

# EVE Energy Co., Ltd

NO.36,HuiFeng 7th Road, Zhongkai Hi-Tech Zone  
EVE Industrial Park, Huizhou, Guangdong,P.R.China,516006

TEL: +86 752 5790228

FAX: +86 752-5790052

Website: [www.evebattery.com](http://www.evebattery.com)

E-mail: [045988@evebattery.com](mailto:045988@evebattery.com)

## LITHIUM ION POLYMER BATTERY SAFETY DATA SHEET

### Section1-Chemical Product and Company Identification ( 化学品及企业标识 )

IDENTITY (As Used on Label and List)

Cell Model No: **P0933-LF**

Product Name: Secondary ( Rechargeable ) **3.7V** Li-ion Battery  
**700mAh, 2.59Wh**

Note: Blank spaces are not permitted if any item is not applicable or no information is available, the space must be marked to indicate that

Manufacturer' s Name:

EVE Energy Co., Ltd

Emergency Telephone Number

+86 752-5790052

Address (Number, Street, City State, and ZIP Code)

EVE Industrial Park, NO.38,HuiFeng 7th Road, Zhongkai  
Hi-Tech Zone, HuiZhou, Guangdong, China  
Guangdong,P.R.China,516006

Telephone Number for information

+86 752-5790052

Date of prepared and revision , Jan,1st ,2020

### Section2-Hazards Identification ( 危险性概述 )

Emergency overview: NIA

Classification according to GHS

Not a dangerous substance according to GHS.

Label elements

Hazard pictogram(s): No available

Signal word: No available

Hazard statement(s): No available

Precautionary statement(s):

Prevention: No available

~es~onse: No available

Disposal: No available

Environmental hazards: no relevant information.

Important symptoms: See Section 11 for more information.

### Section 3-Composition Information on Ingredients ( 成分/组成信息 )

Chemical Composition	CAS No.	Weight ( % )
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Cobalt lithium dioxide	12190-79-3	~28.69
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Graphite	7782-42-5	~20.35
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Aluminium	7429-90-5	~13.34
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polypropylene	9003-07-0	~13.68
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Lithium hexafluorophosphate(1-)	21324-40-3	~9.26
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copper	7440-50-8	~7.26
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PCM		~1.01
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Carbon black	1333-86-4	~0.84
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Benzene,ethenyl-,polymer with1,3- butadiene	9003-55-8	~0.53
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Poly(vinylidene fluoride)	24937-79-9	~0.78
Nickel	7440-02-0	~0.82
Sodium carboxymethyl cellulose	9004-32-4	~0.62
1,4-Benzenedicarboxylic acid polymer with [1,1'-biphenyl]-4,4'-diol, 1,2-ethanediol and 4-hydroxy benzoic acid	124417-30-7	~1.01
Polyethylene	9002-88-4	~0.57
Tin	7440-31-5	~0.92
glue	2308-69-9	~0.32

**Remark: The battery cell does not contain the lead, mercury, cadmium.**

### Section4 –First Aid Measures ( 急救措施 )

Description of first aid measures

General information No special measures required.

After eye contact.

Flush eyes with plenty of water for several minutes while holding eyelids open. Get medical attention if irritation persists.

After skin contact

Remove contaminated clothing and shoes. Immediately wash with water and soap and rinse thoroughly.

Wash clothing and shoes before reuse. If irritation occurs, get medical attention.

After inhalation

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

After swallowing

Do not induce vomiting. Get medical attention.

Personal protective equipment for first-aid responders: Not available.

Most important symptoms/effects, acute and delayed: Not available.

Indication of immediate medical attention and special treatment needed: Not available.

### Section5-Fire Fighting Measures ( 消防措施 )

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Suitable extinguishing media:

Use extinguishing agent suitable for local conditions and the surrounding environment .

Such as dry powder, CO<sub>2</sub>.

Unsuitable extinguishing media:

No further relevant information available,

Specific Hazards arising from the chemical:

Special hazards arising from the substance or mixture

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

Lithium ion batteries contain flammable electrolyte that may vent, ignite and

produce sparks when subjected to high temperature { > 150°C(302F) }, 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.

Specific protective actions for fire-fighters:

Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.

### Section6 –Accidental Release Measures ( 泄漏应急处理 )

Personal precautions:

Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation

Protective equipment:

No further relevant information available.

Emergency procedures:

Remove ignition sources, evacuate area. Sweep up using a method that does not generate dust. Collect as much of the spilled material as possible, placed the spilled material into a suitable disposal container. Keep spilled material out of sewers, ditches and bodies of water.

Environmental precautions:

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

Methods and materials for containment and cleaning up:

All waste must refer to the United Nations, the national and local regulations for disposal.

