材料安全数据表
Material Safety Data Sheet

货 物 名 称:	锂离子聚合物可充电电池
Name of Goods:	**Lithium Ion Polymer Rechargeable Battery**
委 托 单 位:	深圳市伏特能源股份有限公司
Commissioner:	**Shenzhen Safecloud Energy Inc.**

东莞市联鼎电子科技有限公司
Dongguan UTL Electronic Technology Co., Ltd.

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1. Identification of the product and supplier (产品和厂商信息)	
样品名称 **Name of goods**	锂离子聚合物可充电电池 Lithium Ion Polymer Rechargeable Battery
样品型号 **Type/Mode**	7842125 (Arcteryx model number 17394)
规格 **Ratings**	22.2V 3.7AH Input: 26~28V, 0.8A; Battery Capacity: 82 Watt-hours
委托单位 **Commissioned by**	深圳市伏特能源股份有限公司 Shenzhen Safecloud Energy Inc.
委托单位地址 **Commissioner address**	深圳市光明新区公常路大新新美工业园1栋 1st Building, Daxinxinmei Industrial Park, Guangming District, Shenzhen, China
制造商 **Manufacturer**	深圳市伏特能源股份有限公司 Shenzhen Safecloud Energy Inc.
制造商地址 **Manufacturer address**	深圳市光明新区公常路大新新美工业园1栋 1st Building, Daxinxinmei Industrial Park, Guangming District, Shenzhen, China
生产厂 **Factory**	深圳市伏特能源股份有限公司 Shenzhen Safecloud Energy Inc.
生产厂地址 **Factory address**	深圳市光明新区公常路大新新美工业园1栋 1st Building, Daxinxinmei Industrial Park, Guangming District, Shenzhen, China
鉴定依据 **Inspection according to**	EEC Directive 93/112/EC 联合国《关于危险品货物运输的建议书》 UN "Recommendations on the TRANSPORT OF DANGEROUS GOODS"
紧急联系电话 **Emergency telephone call**	+86-755-36697766
接样日期 / Receiving date: 2016-08-01	签发日期 / Issue date: 2016-08-17

Approved by: 批 准: **Reviewed by:** 审 核: 吴雄 **Tested by:** 主 检: 吴顺强

2. Composition/Information on Ingredient (成分/组成信息)

危险成分（化学名称） Hazardous Ingredients (Chemical Name)	含量及含量百分比(%) Concentration or concentration ranges (%)	CAS编号 CAS Number
钴酸锂/ Lithium Cobalt Oxide	32.40	12190-79-3
聚偏氟乙烯/ Polyvinylidene Fluoride(PVDF)	2.54	24937-79-9
铝/ Aluminium(Al)	8.95	7429-90-5
石墨/ Graphite	16.55	7782-42-5
丁苯橡胶/ Styrene-Butadiene Rubber(SBR)	0.34	9003-55-8
羧甲基纤维素/ Carboxymethyl cellulose	0.32	9000-11-7
铜/ Copper(Cu)	16.20	7440-50-8
六氟磷酸锂/ Lithium Hexafluorophosphate	15.50	21324-40-3
聚乙烯/ Polyethylene	6.55	9002-88-4
三元乙丙胶(尼龙) / Ethylene-Propylene-Diene Monomer	0.65	24937-16-4

3. Hazards Identification (主要危险性鉴定)

爆炸危险性 Explosive risk	该物品不属于爆炸危险品 This article does not belong to the explosion dangerous goods
易燃危险性 Flammable risk	该物品不属于易燃危险品 This article does not belong to the flammable material
氧化危险性 Oxidation risk	该物品不属于氧化危险品 This article does not belong to the oxidation of dangerous goods
毒害危险性 Toxic risk	该物品不属于毒害危险品 This article does not belong to the toxic dangerous goods
放射危险性 Radioactive risk	该物品不属于放射危险品 This article does not belong to the radiation of dangerous goods
腐蚀危险性 Mordant risk	该物品不属于腐蚀危险品 This article does not belong to the corrosion of dangerous goods
其他危险性 other risk	该物品为锂离子聚合物可充电电池，瓦时率为82Wh This article is the Lithium Ion Polymer Rechargeable Battery, Watt hour rate 82Wh

4. First aid measures (急救措施)

Eye

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin

Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid.

