



宁德时代新能源科技股份有限公司

Contemporary Amperex Technology Co., Limited

No.2 Xingang Road, Zhangwan Town, Jiaocheng Distric, Ningde City, Fujian Province, P.R of China, 352100

中国福建省宁德市蕉城区漳湾镇新港路 2 号 352100

MATERIAL SAFETY DATA SHEET

物料安全技术说明书

Issue: 2024-A

Doc No.: 2024-A-312

Issue Date: 11/9/2024

1. Product and enterprise identification

Product name	Lithium Ion Battery	CATL model name	L302C01
Manufacturer	Contemporary Amperex Technology Co., Limited	Estimated weight	217Kg
Rated capacity	302Ah	Rated voltage	115.92V
Address	No.2 Xingang Road, Zhangwan Town, Jiaocheng District, Ningde City, Fujian Province, China, 352100		
Contact number	+86-593-2583668		

2. Overview of Hazards

2.1 Overview of Emergency Situations

The lithium ion battery described in this safety technical specification is sealed, can withstand the temperature and pressure during normal use, and has no risks such as fire, explosion, leakage of dangerous chemicals, etc. Only when the integrity of the battery is damaged or the battery is subjected to mechanical, thermal or electrical abuse can the materials contained in the battery pose a risk.

2.2 Hazard Categories

See section 3 for component information

· Label element

N/A.

· Hazard statement

N/A.

:: Precautionary statements

N/A.

2.3 Health hazards: Battery electrolyte may irritate skin and eyes. If the battery breaks, the toxic gas volatilized by electrolyte will seriously damage the eyes, stimulate the respiratory tract and even cause respiratory allergy.

3. Composition information

3.1 Battery pack composition

Composition	%/wt.
Battery outer box, metal bracket and control system	35-45
Battery (see Table 3.2 below for battery composition)	55-65

3.2 Battery Composition Table

Raw materials or ingredients	CAS No./EC No.	Hazard pictogram and hazard	%/wt.
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		description	
Graphite	CAS # 7782-42-5 EC # 231-955-3	Not classified	7-25
Cobalt lithium manganese nickel oxide	CAS # 182442-95-1 EC # 695-690-9	Carc. 1B, H350; Acute Tox. 2, H330	5-40
poly(vinylidene fluoride)	CAS # 24937-79-9 EC # 607-458-6	Not classified	0-5
Carbon	CAS # 1333-86-4 EC # 215-609-9	Not classified	0-2
Copper	CAS # 7440-50-8 EC # 231-159-6	Not classified	10-12
Aluminum	CAS # 7429-90-5 EC # 231-072-3	Not classified	3-5
Carboxymethylcellulose sodium	CAS # 9004-32-4 EC # 618-378-6	Not classified	0-5
Electrolyte	NA	See 3.3 Table of Main Substances of Electrolyte	3-20

3.3 Electrolyte Composition Table

Raw materials or ingredients	CAS No./EC No.	Hazard pictogram and hazard description	%/wt.
Lithium hexafluorophosphate	CAS # 21324-40-3 EC # 244-334-7	Acute Tox. 3, H311 Skin Corr. 1A, H314 Acute Tox. 4, H302 STOT RE 1, H372	5-15
Dimethyl carbonate	CAS # 616-38-6 EC # 210-478-4	Infammable, H225	0-15
Ethylene carbonate	CAS # 96-49-1 EC # 202-510-0	Eye Irrit. 2, H319 Acute Tox. 4, H312	0-15
Diethyl carbonate	CAS # 105-58-8 EC # 203-311-1	Flam. Liq. 3, H226	0-15
Methyl ethyl carbonate	CAS # 623-53-0 EC # 613-014-2	Infammable, H225 Skin Irrit. 2, H315	0-15

4. First aid measures

4.1 Intake: The ingredients of the battery can cause severe chemical burns to the mouth, esophagus and gastrointestinal tract. If the battery or disassembled battery is ingested, do not induce vomiting or eat food or drink. Seek medical attention immediately.

4.2 Inhalation: The ingredients in the battery may cause respiratory allergy, and inhalation of steam may cause upper respiratory tract and lung allergy. Breathe fresh air and seek medical advice immediately.

