三帕认证

Safety Data Sheet

安全技术说明书

Product Name 产品名称:	Polymer Lithium Ion Battery 聚合物锂离子电池
Model 型号:	FT902536P
Issue Date 签发日期:	2021.03.04
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Compiler 编制:	Max Feng
Reviewer 审核:	Tracy Chen
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广州三帕认证技术服务有限公司

Guangzhou CP-UP Certification Technology Service Co., Ltd.

Tel: 86-020 3112 7037 Email: info@cp-up.com Website: www.cp-up.com

Section 1 - Chemical and Company Identification 第一部分-化学品及企业标识		
Product Name 产品名称		Polymer Lithium Ion Battery 聚合物锂离子电池
Model/型号		FT902536P
Ratings/额定参数		3.7V 800mAh 2.96Wh
Applicant 申请商		Hangzhou Future Power Technology Co.,Ltd. 杭州金色能源科技有限公司
Applicant address 申请商地址		No.16, Dongwang Road,Dongzhou Street, Fuyang , Hangzhou, Zhejiang, China 311400 浙江省杭州市富阳区东洲街道东望路 16 号
Manufacturer 制造商		Hangzhou Future Power Technology Co.,Ltd. 杭州金色能源科技有限公司
Manufacturer Contact information 制造商联系信息	address 地址	No.16, Dongwang Road,Dongzhou Street, Fuyang , Hangzhou, Zhejiang, China 311400 浙江省杭州市富阳区东洲街道东望路 16 号
	Tel./应急电话	86- 0571-63371888
	Email/邮箱	jsrz@ftjt.net
	Zip code/邮编	311401
	Fax/传真	N/A

Section 2 - Hazards Identification
第二部分-危险性概述

Hazards Identification：危险性描述

Not dangerous with normal use. Do not dismantle, open or shred the battery ingredients contained within or their ingredients products could be harmful.

正常使用没有危险，不能拆解、打开或分解电池，里面的材料或成分是有害的。

Primary Route (s) of Exposure: 接触途径

inhalation, ingestion, Skin contact and Eye contact.

吸入、食入、皮肤接触、眼睛接触。

Potential Health Effects: 潜在健康影响

inhalation： Vapors or mists from a ruptured battery may cause respiratory irritation.

吸入：破裂的电池散发出来的气雾会引起呼吸道刺激。

Ingestion： The battery ingredients contained within or their ingredients products can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract.

食入：电池的组成成分或原料可以导致嘴，食道和胃肠道的严重化学烧伤。

Skin： Skin contact with contents of an open battery can cause severe irritation or burns to the skin.

皮肤：皮肤接触到电池的内部化学材料可能会导致严重的刺激或烧伤皮肤。

Eye： Eye contact with contents of an open battery can cause severe irritation or burns to the eye.

眼睛：眼睛接触到电池的内部化学材料可能会导致严重的刺激或烧伤眼睛。

Section 3- Composition/Information on Ingredients 第三部分-成分/组成信息		
Chemical Name **化学名称**	**CAS Number** **CAS 号（化学文摘索引登记号）**	**Concentration or concentration ranges (%)** **浓度或浓度范围(%)**
Lithium Cobalt Oxide	12190-79-3	35.5
Aluminum Foil	7429-90-5	9
1.1-Difluoroethylene polymer	24937-79-9	1
Graphite	7782-42-5	18
Copper Foil	7440-50-8	17.2
Styrene-Butadiene polymer	9003-55-8	1.5
Phosphate(1-), hexafluoro-, lithium	21324-40-3	2.8
Ethylene carbonate	96-49-1	5
Dimelene carbonate	616-38-6	5
Carbonate, methyl ethyl	623-53-0	5
Note: CAS number is Chemical Abstract Service Registry Number. 注意：CAS 号是化学文摘服务注册号。 N/A=Not apply. N/A=不适用		