Inhalation

Remove from exposure and move to fresh air immediately. Use oxygen if available.

Ingestion

Give at least 2 glasses of milk or water. Induce vomiting unless patient is unconscious. Call a physician.

5. Fire-fighting measures (消防措施)

Flash Point: N/A.

Auto-Ignition Temperature: N/A.

Extinguishing Media: Water, CO2.

Special Fire-Fighting Procedures

Self-contained breathing apparatus.

Unusual Fire and Explosion Hazards

Cell may vent when subjected to excessive heat-exposing battery contents.

Hazardous Combustion Products

Carbon monoxide, carbon dioxide, lithium oxide fumes.

6. Accidental release measures (泄漏应急处理)

Steps to be Taken in case Material is Released or Spilled

If the battery material is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. Wipe it up with a cloth, and dispose of it in a plastic bag and put into a steel can. The preferred response is to leave the area and allow the battery to cool and vapors to dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerate.

Waste Disposal Method

It is recommended to discharge the battery to the end, to use up the metal lithium inside the battery, and to bury the discharged battery in soil.

7. Handling and storage (操作处置和储存)

The battery should not be opened, destroyed or incinerate, since they may leak or rupture and release to the environment the ingredients that they contain in the hermetically sealed container.
Do not short circuit terminals, or over charge the battery, forced over-discharge, throw to fire.

Do not crush or puncture the battery, or immerse in liquids.

Precautions to be taken in handling and storing

Avoid mechanical or electrical abuse. Storage preferably in cool, dry and ventilated area, which is subject to little temperature change. Storage at high temperatures should be avoided. Do not place the battery near heating equipment, nor expose to direct sunlight for long periods.

Other Precautions

The battery may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.

8. Exposure controls/personal protection (接触控制/个人保护)

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.

Ventilation

Not necessary under conditions of normal use.

Other Protective Clothing or Equipment

Not necessary under conditions of normal use.

Personal Protection is recommended for venting battery

Respiratory Protection, Protective Gloves, Protective Clothing and safety glass with side shields.

9. Physical and chemical properties (物理和化学特性)

Appearance: Prismatic shape

Ref. No.: 16PNS06115 01001

Odour: If leaking, smells of medical ether.

pH: Not applicable as supplied.

Flash Point: Not applicable unless individual components exposed.

Flammability: Not applicable unless individual components exposed.

Relative density: Not applicable unless individual components exposed.

Solubility (water): Not applicable unless individual components exposed.

Solubility (other): Not applicable unless individual components exposed.

10. Stability and reactivity (稳定性和反应活性)

Stability: Product is stable under conditions described in Section 7.

Conditions to avoid: Heat above 70°C or incinerate. Deform. Mutilate. Crush. Disassemble. Overcharge. Short circuit. Expose over a long period to humid conditions.

Materials to avoid: Oxidising agents, alkalis, water.

Hazardous Decomposition Products: Toxic Fumes, and may form peroxides.

Hazardous Polymerization: N/A.

If leaked, forbidden to contact with strong oxidizers, mineral acids, strong alkalies, halogenated hydrocarbons.

11. Toxicological information (毒理性资料)

Signs & symptoms: None, unless battery ruptures.

In the event of exposure to internal contents, vapour fumes may be very irritating to the eyes and skin.

Inhalation: Lung irritant.

Skin contact: Skin irritant

Eye contact: Eye irritant

Ingestion: Poisoning if swallowed

Medical conditions generally aggravated by exposure: In the event of exposure to internal contents, moderate to server irritation, burning and dryness of the skin may occur, Target organs nerves, liver and kidneys.

12. Ecological information (生态学资料)

Mammalian effects: None known at present.

Eco-toxicity: None known at present.

Bioaccumulation potential: Slowly Bio-degradable.

Environmental fate: None known environmental hazards at present.

13. Disposal consideration (废弃处置)

Do not incinerate, or subject cells to temperature in excess of 70°C, Such abuse can result in loss of seal leakage, and/or cell explosion. Dispose of in accordance with appropriate local regulations.

