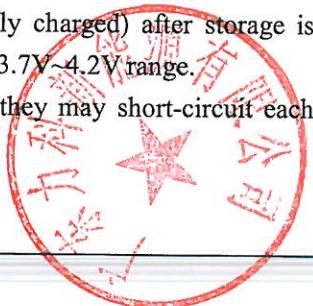
Do not throw out into the environment.Method of cleaning up: The spilled solids are put into a container. The leaked place is wiped off with dry cloth.

Prevention of secondary hazards:

Avoid re-scattering. Do not bring the collected materials close to fire.

Section 7-Handling and Storage

Handling	Don't handling Li-ion Battery with metalwork. Do not open, disassemble, crush or burn battery. Ensure good ventilation/ exhaustion at the workplace. Prevent formation of dust. Information about protection against explosions and fires: Keep ignition sources away- Do not smoke.
Storage	If the Li-ion Battery are subject to storage for such a long term as more than 3 months, it is recommended to recharge the Li-ion Battery periodically. 3 months: -10°C~+40°C, 45 to 85%RH And recommended at 0°C~+35°C 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 3.7V~4.2V 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 Li-ion Battery to heat or fire.



	Avoid storage in direct sunlight. Do not store together with oxidizing and acidic materials.
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Section 8-Exposure Controls/Personal Protection

Engineering Controls	Use local exhaust ventilation or other engineering controls to control sources of dust, mist, fumes and vapor. Keep away from heat and open flame. Store in a cool, dry place.
Personal Protective Equipment	Respiratory Protection: Not necessary under normal conditions. Skin and body Protection: Not necessary under normal conditions, Wear neoprene or nitrile rubber gloves if handling an open or leaking battery. Hand protection: Wear neoprene or natural rubber material gloves if handling an open or leaking battery. Eye Protection: Not necessary under normal conditions, Wear safety glasses if handling an open or leaking battery.
Other Protective Equipment	Have a safety shower and eye wash fountain readily available in the immediate work area.
Hygiene Measures	Do not eat, drink, or smoke in work area. Maintain good housekeeping.

Section 9-Physical and Chemical Properties

Physical State	Form: Solid
	Color: White
	Odor: Monotony
Change in condition:	
pH, with indication of the concentration	Not applicable
Melting point/freezing point	Not available.
Boiling Point, initial boiling point and Boiling range:	Not available.
Flash Point	Not available.
Upper/lower flammability or explosive limits	Not available.
Vapor Pressure:	Not applicable
Vapor Density: (Air = 1)	Not applicable
Density/relative density	Not available.
Solubility in Water:	Insoluble
n-octanol/water partition coefficient	Not available.



Auto-ignition temperature	130°C
Decomposition temperature	Not available.
Odor threshold	Not available.
Evaporation rate	Not available.
Flammability (soil, gas)	Not available.
Viscosity	Not applicable

Section 10- Stability and Reactivity

Stability	The product is stable under normal conditions.
Conditions to Avoid (e.g. static discharge, shocker vibration)	Do not subject Li-ion Battery to mechanical shock. Vibration encountered during transportation does not cause leakage, fire or explosion. Do not disassemble, crush, short or install with incorrect polarity. Avoid mechanical or electrical abuse.
Incompatible Materials	Not Available
Hazardous Decomposition Products	This material may release toxic fumes if burned or exposed to fire
Possibility of Hazardous Reaction	Not Available

Section 11-Toxicological Information

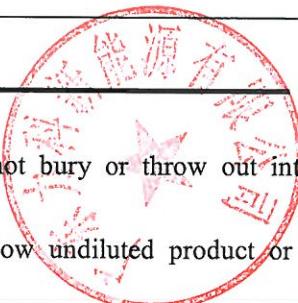
Irritation	Risk of irritation occurs only if the cell is mechanically, thermally or electrically abused to the point of compromising the enclosure. If this occurs, irritation to the skin, eyes and respiratory tract may occur.
Sensitization	Not Available
Neurological Effects	Not Available
Teratogenicity	Not Available
Reproductive Toxicity	Not Available
Mutagenicity (Genetic Effects)	Not Available
Toxicologically Synergistic Materials	Not Available

Section 12-Ecological Information

General note:

Since a battery cell and the internal materials remain in the environment, do not bury or throw out into the environment.