4.3 Skin contact: The ingredients in the battery may cause skin allergies or chemical burns. In case of



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contact, remove contaminated clothing and wash skin with soap and water. In case of chemical burns or persistent irritation, seek medical advice immediately.

4.4 Eye contact: The ingredients in the battery may cause severe allergies and chemical burns. In case of contact, immediately open the upper and lower eyelids and rinse the eyes with clear water for more than 15 minutes until there is no chemical residue. Then seek medical advice immediately.

5. Fire protection measures

5.1 Fire extinguishing agent: Water or water mist, dry powder or carbon dioxide fire extinguisher

5.2 Particular Hazards

1. The voltage of a single cell in each box is 2.8~4.25V.
2. The electric box may fall and squeeze during transportation. If the internal battery core is punctured, metal short circuit, immersion, etc., it will lead to electric shock or fire.
3. When the electrolyte in the battery leaks, there will be the risk of explosion. In addition, improper disposal of electrolyte will also cause environmental pollution.
4. Dangerous decomposition products (such as electrolyte vapor or other harmful vapor) may be produced under the condition of battery ignition, overheating or overvoltage, and the vapor density is generally heavier than air, which will spread on the ground and may contact the ignition source through ventilation.

5.3 Precautions and Protective Measures for Fire Extinguishing

1. Give an alarm immediately when smoke or burning is found in the box. 2. Wear protective equipment, including respirators and masks. If water is used, raincoats, rain boots and insulating gloves should also be included. 3. Cut off the power. 4. Use solid fire extinguishing equipment. It is recommended to use fire extinguishing equipment in the following order: water or water mist, sand, fire blanket, dry powder and carbon dioxide fire extinguisher. 5. Exhaust smoke through fan or air circulation. 6. Dry and neutralize. Dry by fan. If water is used, neutralize it with calcium hydroxide. Dry by fan.

6. Accidental Release Measures

If the internal materials of the battery leak, the relevant leakage emergency measures are as follows:

6.1 Emergency procedures: Evacuate personnel from polluted areas to safe areas quickly, isolate them, and strictly restrict access. Cut off the fire source and leakage source as much as possible. **Personal protective measures and protective equipment:** It is recommended that emergency personnel wear self-contained positive pressure respirator and fire protection clothing, and do not directly contact with leakage.



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6.2 Environmental protection measures: When the battery pack is in water, there is a risk of weak electric shock; Hydrogen will be produced when electrolyzing water, so ventilation must be kept to prevent hydrogen from accumulating and exploding in confined space. If possible, take the battery or module out of the water and report to the local police.

6.3 Electrolyte cleaning method:

Minimal leakage: Absorbed with sand vermiculite or other inert materials collected and transported to an open area for burial evaporation or incineration.

Large amount of leakage: build a dike or dig a hole to accommodate it. Cover with foam to reduce steam hazards.

Transfer to tank truck or special collector with explosion-proof pump, and recycle or transport to waste treatment site for disposal.

7. Operational disposal and storage

The battery should be stored in a ventilated and cool place (below 30 °C), away from moisture, and there is enough space between the battery and the wall; Batteries should be kept away from heat sources, open flames, food and beverages; Do not store batteries above 55 °C or below -30 °C. Storing the battery at high temperature will shorten the life of the battery, while storing the battery at higher temperature (such as 100 °C) may lead to the emission of flammable liquids and gases in the battery; Batteries should be kept away from strong oxidants and acids.

7.1 Operational Considerations

1 Do not carry out excessive physical impact or vibration on the battery.

2 Short circuit should be avoided. A long short circuit can cause the battery to lose energy quickly, which can generate enough heat to burn the shell.

3 The sources of short circuit include the random placement of batteries in bulk containers or various metal objects used in battery assembly on equipment. In order to minimize the risk of battery short circuit, battery protection measures should be provided during battery transportation and storage.

4 Do not disassemble or deform the battery.

5 When the battery is broken, do not contact it with water.

7.2 Storage Considerations

1 When the lithium ion battery is stored for a long time, its charging capacity should be between 25% and 75%.

2 It should be stored in a dry, cool and well ventilated area.

Excessive temperature will cause a series of problems, such as leakage or rust.

Do not put the battery in an open flame.