14. Transport information (运输信息)

Label for conveyance: Lithium Battery Label.

UN Number: UN3480

Packing Group: N/A

EmS No: 4.1-06

Marine pollutant: No

Proper Shipping name: Lithium ion batteries (including Lithium ion polymer batteries)

Hazard Classification: The goods shall be complied with the requirements of Section IB of Packing Instructions 965 of 57th DGR Manual of IATA (2016 edition), including the passing of the UN38.3 test. And also complies with the Special Provision 188 of IMDG CODE (Amdt.37-14) 2014 Edition.

15. Regulation information (法规信息)

Law information

《Dangerous Goods Regulations》

《Recommendations on the Transport of Dangerous Goods Model Regulations》

《International Maritime Dangerous Goods》

《Technical Instructions for the Safe Transport of Dangerous Goods》

《Classification and code of dangerous goods》

《Occupational Safety and Health Act》(OSHA)

《Toxic Substance Control Act》(TSCA)

《Consumer Product Safety Act》(CPSA)

《Federal Environmental Pollution Control Act》(FEPCA)

《The Oil Pollution Act》(OPA)

《Superfund Amendments and Reauthorization Act TitleⅢ (302/311/312/313)》(SARA)

《Resource Conservation and Recovery Act》(RCRA)

《Safety Drinking Water Act》(CWA)

《California Proposition 65》

《Code of Federal Regulations》(CFR)

In accordance with all Federal, State and local laws.

16. Other information (其他信息)

This information is not effective to all the batteries manufactured by Shenzhen Safecloud Energy Inc. This information comes from reliable sources, but no warranty is made to the completeness and accuracy of information contained. Dongguan UTL Electronic Technology Co., Ltd. doesn't assume responsibility for any damage or loss because of misuse of batteries. User's should grasp the correct use method and be responsible for the use of batteries.