Section 4- First Aid Measure 第四部分-急救措施	
Inhalation **吸入**	Remove source of contamination or move victim to fresh air. Obtain medical advice. 移除污染源或者将受害者移至新鲜空气处。寻求医生建议。
Ingestion **食入**	Please rinse mouth thoroughly with water, induce vomiting under the guidance of professional personage. Please seek medical treatment in time. 立即用清水漱口，在专业人士的指导下催吐，速就医。
Skin contact **皮肤接触**	Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid. 脱下已污染衣服，用大量的水冲洗至少 15 分钟，速就医。
Eye contact **眼睛接触**	Irrigate with flowing water for 15 minutes. If irritation persists, consult a physician. 用流动水冲洗 15 分钟，如刺激持续发生，请求助于医生。

Section 5- Fire Fighting Measures 第五部分-消防措施	
Characteristics of Hazard **危险特性**	Toxic fumes, gases or vapors may evolve on burning. 火灾时可释放有害浓烟、气体或者蒸汽。
Hazardous Combustion Products **燃烧产生的危险物品**	Carbon monoxide, carbon dioxide, lithium oxide fumes and so on. 一氧化碳，二氧化碳，锂氧化物烟气等。

Fire-extinguishing Methods and Extinguishing Media **灭火方法及灭火剂**	Please use water, dry sand and other proper fire extinguishing media. 请使用水，干沙等合适的灭火介质。
Attention in Fire-extinguishing **灭火注意事项**	The firemen should put on antigas masks and full fire-fighting suits. 消防人员须佩戴防毒面具、穿全身消防服。

Section 6- Accidental Release Measure **第六部分-泄漏应急处理**	
Personal Precautions, protective equipment, and emergency procedures **个人预防措施、防护装备和应急程序**	Restrict access to area until completion of clean-up. Do not touch the spilled material. Wear adequate personal protective equipment as indicated in Section 8. 限制区域，直到完成清理工作。请勿触摸泄漏的材料。穿戴适当的个人防护设备，如第 8 部分所示。
Environmental Precautions **环境保护措施**	Prevent material from contaminating soil and from entering sewers or waterways. 防止物质污染土壤和进入下水道或水道。
Methods and materials for Containment **方法和材料控制**	Stop the leak if safe to do so. Contain the spilled liquid with dry sand or earth. Clean up spills immediately. 出于安全，阻止泄漏，可以用干沙或沙土来遏制液体泄露，立即清理泄漏。
Methods and materials for cleaning up **清理的方法和材料**	Absorb spilled material with an inert absorbent (dry sand or earth). Scoop contaminated absorbent into an acceptable waste container. Collect all contaminated absorbent and dispose of according to directions in Section 13. Scrub the area with detergent and water; collect all contaminated wash water for proper disposal. 用惰性吸收剂(干沙或沙土)吸收溢出的材料。污染物转移到可吸收废物的容器。收集所有受污染的吸收剂和根据第 13 部分的指令处置。用洗涤剂和水清洁污染区域,收集所有受污染的洗涤水进行适当处置。

Section 7- Handling and Storage **第七部分-操作处置与储存**	
Handling **操作**	Don't handing the batteries in manner that allows terminals to short circuit. Do not open, disassemble, crush or burn battery. 不要以让接头短路的方式对电池进行操作。不要打开，分解，挤压或燃烧电池。
Storage **储存**	if the battery is subject to storage for such a long term as more than 3 months, it is recommended to recharge the battery periodically. 如果电池长期存放超过 3 个月，建议定期对电池充电。 Long period storage: 25±5°C, 60±25%R.H 长期存储：25±5°C,相对湿度 60±25% Do not storage the battery haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects. 不要将电池随意丢在盒子或抽屉里，以免电池之间或电池与其他金属物质发生短路。 Keep out of reach of children.