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8. Contact control and personal protection

8.1 Occupational Exposure Limits: N/A

8.2 Biological Limit: N/A

8.3 Monitoring method: N/A

8.4 Engineering control: Engineering control is not required under normal operation. In case of extrusion or collision, it is judged that there may be electric leakage, and insulating gloves are needed. In case of electrolyte leakage, increase ventilation and use self-contained full-face breathing equipment.

8.5 Personal Protective Equipment: Needed in case of battery fire or explosion, without protection when the battery is in normal use.

Respiratory system protection: self-contained full-face breathing equipment.

Hand protection: Insulated gloves.

Eye protection: self-contained full-face breathing equipment.

Skin and body protection: Chemical protective clothing.

9. Physical and chemical properties

Status	solid
pH	N/A
Color	N/A
Odor	none
Flash point	N/A
Explosion limit	N/A
Vapor pressure	N/A
Vapor density	N/A
Boiling point	N/A
Solubility	Insoluble in water
Specific gravity	N/A
density	N/A
Melting point	N/A
Freezing point	N/A
Status	solid

10. Stability and reactivity

10.1 Stability: Stable under normal conditions.

10.2 Reactivity: When the battery is exposed to high temperature, extrusion, deformation or external short circuit may lead to the discharge of harmful gases and volatile organic compounds. When the battery breaks, it will react with water to form hydrogen fluoride gas.



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10.3 Conditions to be avoided: N/A

10.4 Prohibited Compounds: N/A

11. Toxicological information

There is no available data for the product itself, and the information of its internal battery materials is as follows:

11.1 Acute toxicity: No information is currently available.

11.2 Irritation: The electrolyte contained in the battery will irritate the eyes, and if it comes into contact with the skin or mucous membrane for a long time, it will also cause irritation;

11.3 Sensitization: The electrolyte contained in the battery may stimulate the nervous system of respiratory organs.

11.4 Carcinogenicity: No information is currently available.

11.5 Reproductive toxicity: No information is currently available.

11.6 Teratogenicity: No information is currently available.

11.7 Mutagenicity: No information is currently available.

11.8 Specific target organ systemic toxicity: No information is currently available.

12. Ecological information

If the battery is to be scrapped, it should be selected and disposed of by a professional company. After the battery is properly handled, it will not cause harm to the environment. However, the internal components of the battery pack should not be allowed to enter the ocean, and should not be discharged into rivers, waste water or groundwater.

12.1 Ecotoxicity: No information is currently available.

12.2 Persistence and degradability: No information is currently available.

12.3 Biological abs or bioaccumulation: No information is currently available.

12.4 Migration in soils: No information is currently available.

13. Waste disposal

13.1 Waste chemicals: The battery should be fully discharged before disposal. Battery poles should be covered to prevent short circuit. Batteries need to be disposed of in accordance with applicable laws.

13.2 Contaminated packaging materials: Dispose of according to national or local laws and regulations.

13.3 Precautions for abandonment: Dispose of according to national or local laws and regulations.

14. Transport information

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Land transportation: International Carriage of Dangerous Goods by Road (ADR), Regulations on International Carriage of Dangerous Goods by Rail (RID).

Maritime transport: International Maritime Dangerous Goods Code (IMDG CODE).

Air transport: International Civil Aviation Organization-Technical Directive for Safe Transport of Dangerous Goods by Air (ICAO-TI) and International Air Transport Association-Dangerous Goods Regulations (IATA-DGA).

Inland waterway transport: Regulation on the Safety Supervision and Control of Dangerous Goods on Ships, European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN).

Others: Model Regulations of the United Nations Recommendations on the Transport of Dangerous Goods (TDG), Manual of Tests and Criteria of the Model Regulations of the Recommendations on the Transport of Dangerous Goods

Mode of transport	Land transportation (ADR/RID)	Sea transportation (IMDG)	Shipping (ICAO/IATA)
UN number	3480/3481	3480/3481	3480/3481
Shipping name	Lithium ion battery pack	Lithium ion battery pack	Lithium ion battery pack
Transportation hazard level	9	9	9
Packaging category	II		
Packaging requirements	/	P 903	PI 965-967
Label			
Matters needing attention	<ol style="list-style-type: none"> The transported batteries need to pass the UN38.3 experimental test. The package shall withstand a 1.2 m drop test of any orientation without damaging the batteries in the package, changing the position of the batteries in the package so that they contact each other and no batteries leak out of the package. Cells must not be damaged or mishandled. If they are damaged, they must be isolated, inspected and repackaged. Comply with the special provisions of international regulations on the packaging of lithium batteries or lithium battery packs. 		