Photos

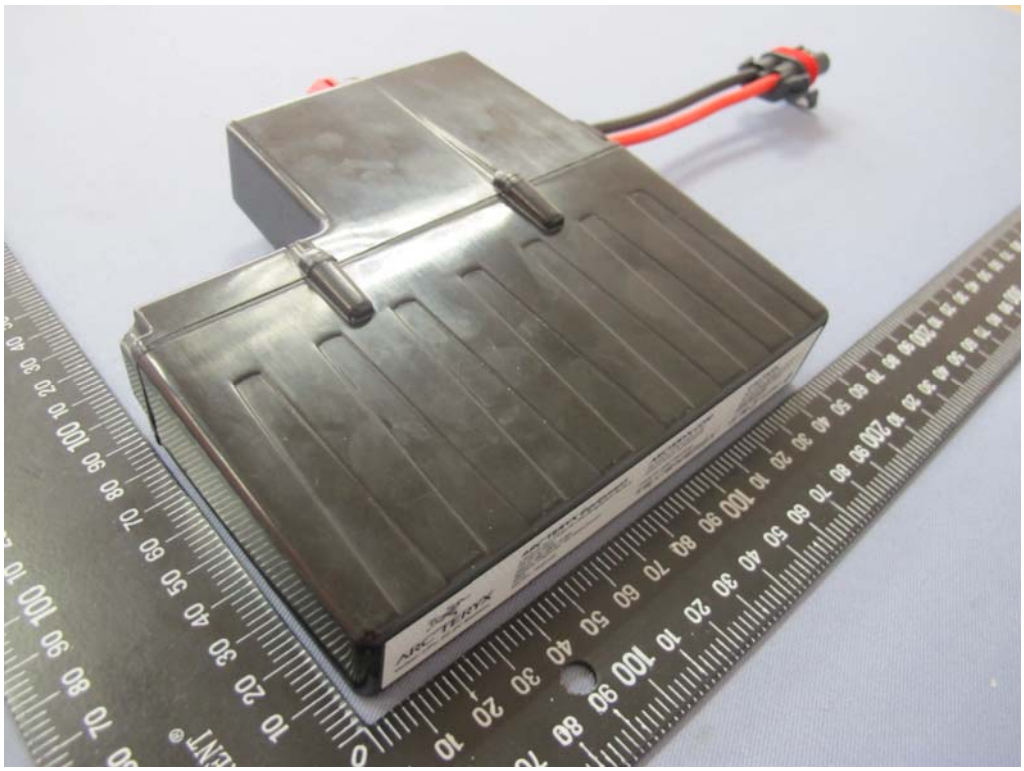

Figure 1 Top view of battery

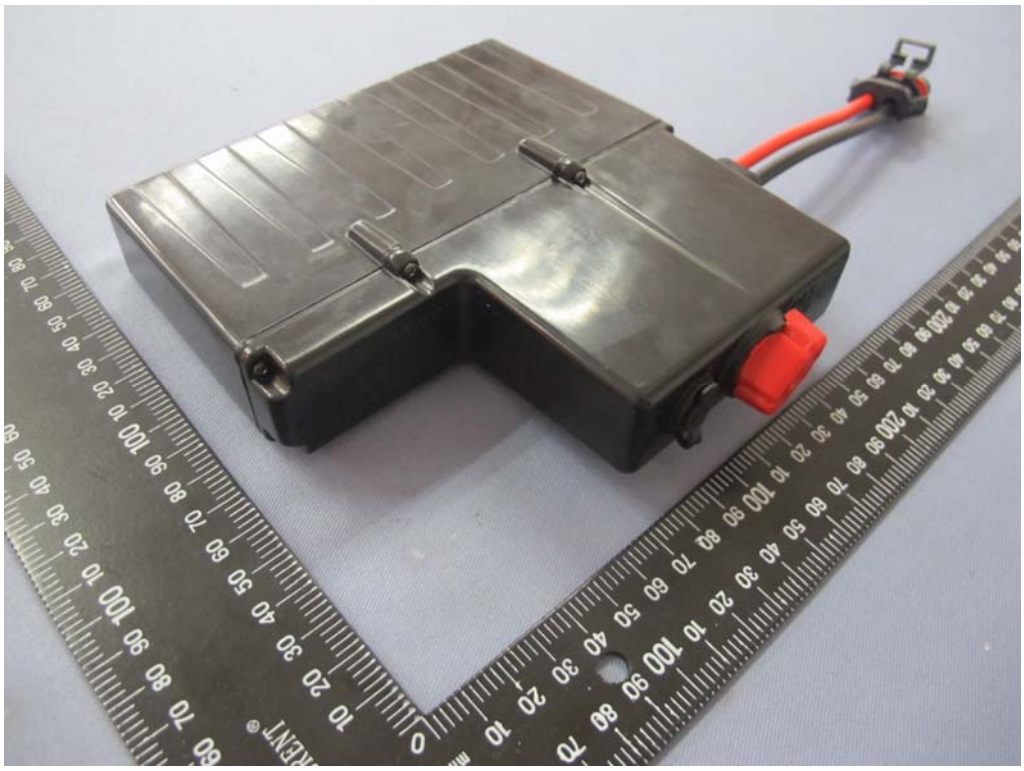

Figure 2 Bottom view of battery