	储存在小孩接触不到的地方。 Do not expose the battery to heat or fire. Avoid storage in direct sunlight. 不要将电池暴露在火源和热源附近，避免在阳光直射下存储。 Do not store together with oxidizing and acidic materials. 不要与氧化和酸性物质存储在一起。

Section 8 - Exposure Controls/Personal Protection **第八部分-接触控制和个体防护**	
Engineering Controls **工程控制**	No engineering controls are required for handling batteries that have not been damaged. Personal protective equipments for damaged batteries should include chemical resistant gloves and safety glasses. 操作未破损的电池，没有工程控制要求。对于破损的电池，个人防护用品应包括化学品防护手套和安全眼镜。
Personal Protective Equipment **个人防护设备**	Respiratory Protection: in case of battery venting, provide as much ventilation as possible. Avoid confined areas with venting cell cores. Respiratory Protection is not necessary under conditions of normal use. Not necessary under conditions of normal use. 呼吸保护：当电池排气阀打开时，应尽量使通风设备开至最大，避免将打开排气阀的电芯局限在某一狭窄空间内。正常操作条件下，呼吸保护是不必要的。正常使用条件下不必考虑。 Protective Gloves: Not necessary under conditions of normal use. 防护手套：正常使用条件下不必考虑。 Other Protective Clothing or Equipment: Not necessary under conditions of normal use. 其他防护服装或设备：正常使用条件下不必考虑。 Personal Protection is recommended for venting battery: Respiratory Protection, Protective Gloves, Protective Clothing and safety glass with side shields. 当电池排气阀打开时，应做好个人防护。呼吸防护，防护手套，防护服装和有护边的安全玻璃罩都是要准备的。

Section 9- Physical and Chemical Properties **第九部分-理化特性**
Appearance: Yellow **外观颜色：黄色**
Physical state: Solid **物理状态：**固体
Form: Prismatic **形状：棱形**
Melting Point ℃: >300℃ **熔点℃：**>300℃
Odor: Odorless **气味：**无气味
Solubility: Partial soluble in water **溶解度：**部分溶于水

Section 10 - Stability and Reactivity 第十部分-稳定性和反应性	
Stability **稳定性**	Stable under normal temperatures and pressures. 常温常压下稳定。
Conditions to Avoid **应避免的条件**	Heat above 70°C or Incinerate, Deform, Mutilate, Crush, Disassemble, Overcharge, Short circuit, Expose over a long period to humid conditions. 加热 70°C 以上或焚烧、变形、毁坏、粉碎、拆卸、过充电、短路，长时间暴露在潮湿的条件下。
Hazardous Decomposition Products **危害分解物**	Toxic Fumes, and may form peroxides. 有毒烟雾，并可能形成过氧化物。
Possibility of Hazardous Reaction **危险反应的可能性**	If leaked, forbidden to contact with strong oxidizers ,mineral acids ,strong alkalis, halogenated hydrocarbons. 如果发生泄露，避免与强氧化剂，无机酸，强碱，卤代烃接触。

Section 11 - Toxicological Information 第十一部分-毒理学信息	
Irritation **刺激**	In the event of exposure to internal contents, vapor fumes may be very irritating to the eyes and skin. 内部物质暴露的情况下，蒸汽烟雾可能对眼睛和皮肤产生刺激性。
Sensitization **致敏**	Not applicable. 不适用
Reproductive Toxicity **再生毒性**	Not applicable. 不适用
Toxicologically Synergistic Materials **协同材料毒理学**	Not applicable. 不适用

Section 12-Ecological Information 第十二部分-生态学信息	
General note **通用信息**	Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. 不允许未稀释或大量的产品到达地下水、水道或污水系统。
Anticipated behavior of a chemical product in environment/possible environmental impact/ ecotoxicity **化学产品在环境/可能的环境预 期的行为的一种生态毒性**	Not applicable. 不适用
Mobility in soil **土壤中移动性**	Not applicable. 不适用
Persistence and Degradability **持久性和降解性**	Not applicable. 不适用

Section 13 - Disposal Considerations 第十三部分-废弃处置	
Waste Treatment **废弃处置方法**	Recycle or dispose of in accordance with government, state & local regulations. 建议遵照国家和地方法规处置或再利用。
Attention for Waste Treatment **废弃注意事项**	Deserted batteries couldn't be treated as ordinary trash. Couldn't be thrown into fire or placed in high temperature. Couldn't be dissected, pierced, crushed or treated similarly. Best way is recycling. 废电池不能被当做普通垃圾。不能扔进火中或置于高温下。不能解体， 刺穿，破碎或类似的处理。最好的办法是回收利用。