15. Regulatory information

15.1 United States Federal Regulations

Occupational Safety and Health Act (OSHA): Employers/enterprises must ensure that lithium batteries, chargers and lithium-ion-related equipment used in the workplace are tested according to appropriate testing



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standards (such as UL 2054) and certified by testing institutions with NRTL (Nationally Accredited Testing Laboratory) qualification.

Toxic Substances Control Act (TSCA): This product is not listed.

Clean Air Act (CAA): This product is not included.

Clean Water Act (CCW): This product is not listed.

15.2 Canadian Regulations

Workplace Hazardous Goods Information System (WHMIS): This product is not included.

Hazardous Products Act (HPA): This product is not listed.

Canadian Environmental Protection Law (CEPA): This product is not listed.

15.3 German regulations

Regulations on facilities for treating harmful substances to water (AwSV): The hazard grade of electrolyte to water of this product is WGK2 (hazardous to water).

15.4 EU Regulations

It does not contain substances on REACH candidate list.

No REACH appendix XVII/XIV substances.

15.5 International Regulations

Australian List of Existing Chemicals (AICS): This product is not included.

List of Existing Chemical Substances in China (IECSC): This product is not listed.

List of Existing Chemical Substances in Japan (ENCS): This product is not listed.

List of Existing Chemical Substances in Korea (ISHL): This product is not listed.

New Zealand List of Existing Chemicals (NZLOC): This product is not listed.

16. Other information

16.1 Charging

The battery can be recharged for many times. Please use the original battery charger. Do not use modified or damaged battery chargers. When the charging exceeds the specified charging time, the charging can be stopped to prevent the battery from overcharging. The charging temperature should be at -20 C-45 C (from the safety point of view, there is no experience value during fast charging), and there is normal heating phenomenon during battery charging.

16.2 Charging Voltage and Current

When the voltage exceeds the specified value, it is limited by the internal protection circuit of the battery. If the protection circuit is damaged, please stop using it. Please charge and discharge at the specified voltage and current. If the battery voltage drops below the specified minimum voltage, please stop using it.

16.3 Warning



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Use the charger provided by the equipment manufacturer and use it according to the operation instructions. It is forbidden to turn on the battery, close to the fire source, and short circuit, which may cause fire, explosion, leakage and personal injury.

16.4 Declaration

The information contained here was completed without any authorization. This information is only used as a reference, and users should customize independent systems according to the complete and reliable information they actually collect, so as to ensure proper use and ensure the safety and health of employees and customers.

16.5 Revise version number

CATL V2 2024/3/25



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1. 产品及企业标识

产品名称	锂离子电池	CATL 产品型号	L302C01
制造商	宁德时代新能源科技股份有限公司	估计重量	217Kg
额定容量	302Ah	额定电压	115.92V
地址	中国福建省宁德市蕉城区漳湾镇新港路 2 号, 352100		
联系电话	+86-593-2583668		

2. 危险性概述

2.1 紧急情况概述

本安全技术说明书中描述的锂离子电池是密封的,能够承受正常使用过程中的温度和压力,且无火灾、爆炸、危险化学品物质泄漏等风险。只有当电池的完整性受损或电池受到机械、热或电滥用等情况时,电池中包含的材料才可能构成风险。

2.2 危险性类别

见部分 3 成分信息

• 标签要素

N/A.

• 危害说明

N/A.

• 防范说明

N/A.