Water hazard class 1(Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.



Section 13-Disposal Considerations

Product disposal recommendation: Observe local, state and federal laws and regulations. Packaging disposal recommendation: Be aware discarded batteries may cause fire, tape the battery terminals to insulate them. Don't disassembly the battery. Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local, state and federal laws and regulations.

The potential effects on the environment and human health of the substances used in batteries and accumulations; the desirability of not disposing of waste batteries and accumulators as unsorted municipal waste and of participating in their separate collection so as to facilitate treatment and recycling.

Section 14-Transport Information

This report applies to by sea, by air and by land;

The Li-ion Battery tested according to the requirements of the 6th revised edition of the UN manual of tests and Criteria, Part III, subsection 38.3;

Lithium 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 LITHIUM ION BATTERY according to Section II/IA/IB of PACKING INSTRUCTION 965/ 966 /967 of the 2020 IATA Dangerous Goods regulations 61th Edition may be transported and applicable U.S.DOT regulations for the safe transport of Li-ion Battery.

More information concerning shipping, testing, marking and packaging can be obtained from label master at <http://www.labelmaster.com/>.

The packaging shall be adequate to avoid mechanical damage during transport, handling and stacking.

The materials and pack design shall be chosen so as to prevent the development of unintentional electrical conduction, corrosion of the terminals and ingress of moisture.

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

Each package must be labeled with a Li-ion Battery handling label or in addition to the Class 9 hazard label.

With regard to transport, the following regulations are cited and considered:

- The International Civil Aviation Organization (ICAO) Technical Instructions.
- The International Air transport Association (IATA) Dangerous Goods Regulations. UN number of lithium battery: UN3480 or UN3481;

UN Proper shipping name/Description (technical name): Lithium ion batteries or Lithium ion batteries contained in equipment or Lithium ion batteries packed with equipment;

UN Classification (Transport hazard class): Non dangerous;

Marine pollutant (Y/N): N;

- The International Maritime Dangerous Goods IMDG Code(Amend 39-2018).

For lithium-ion batteries by sea, provided that packaging is strong and prevent the products from short-circuit. UN number of lithium battery: UN3480 or UN3481;

UN Proper shipping name/Description (technical name): Lithium ion batteries or Lithium ion batteries contained in equipment or Lithium ion batteries packed with equipment;

UN Classification (Transport hazard class): Non dangerous; Marine pollutant (Y/N): N

Special Provision: International maritime dangerous goods code IMDG (Amend 39-2018)188, 230, 310, 348, 957;

- The US Hazardous Materials Regulation (HMR) pursuant to a final rule issued by RSPA
- The Office of Hazardous Materials Safety within the US Department of Transportations' (DOT) Research and Special Programs Administration (RSPA)

Section 15-Regulatory Information

Regulations specifically applicable to the product: Wastes Disposal and Public Cleaning Law [Japan] Law for Promotion of Effective Utilization of resources [Japan] US Department of Transportation 49 Code of Federal Regulations [USA]

OSHA hazard communication standard (29 CFR 1910.1200)

Hazardous

V

Non-hazardous

Section 16-Other Information

The information above is believed to be accurate and represents the best information currently available to us. However, concord makes no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. Although reasonable precautions have been taken in the preparation of the data contained herein, it is offered solely for your information, consideration of investigation. This material safety data sheet provides guidelines for the safe handling and use of this product; it does not and cannot advise on all possible situations, therefore, your specific use of this product should be evaluated to determine if additional precautions are required.

The data/information contained herein has been reviewed and approved for general release on the basis that this document contains no export controlled information.