Section 14 - Transport Information
第十四部分-运输信息

The battery shall be passed the test items of the UNITED NATIONS “Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria" section 38.3 and meet the requirements of UNITED NATIONS “Recommendations on the Transport of Dangerous Goods, model Regulations "
该电池必须通过联合国《关于危险货物运输的建议书 试验和标准手册》第 38.3 章节的测试项目和满足联合国《关于危险货物运输的建议书 规章范本》的要求。

The battery shall be 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;
该电池必须做好防短路保护。包括防止与同一封装内的导电材料接触可能导致的短路。

The packaging shall be adequate to avoid mechanical damage during transport, handling and stacking.
包装应足以避免在运输，处理和堆放期间的机械损坏。

The package must be handled with care and that a flammability hazard exists if the package is damaged. 包装必须小心处理，如果包装损坏，存在易燃危险。

With regard to transport, the following regulations are cited and considered:
关于运输，引用和考虑了以下法规：
-The international Civil Aviation Organization (ICAO) Technical Instructions.
-国际民用航空组织(ICAO)技术细则。
-The international Air transport Association (IATA) Dangerous Goods Regulations.
-国际航空运输协会(IATA)危险物品规则。
The battery can be shipped by air in according to Section II /Section IB of PACKING INSTRUCTION 965, or Section II of PACKING INSTRUCTION 966～967 of the 2021 IATA Dangerous Goods regulations 62th Edition.
该电池可以根据 2021 年 IATA 危险物品规则第 62 版包装指令 965 第 II 部分/第 IB 部分或包装指令 966～967 第 II 部分运输。
UN number: UN3480 or UN3481;
UN 编号：UN3480 或 UN3481:
UN Proper shipping name/Description (technical name): Lithium ion batteries or Lithium ion batteries packed with equipment or Lithium ion batteries contained in equipment;
UN 合适的运输名称/描述(技术名称)：锂离子电池或锂离子电池与设备包装在一起或锂离子电池内置于设备中;

UN Classification (Transport hazard class): Class 9 (PI965 Section IB) or N/A (PI965～967 Section II)
UN 分类(运输危险类别): 9 类危险品(包装指令 965 第 IB 部分)或者不适用(包装指令 965～967 第 II 部分)
UN packaging group: N/A
UN 包装类别：不适用

-The international Maritime Dangerous Goods (IMDG) Code.
-国际海运危险货物(IMDG)规则。
UN number: UN3480 or UN3481;
UN 编号：UN3480 或 UN3481；
UN Proper shipping name/Description (technical name): Lithium ion batteries or Lithium ion batteries packed with equipment or Lithium ion batteries contained in equipment;
UN 合适的运输名称/描述(技术名称)：锂离子电池或锂离子电池与设备包装在一起或锂离子电池内置于设备中;
UN Classification (Transport hazard class): N/A
UN 分类(运输危险类别)：不适用
UN packaging group: N/A
UN 包装类别：不适用
The battery is not restricted according to IMO IMDG Code (inc Amdt 39-18).
海运按照 IMO IMDG Code (inc Amdt 39-18)可按普通货物条件办理。
Need to meet the Special Provision: international maritime dangerous goods code (IMDG) 188, 230, 310, 348, 957;
需要符合这些特殊条款:国际海运危险货物规则(IMDG) 188, 230, 310, 348, 957;