2.3 健康危害: 电池的电解液可能会刺激皮肤和眼睛。若电池破裂,电解液挥发的有毒气体会严重损害眼睛,并对呼吸道产生刺激,甚至引起呼吸道过敏。

3. 成分信息

3.1 电池包组成

组成成分	%/wt.
电池外箱,金属支架及控制系统	35-45
电池(电池的组成见下表 3.2)	55-65

3.2 电池成分表

原料或配料	CAS No./EC No.	危害象形图及危害说明	%/wt.
石墨	CAS# 7782-42-5 EC# 231-955-3	未被归类	7-25

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镍钴锰酸锂	CAS# 182442-95-1 EC# 695-690-9	Carc. 1B, H350; Acute Tox. 2, H330	5-40
聚偏二氟乙烯	CAS# 24937-79-9 EC# 607-458-6	未被归类	0-5
乙炔炭黑	CAS# 1333-86-4 EC# 215-609-9	未被归类	0-2
铜	CAS# 7440-50-8 EC# 231-159-6	未被归类	10-12
铝	CAS# 7429-90-5 EC# 231-072-3	未被归类	3-5
羧甲基纤维素钠	CAS# 9004-32-4 EC# 618-378-6	未被归类	0-5
电解液	NA	见 3.3 电解液主要物质成分表	3-20

3.3 电解液成分表

原料或配料	CAS No. /EC No.	危害象形图及危害说明	%/wt.
六氟磷酸锂	CAS# 21324-40-3 EC# 244-334-7	Acute Tox. 3, H311 Skin Corr. 1A, H314 Acute Tox. 4, H302 STOT RE 1, H372	5-15
碳酸二甲酯	CAS# 616-38-6 EC# 210-478-4	Inflammable, H225	0-15
碳酸乙烯酯	CAS# 96-49-1 EC# 202-510-0	Eye Irrit. 2, H319 Acute Tox. 4, H312	0-15
碳酸二乙酯	CAS# 105-58-8 EC# 203-311-1	Flam. Liq. 3, H226	0-15
碳酸甲乙酯	CAS# 623-53-0 EC# 613-014-2	Inflammable, H225 Skin Irrit. 2, H315	0-15

4. 急救措施

4.1 摄入: 电池的成分可以导致嘴、食道、胃肠道严重的化学烧伤, 如果摄入电池或拆开的电池, 不要诱导呕吐或吃食物或饮料。应立刻就医。

4.2 吸入: 电池里的成分可能会引起呼吸道过敏, 吸入蒸汽可能引起上呼吸道和肺过敏。应马上呼吸新鲜空气并就医。

4.3 皮肤接触: 电池里的成分可能会引起皮肤过敏或化学烧伤。万一接触, 除去污染的衣物并用肥皂和水清洗皮肤, 如果发生化学烧伤或持续刺激, 立刻就医。

4.4 眼睛接触: 电池里的成分可能会引起严重的过敏和化学烧伤。万一接触, 立刻翻开上下眼睑, 用清水冲洗眼睛 15 分钟以上, 直到没有化学物质残留。然后立刻就医。

5. 消防措施

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5.1 灭火剂：水或水雾、干粉或二氧化碳灭火器

5.2 特别危险性

- 每个箱体中的单个电芯的电压在 2.8~4.25V。
- 电箱在运输过程中，可能会掉落、挤压。如果内部电芯出现刺破、金属短路，浸水等，导致触电或起火。
- 电芯中的电解液泄漏时，会有爆炸的风险。另外，电解液处置不当也会造成环境污染。
- 电池着火、过热或过电压条件下都可能会产生具有危险性的分解产物（如电解液蒸汽或其他有害蒸汽），且蒸汽密度一般重于空气重，会在地面上传播，并可能通过通风接触点火源。

5.3 灭火注意事项及防护措施

- 发现箱体冒烟或燃烧时立即报警。
- 穿着防护用品，包括呼吸器、口罩，如果用水还应包括雨衣、雨鞋、绝缘手套等。
- 切断电源。
- 使用固体类灭火器材，推荐按以下顺序使用灭火器材：水或水雾、沙、灭火毯、干粉、二氧化碳灭火器。
- 通过风扇或空气流通排烟。
- 干燥、中和。通过风扇干燥，如果使用了水用氢氧化钙中和，通过风扇干燥。

6. 泄露应急措施

如果电池的内部材料发生泄漏，相关的泄漏应急措施如下：

6.1 应急程序：迅速将人员从污染区疏散到安全区域，并进行隔离，严格限制出入。尽可能切断火源和泄漏源。个人防护措施、防护设备：建议应急处理人员戴自给正压式呼吸器，穿消防防护服，不要直接接触泄漏物。