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

### Section7–Handling and Storage ( 操作处置与储存 )

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Precautions for safe handling:

Consumption of food and beverage should be avoided in work areas.

Wash hands with soap and water before eating, drinking.

Ground containers when transferring liquid to prevent static accumulation and discharge.

Information about fire and explosion protection

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

Conditions for safe storage, including any incompatibilities:

Requirements to be met by storerooms and receptacles

Store in a cool, dry, well-ventilated place.

Information about storage in one common storage facility

Keep away from heat, avoiding the long time of sunlight.

Further information about storage conditions

Keep container tightly sealed.

Specific and use

No further relevant information available.

### Section8 –Exposure Controls, Personal Protection ( 接触控制 / 个人防护 )

**Engineering control :**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Personal Protective Equipment

Respiratory protection: Wear suitable protective mask in order to reduce the respiratory system.

A large number of leakage, wear chemical protective clothing, including self-contained breathing apparatus.

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

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

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

### Section9 –Physical and Chemical Properties ( 理化特性 )

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Information on basic physical and chemical properties

Color: Silvery.

Physical State: Prismatic.

Odour: Not available.

Odour threshold: Not available.

pH: Not available.

Melting point/freezing point: Not available.

Initial boiling point and boiling range: Not available.

Flash Point: Not available.

Evaporation rate: Not available.

Flammability (solid, gas): Not available.

Explosion Limits (vol% In air): Not available.

Vapour pressure, kPa at 20C: Not available.

Vapor density: Not available.

Density/Relative density (water = 1): Not available.

Solubility(ies): Not available.

Partition coefficient: n-octanol/water: Not available.

Auto-ignition temperature: Not available.

Decomposition temperature: Not available.

Viscosity: Not available.

### Section 10 – Stability and Reactivity ( 稳定性和反应性 )

Reactivity: Data not available.

Chemical stability: Stable.

Possibility of hazardous reactions: Data not available.

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

Incompatibilities materials: Oxidizing agents, acid, base.

Hazardous decomposition products: Carbon monoxide, carbon dioxide, lithium oxide fumes.

### Section 11 – Toxicological Information ( 毒理学信息 )

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Skin corrosion / irritation: Not available.  
Serious eye damage/irritation: Not available.  
Respiratory or Skin sensitization: Not available.  
Germ Cell mutagenicity: Not available.  
Carcinogenicity: Not available.  
Reproductive toxicity: Not available.  
Specific target organ toxicity-Single exposure: Not available.  
Specific target organ toxicity-Repeated exposure: Not available.  
Aspiration hazard: Not available.  
Information on the likely routes of exposure: Not available.  
Eye: Not available.  
Skin: Not available.  
Ingestion: Not available.  
Inhalation: Not available.

### Section12 –Ecological Information ( 生态学信息 )

Ecological Toxicity: No further relevant information available.  
Persistence and degradability: No further relevant information available.  
Bioaccumulation Potential: No further relevant information available.  
Mobility In Soil: No further relevant information available.,  
Other adverse effects: No further relevant information available.

### Section13 –Disposal Considerations ( 废弃处置 )

Disposal methods:  
Recommendation:  
Consult state, local or national regulations to ensure proper disposal.  
Uncleaned packaging  
Recommendation: Disposal must be made according to official regulations.

### Section14 – Transport Information ( 运输信息 )

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### (A) For Lithium Ion Cells and Batteries

Separate lithium ion battery in transit to prevent short circuit. They should be packed in strong packaging for support during transport, and air transport capacity should be controlled under 30 percent

The products meet all the requirements of the IATA DGR 61st edition, under special provisions A99 including UN 38.3 test and 1.2m drop test. They can be shipped as "Danger" cargo in accordance with IATA Dangerous Good Regulations Section 1B of Packing Instruction 965 of IATA DGR item UN3480.

### (B) For Lithium Ion Cells and Batteries Contained in Equipment

The products meet all the requirements of the IATA DGR 61st edition, under special provisions A164 including UN 38.3 test. They can be shipped as "Not Restricted" cargo in accordance with IATA Dangerous Good Regulations Section II of Packing Instruction 967 of IATA DGR item UN3481, with total battery weight less than 5kg in one package.

### (C) For Lithium Ion Cells and Batteries Packed with Equipment.

The products meet all the requirements of the IATA DGR 61st edition, under special provisions A164 including UN 38.3 test and 1.2m drop test. They can be shipped as "Not Restricted" cargo in accordance with IATA Dangerous Good Regulations Section II of Packing Instruction 966 of IATA DGR item UN3481 with total battery weight less than 5kg in one package, and less than 2pcs in one small package..