Section 15 - Regulatory Information
第十五部分-法规信息

International Civil Aviation Organization (ICAO) Technical Instructions
ICAO 国际民用航空组织(ICAO)技术细则:
1.Unless be exempted according to ICAO TI, the lithium ion cell/batteries (UN 3480，PI 965) and lithium metal cell/batteries (UN 3090，PI 968) are forbidden for carriage on passenger aircraft.
除非依据《技术细则》的相关要求取得豁免，单独包装的锂离子电池（芯）(UN 3480,PI 965）和锂金属电池（芯）（UN 3090，PI 968）货物禁止使用客机运输。
2.Unless be approved according to ICAO TI, Lithium ion cells/batteries (UN 3480，PI 965) must be offered for transport at a state of charge (SoC) not exceeding 30% of their rated design capacity.
除非依据《技术细则》的相关要求取得特别批准，按照包装说明 965 要求运输的锂离子电池（芯）货物，交运时锂离子电池（芯）的荷电状态不得超过其额定容量的 30%。
3. A shipper is not permitted to offer for transport more than one (1) package prepared according to Section II of PI 965 and PI 968 in any single consignment. Not more than one (1) package prepared in accordance with Section II of PI 965 and PI 968 may be placed into an overpack.
在任何一票货物中，按照包装说明 965 第 II 节或 968 第 II 节要求运输的锂电池货物包装件不得超过一个。每个集合包装中所装的按照包装说明 965 第 II 节或 968 第 II 节要求运输的锂电池货物包装件不得超过一个。
4.Packages prepared according to Section II of PI 965 and PI 968 must be offered to the operator separately from other cargo and must not be loaded into a unit load device (ULD) before being offered to the operator.
按照包装说明 965 或 968 第 II 节要求运输的锂电池货物包装件或集合包装必须与其它货物分开交运，且在交运前不得装入集装器。

Section 16 - Additional Information
第十六部分-附加信息

Compile unit 编制单位：

Guangzhou CP-UP Certification Technology Service Co., Ltd.

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Revision 修订: 0

Other Information 其他信息：

The information above is believed to be accurate and represents the best information currently available to us. However, we 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 and investigation. This 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.

在我们看来上面的信息是准确的，这是我们目前能提供的最佳的信息。但是，对于这些信息，我们不对商品的性能做任何明示的或者暗示的保证，我们也不对使用这些信息造成的后果担负任何责任。用户应当自己调查研究后决定这些信息是否适用于他们的特定用途。尽管在该文档里提出了合理的预警，但是这仅仅只是给您做参考、考量和调查。这份安全技术说明书提供了安全处理和使用该产品的指南，但是它没有，也不能对所有可能发生的情景提出建议，所以您需要根据您对该产品的特定使用情况来决定是否需要其他的预防措施。

--End of report--

--报告结束--

TECHNICAL DATA SHEET

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

Product identifier

Product Name Lithium ion Battery

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use LITHIUM ION BATTERIES

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Name Huizhou Everpower Technology Co., Ltd.
Supplier Address NO.2 Building, NO.55 District, Zhongkai Hi-Tech Zone, Huizhou City, Guangdong Province, P.R.China

Supplier Phone Number Phone:+ 860752-5855980
Fax: +860752-5855980
Contact Phone: +860752-5855980

Supplier Email wenkong@htkjbattery.com

Emergency telephone number

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight %
Lithium Cobalt Oxide (CoLiO2)	12190-79-3	40%
2,4-Dinitrophenylhydrazine	119-26-6	6%
Copper	7440-50-8	9%
Aluminum	7429-90-5	7%
Graphite	7782-42-5	18%
Propylene carbonate	108-32-7	4%
Ethylene carbonate	96-49-1	4%
Dimethyl carbonate	616-38-6	4%
Phosphate(1-), hexafluoro-, lithium	21324-40-3	5%
1,1-Difluoroethylene polymer	24937-79-9	1%
Polyethylene	9002-88-4	1%
Nickel	7440-02-0	1%

3. FIRST AID MEASURES

First aid measures

General Advice First aid is upon rupture of sealed battery. Show this safety data sheet to the doctor in attendance

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. Do not rub affected area

Skin Contact Wash off immediately with soap and plenty of water for at least 15 minutes. In the case of skin irritation or allergic reactions see a physician. May cause an allergic skin reaction.

Inhalation Remove to fresh air. If symptoms persist, call a physician. Get medical attention immediately if symptoms occur.

Ingestion Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician.

Self-protection of the first aider Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wear personal protective clothing (see section 8)

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects Burning sensation. Coughing and/ or wheezing. Difficulty in breathing. Itching. Rashes. Hives.

Indication of any immediate medical attention and special treatment needed

Notes to Physician May cause sensitization of susceptible persons. Treat symptomatically

4. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

CAUTION: Use of water spray when fighting fire may be inefficient

Specific Hazards Arising from the Chemical

Product is or contains a sensitizer. May cause sensitization by skin contact.

Hazardous Combustion Products

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.

5. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation.Use

personal. protective equipment as required. Evacuate personnel to safe areas.

Other Information Refer to protective measures listed in Sections 7 and 8

Environmental Precautions

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

Methods for cleaning up Pick up and transfer to properly labeled containers

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

6. HANDLING AND STORAGE

Precautions for safe handling

Handling In case of rupture. Use personal protection equipment. Avoid contact with skin, eyes or clothing.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible Products Strong acids. Strong oxidizing agents. Strong bases.

7. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Lithium Cobalt Oxide 12190-79-3	TWA: 0.02 mg/m^3		
Graphite 7782-42-5	TWA: 2 mg/m^3 respirable fraction all forms except graphite fibers	TWA: 15 mg/m^3 total dust synthetic TWA: 5 mg/m^3 respirable fraction synthetic (vacated) TWA: 2.5 mg/m^3 respirable dust natural (vacated) TWA: 10 mg/m^3 total dust synthetic (vacated) TWA: 5 mg/m^3 respirable fraction synthetic TWA: 15 mppcf natural	IDLH: 1250 mg/m^3 TWA: 2.5 mg/m^3 respirable dust
Copper 7440-50-8	TWA: 0.2 mg/m^3 fume TWA: 1 mg/ mg/m^3 Cu dust and mist	TWA: 0.1 mg/m^3 fume TWA: 1 mg/m^3 dust and mist (vacated) TWA: 0.1 mg/m^3 Cu dust, fume, mist	IDLH: 100 mg/m^3 dust, fume and mist TWA: 1 mg/m^3 dust and mist TWA: 0.1 mg/m^3 fume
Aluminum 7429-90-5	TWA: 1 mg/m^3 respirable fraction	TWA: 15 mg/m^3 total dust TWA: 5 mg/m^3 respirable fraction (vacated) TWA: 15 mg/m^3 total dust (vacated) TWA: 5 mg/m^3 respirable fraction (vacated)	TWA: 10 mg/m^3 total dust TWA: 5 mg/m^3 respirable dust

		TWA: 5 mg/m^3 Al Aluminum	
Nickel 7440-02-0	TWA: 1.5 mg/m^3	TWA: 1 mg/m^3 (vacated) TWA: 1 mg/m^3	IDLH: 10 mg/m^3 TWA: 0.015 mg/m^3

8. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State Solid
Appearance Silver **Odor** Odorless
Color No information available **Odor Threshold** No information available

Property	**Values**	**Remarks/ Method**
pH	No data available	None known
Melting / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash Point	No data available	None known
Evaporation Rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		
Upper flammability limit	No data available	
Lower flammability limit	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Specific Gravity	No data available	None known
Water Solubility	No data available	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	0.00001	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	0.00001	None known
Explosive properties	No data available	
Oxidizing Properties	No data available	

Other Information

Softening Point No data available
VOC Content (%) No data available
Particle Size No data available
Particle Size Distribution

9. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization
Hazardous polymerization does not occur.

Conditions to avoid
None known based on information supplied.

Incompatible materials

Strong acids. Strong oxidizing agents. Strong bases.

Hazardous Decomposition Products
Carbon oxides.

10. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	Product does not present an acute toxicity hazard based on known or supplied information In case of rupture
Inhalation	Specific test data for the substance or mixture is not available. Corrosive by inhalation.(based on components).
Eye Contact	Specific test data for the substance or mixture is not available. Expected to be and irritant based on components. Irritating to eyes. May cause redness, itching, and pain. May cause temporary eye irritation.
Skin Contact	Specific test data for the substance or mixture is not available. Expected to be an irritant based on components. Irritating to skin. Prolonged contact may cause redness and irritation.
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed. (based on components).