6.2 环境保护措施：当电池组在水中时，有微弱电击的风险；在电解水时会产生氢气，必须保持通风以防止氢气集聚，防止氢气在密闭空间爆炸。如果可以，将电池或模组从水中拿出然后向当地警方报警。

6.3 电解液清理方法：

少量泄漏：用沙土、蛭石或其它惰性材料吸收，收集运至空旷的地方掩埋、蒸发、或焚烧。

大量泄漏：构筑围堤或挖坑收容。用泡沫覆盖，降低蒸气危害。用防爆泵转移至槽车或专用收集器内，回收或运至废物处理场所处置。

7. 操作处置和储存

电池应存放在通风凉爽的地方（30℃以下），远离湿气，电池与墙壁之间有足够的空间；电池应远离热源、明火、食品和饮料；不要将电池储存在 55℃以上或-30℃以下。在高温下储存电池会缩短电池的寿命，而在更高的温度（如 100℃）下储存电池可能会导致电池中易燃液体和气体的排放；电池应远离强氧化剂和酸。



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7.1 操作注意事项

- 请勿对电池进行过度的物理冲击或振动。
- 应避免短路。长时间的短路会导致电池迅速失去能量，可以产生足够的热量将外壳烧着。
- 短路的来源包括将电池胡乱放在散装容器中、或在设备上进行电池装配时使用的各种金属物品。为了将电池短路的风险降低到最小，在电池运输和存储时，应该提供电池的保护措施。
- 不能将电池拆解或使电池变形。
- 电芯破裂时，不要将其接触到水。

7.2 存储注意事项

- 当锂离子电池长时间储存时，其充电容量应在 25%和 75%之间。
- 应储存在干燥凉爽且通风较好的区域。
- 温度过高会导致电池发生一系列的问题，如泄漏或生锈。
- 请勿将电池置于明火中。

8. 接触控制和个体防护

8.1 职业接触限值: N/A

8.2 生物限值: N/A

8.3 监测方法: N/A

8.4 工程控制: 正常运行情况下不需要工程控制。如遇挤压、碰撞，判断可能存在漏电情况，需要带绝缘手套。若电解液泄漏，需增加通风并使用自给式全脸呼吸设备。

8.5 个体防护设备: 在电池起火或发生爆炸时需要，在电池正常使用时无需防护。

呼吸系统防护: 自给式全脸呼吸设备。

手部防护: 绝缘手套。

眼部防护: 自给式全脸呼吸设备。

皮肤和身体防护: 化学防护服。

9. 理化特性

状态	固体
pH	N/A
颜色	N/A
气味	无
闪点	N/A
爆炸极限	N/A
蒸气压力	N/A
蒸气密度	N/A
沸点	N/A



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溶解性	不溶于水
比重	N/A
密度	N/A
熔点	N/A
凝固点	N/A
状态	固体

10. 稳定性和反应性

10.1 稳定性: 在正常条件下稳定。

10.2 反应性: 当电池暴露于高温下时, 挤压、变形或外短路都可能会导致排出有害气体和挥发性有机物。当电池破裂, 遇水会反应生成氟化氢气体。

10.3 应避免的条件: N/A

10.4 禁配物: N/A

11. 毒理学信息

产品本身没有可用的数据, 其内部电池材料的信息如下:

11.1 急性毒性: 目前无可用信息。

11.2 刺激性: 电池中所含的电解液会刺激眼睛, 若长期接触皮肤或粘膜也会造成刺激;

11.3 致敏性: 电池中所含的电解液可能会刺激呼吸器官的神经系统。

11.4 致癌性: 目前无可用信息。

11.5 生殖毒性: 目前无可用信息。

11.6 致畸性: 目前无可用信息。

11.7 致突变性: 目前无可用信息。

11.8 特异性靶器官系统毒性: 目前无可用信息。

12. 生态学信息

如果电池要报废, 那么应当由专业公司进行挑选和处理。电池进行妥善处理, 不会对环境造成危害。但不能让电池包内部组件进入海洋, 并避免排放到河沟、废水或地下水中。

12.1 生态毒性: 目前无可用信息。

12.2 持久性和降解性: 目前无可用信息。

12.3 生物腹肌或生物累积性: 目前无可用信息。

12.4 土壤中的迁移性: 目前无可用信息。

13. 废弃处理

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13.1 废弃化学品：电池在处置前应完全放电。电池两极应加盖以防止短路。需根据适用的法律处理电池。