### (D) The international maritime dangerous goods code.

1) Inspection method and procedure : IMO International maritime Dangerous Goods Code (2018 Edition )

2) The product and battery meets the requirements in IMDG CODE (Amdt.38-18) Special provision 188; it can be transported by sea under this Special provision

Transport condition is not restricted according to "special provision 188 of IMO-IMDG Code" ; "

## Section15 – Regulatory Information ( 法规信息 )

Note: This regulatory information included here should not necessarily all inclusive. None of the ingredients in this product are subjected to be reporting requirements of the CERCLA, the Clean Air Act and Clean Water Act (US). This product is not formulated with, nor do the manufacturing or formulation processes utilize an Class I or II Ozone depleting substances

## Section16– Other Information ( 其它信息 )

The recommendations and information contained in this MSDS have been compiled from Sources believed to represent the most current information available when the MSDS was Prepared. However, the manufacturer/distributor of this product provides any warranty. Guaranty or representation as to the correctness or sufficiency of this information. If this product is to be used in large amounts and /or an unusual manner, the user is obliged to determine what safety measures are appropriate, including the applicable and relevant workplace and environmental regulations pertaining to handling, use and disposal.

### DISCLAIMER OF LIABILITY

The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in anyway connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

# UN38.3 Lithium Battery (Cell) Test Summary

## UN38.3 锂电池(电芯)试验概要

No. : RZUN2019-0414-TS

Cell or Battery Information 电池/电芯信息		
Name 名称:	Rechargeable Lithium-ion Battery/锂离子聚合物电池	Other Physical Description: 其它相关描述:
Type/Model 型号:	P0933-LF 3.7V 700mAh 2.59Wh	
Color 颜色:	Silver/银色	
Shape 形状:	Prismatic/棱柱形	
Completed Battery/Cell Mass 电池/电芯整体质量	14.7g	
<input checked="" type="checkbox"/> Belongs to Lithium-ion Battery, the Wh rating is 属于锂离子电池/电芯, 瓦时数为	2.59Wh	
<input type="checkbox"/> Belongs to Lithium metal Battery, the Lithium content is 属于锂金属电池/电芯, 锂金属含量为		

Manufacturer Information 制造商信息			
Manufacturer: 制造商:	EVE Energy Co., Ltd. 惠州亿纬锂能股份有限公司		
Address: 地址:	NO.38, HuiFeng7thRoad, ZhongkaiHi-TechZone, HuiZhou, Guangdong, P. R. China. 广东省惠州市仲恺高新区惠风七路 38 号		
Telephone 电话:	0752-5848736	Email 电邮:	xurunzhi@evebattery.com
Website 网址:	www.evebattery.com		

Laboratory Information 检测实验室信息					
Laboratory: 检测实验室:	Vkan Certification & Testing Co., Ltd. 威凯检测技术有限公司				
Address: 地址:	No.3,Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou P. R. China. 中国 广州市科学城开泰大道天泰一路 3 号				
Tel 电话:	86-020-32293888	Email 电邮:	office@cvc.org.cn	Website 网址:	http://www.cvc.org.cn

UN38.3 Test conducted and results UN38.3 试验项目和结果					
Test Report ID 检测报告编号:	RZUN2019-0414	Date of Test Report 检测报告签发日期:	2019-03-04		
Manual of Test and Criteria version / amendment: 试验和标准手册版本号/修订版:	ST/SG/AC.10/11/Rev.6/Amend.1/Section 38.3				
List of Tests Completed 已完成的试验项目清单					
Test Items 试验项目	Pass 通过	Fail 失败	Reference to assembled battery testing requirement: 关于组合电池的试验要求:		
<input checked="" type="checkbox"/> T1 Altitude Simulation 高度模拟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Not applicable 不适用	
<input checked="" type="checkbox"/> T2 Thermal Test 热冲击	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Applicable, reference to 38.3.3 (f) 适用于 38.3.3 (f)	
<input checked="" type="checkbox"/> T3 Vibration 振动	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Applicable, reference to 38.3.3 (g) 适用于 38.3.3 (g)	
<input checked="" type="checkbox"/> T4 Shock 冲击	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Other executive standards/其他执行标准:		
<input checked="" type="checkbox"/> T5 External Short Circuit 外部短路	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
<input checked="" type="checkbox"/> T6 Impact/ Crush 撞击/ 挤压	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
<input checked="" type="checkbox"/> T7 Overcharge 过充电	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
<input checked="" type="checkbox"/> T8 Forced Discharge 强制放电	<input checked="" type="checkbox"/>	<input type="checkbox"/>			

**Note: The test results of this summary are only valid for the tested samples listed in test report RZUN2019-0414.**

注: 此摘要的测试结果仅对测试报告 RZUN2019-0414 中列出的测试样品有效

Title/职务: Manager/经理

Signatory/签发人:

黄 麒

Stamp of CVC  
CVC 印章:



LTC-R-4279-UN38.3-A2