Photos

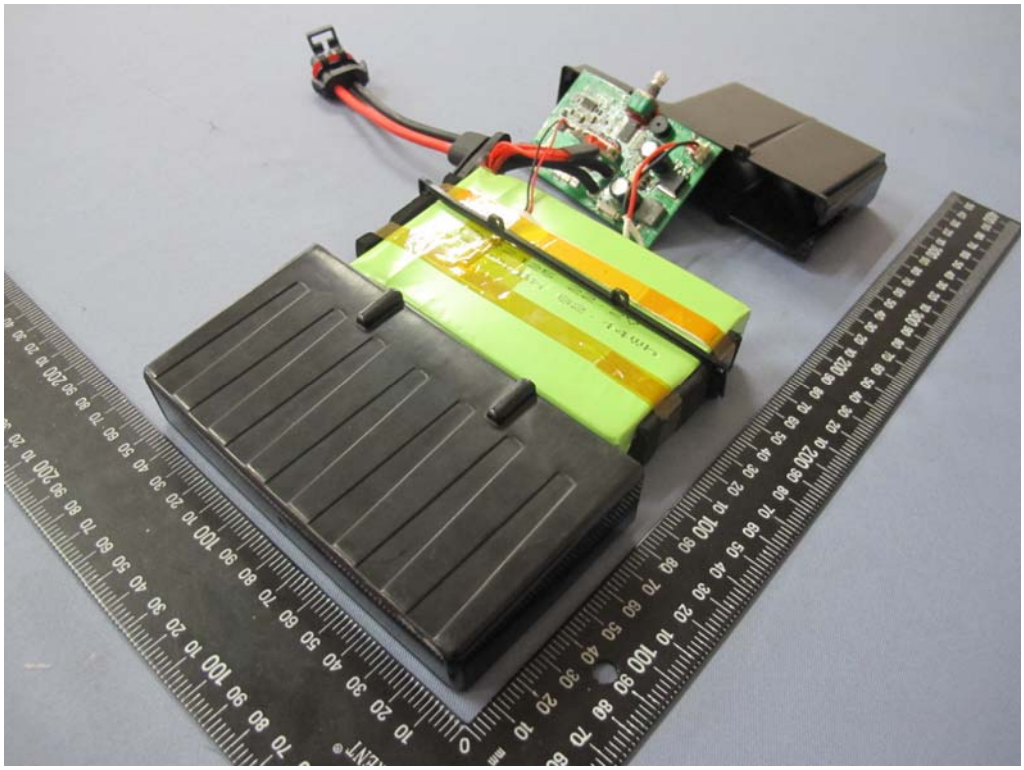

Figure 3 Internal view of battery

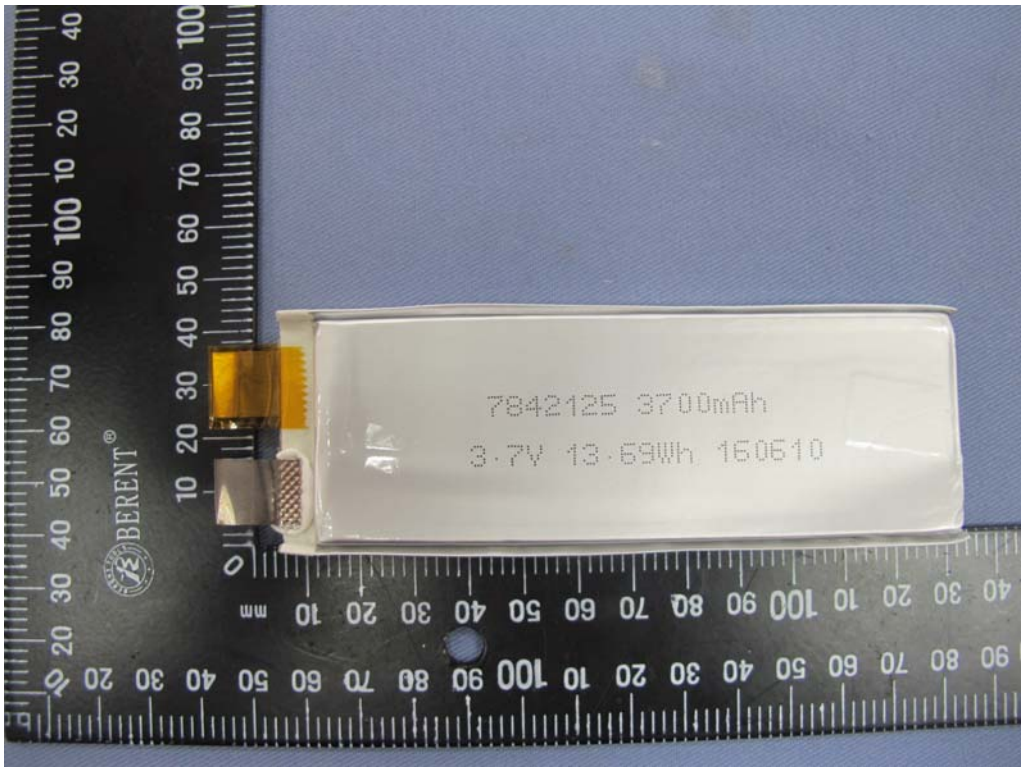

Figure 4 Top view of cell