13.2 污染包装物：按国家法规或地方法规处置。

13.3 废弃注意事项：按国家法规或地方法规处置。

14. 运输信息

陆运：《国际公路危险货物运输》（ADR），《国际铁路危险货物运输规定》（RID）。

海输：《国际海上危险货物规则》（IMDG CODE）。

航输：《国际民用航空组织-航空危险货物安全运输技术指令》（ICAO-TI），《国际航空运输协会-危险货物条例》（IATA-DGA）。

内河运输：《船载危险品安全监督和管理条例》，《欧洲国际内陆水道运输危险货物协定》（ADN）。

其他：《联合国关于危险货物运输建议书 规章范本》（TDG）、《关于危险货物运输的建议书规章范本 试验和标准手册》

运输方式	陆运 (ADR/RID)	海运 (IMDG)	空运 (ICAO/IATA)
UN 编号	3480/3481	3480/3481	3480/3481
运输名称	锂离子电池组	锂离子电池组	锂离子电池组
运输危险等级	9	9	9
包装类别	II		
包装要求	/	P 903	PI 965-967
标签			
注意事项	<ol style="list-style-type: none">运输的电芯需要通过 UN38.3 实验测试。包装件须能承受任何取向的 1.2m 的跌落试验，而不损坏包装件内的电池，也没有改变其中电池的位置导致电池之间互相接触，没有电池自包装件中漏出。不能损坏或错误处理电芯，如果电芯损坏，必须隔离、检查和重新包装。要遵守国际规章中对锂电池或锂电池组包装的特殊规定。		

15. 法规信息

15.1 美国联邦法规

《职业安全与健康法》（OSHA）：雇主/企业必须确保在工作场所使用的锂电池、充电器和锂离子相关设备按照适当的测试标准（如 UL 2054）进行测试，并由具有 NRTL（国家认可的测试实验室）资格的测试机构进行认证。



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有毒物质控制法 (TSCA): 该产品未被列入。

清洁空气法 (CAA): 本产品未被列入。

清洁水法 (CCW): 本产品未被列入。

15.2 加拿大法规

工作场所危险品信息系统 (WHMIS): 本产品未被列入。

危险产品法 (HPA): 本产品未被列入。

加拿大环境保护法 (CEPA): 本产品未被列入。

15.3 德国法规

《关于处理对水有害物质设施的条例》(AwSV): 本产品电解液对水的危害等级为 WGK2 (对水有危害)。

15.4 欧盟法规

不含 REACH 候选清单上的物质。

不含 REACH 附录 XVII/XIV 物质。

15.5 国际法规

《澳大利亚现有化学物质名录》(AICS): 本品未列入。

《中国现有化学物质名录》(IECSC): 该产品未被列入。

《日本现有化学物质名录》(ENCS): 该产品未被列入。

《韩国现有化学物质名录》(ISHL): 该产品未被列入。

《新西兰现有化学物质名录》(NZLOC): 该产品未被列入。

16. 其他信息

16.1 充电

本电池可多次重复充电。请使用原装电池充电器。不要使用改装或损坏的电池充电器。当充电超过规定的充电时间可停止充电, 来防止电池过充。充电温度应在 -20°C - 45°C , (从安全角度考虑, 没有快充时的经验值), 电池充电过程中有正常的发热现象。

16.2 充电电压和电流

当电压超过规定的值后受到电池内部保护电路限制。如果出现保护电路受损情况, 请停止使用。请在规定的电压和电流下充、放电。如果电池的电压下降到低于规定的最低电压时, 请停止使用。

16.3 警告

应使用设备制造商提供的充电器并按操作指南使用。禁止将电池打开, 靠近火源, 以及短路, 可能引起着火、爆炸、泄漏造成人身伤害。

16.4 声明

这里包含的信息是没有任何授权下完成的。该信息只作为一个参考, 使用者应该根据自己实际搜集的完整可靠的信息来定制独立的体系, 从而确保能够适当的使用, 并保障员工和顾客的安全及健康。



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16.5 修改版本号

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