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Graphite 7782-42-5	> 10000 mg/kg (Rat)	-	-
Nickel 7440-02-0	> 9000 mg/kg (Rat)	-	-

11. ECOLOGICAL INFORMATION

Ecotoxicity
Very toxic to aquatic life with long lasting effects.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Copper 7440-50-8	96h EC50: 0.031 - 0.054 mg/L (Pseudokirchneriella subcapitata) 72h EC50: 0.0426 - 0.0535 mg/L (Pseudokirchneriella subcapitata)	96h LC50: 0.0068 - 0.0156 mg/L (Pimephales promelas) 96h LC50: = 0.112 mg/L (Poecilia reticulata) 96h LC50: = 0.3 mg/L (Cyprinus carpio) 96h LC50: = 0.8 mg/L (Cyprinus carpio) 96h LC50: = 1.25 mg/L (Lepomis macrochirus) 96h LC50: = 0.052 mg/L (Oncorhynchus mykiss) 96h LC50: = 0.2 mg/L (Pimephales promelas) 96h LC50: < 0.3 mg/L (Pimephales promelas)		48h EC50: = 0.03 mg/L
Nickel 7440-02-0	72h EC50: = 0.18 mg/L (Pseudokirchneriella subcapitata) 96h EC50: 0.174 - 0.311 mg/L	96h LC50: > 100 mg/L (Brachydanio rerio) 96h LC50: = 1.3 mg/L (Cyprinus carpio) 96h LC50: = 10.4		48h EC50: > 100 mg/L 48h EC50: = 1 mg/L

	(Pseudokirchneriella subcapitata)	mg/L (Cyprinus carpio)		

Persistence and Degradability
No information available.

Bioaccumulation
No information available.

Other adverse effects
No information available.

12. DISPOSAL CONSIDERATIONS

Waste treatment methods
Disposal methods Should not be released into the environment.
Contaminated Packaging Dispose of in accordance with federal, state and local regulations.

US EPA Waste Number Dispose of contents/containers in accordance with local regulations.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Nickel 7440-02-0	(hazardous constituent - no waste number)	Included in waste streams: F006, F039		

California Hazardous Waste Codes 141

Chemical Name	California Hazardous Waste
Lithium Cobalt Oxide (CoLiO2) 12190-79-3	Toxic
Nickel 7440-02-0	Toxic powder Ignitable powder
Aluminum 7429-90-5	Ignitable powder
Copper 7440-50-8	Toxic

13. TRANSPORT INFORMATION

Note: The transportation of primary lithium cells and batteries is regulated by the International Civil Aviation Organization, International Air Transport Association, International Maritime Dangerous Goods Code and the US Department of Transportation. The batteries must meet the following criteria for shipment: 1. Air shipments must meet the requirements listed in Special Provision A45 of the International Air Transport Association Dangerous Goods Regulations. 2. Meet the requirements for the US Department of Transportation listed in 49 CFR 173.185. 3. The transport of primary lithium batteries is prohibited aboard passenger aircraft. Refer to the Federal Register December 15, 2004 (Hazardous Materials; Prohibited on the Transportation of Primary Lithium Batteries and Cells Aboard Passenger Aircraft; Final Rule) Lithium batteries shipped as"Lithium batteries", "Lithium batteries packed with equipment", or"Lithium batteries contained in equipment" may not be classified as"Dangerous Goods" when shipped in accordance with "special provision A45 of IATA-DGR" or "special provision 188 of IMO-IMDG Code"

DOT NOT REGULATED
Proper Shipping Name NON REGULATED
Hazard Class N/A
TDG Not regulated
MEX Not regulated
ICAO Not regulated

IATA	Not regulated
Proper Shipping Name	Not regulated
Hazard Class	N/A
IMDG/IMO	Not regulated
Proper Shipping Name	NON-REGULATED PER SP 188
Hazard Class	N/A
EmS No.	F-A, S-I
RID	Not regulated
ADR	Not regulated
AND	Not regulated

14. REGULATORY INFORMATION

International Inventories

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Lithium Cobalt Oxide (CoLiO2)	12190-79-3	40	0.1
Nickel	7440-02-0	1	0.1
Aluminum	7429-90-5	7	1.0
Copper	7440-50-8	9	1.0

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Copper 7440-50-8		X	X	
Nickel 7440-02-0		X	X	

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

Chemical Name	California Proposition 65
Nickel - 7440-02-0	Carcinogen

15. OTHER INFORMATION

Prepared By Huizhou Everpower Technology Co., Ltd.

Issuing Date
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Revision Note No information available

Disclaimer

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

End of Technical Data Sheet