



Test Report

No. NGBEC2200565901

Date: 18 Apr 2022

Page 1 of 4

Client Name : NINGBO YIYANG NEW ENERGY TECHNOLOGY CO., LTD

Client Address : LUOCHIMIAO INDUSTRIAL ZONE, CHEN HUANGCUN, YUNLONG TOWN, YINZHOU DISTRICT,
NINGBO CITY

Sample Name : Li-ion battery

Model No. : 18650

Client Ref. Information : 14500,16340,18500,17500,18350,10440,26650,14430, , 32700, 32650, 21700
, 17350

The above sample(s) and information were provided by the client.

SGS Job No. : NP22-001577 - NB

Date of Sample Received : 02 Apr 2022

Testing Period : 02 Apr 2022 - 18 Apr 2022

Test Requested : Selected test(s) as requested by the client.

Test Method(s) : Please refer to next page(s).

Test Result(s) : Please refer to next page(s).

Result Summary :

Test Requested	Conclusion
Directive 2006/66/EC and its Article 4 amendment of Directive 2013/56/EU- Heavy Metals Content in Batteries and Accumulators	PASS

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Ningbo Branch

Ashley Zhang

Ashley Zhang
Approved Signatory

scan to see the report



BAC8ECA8



SGS-CSTC Standards Technical Services Co., Ltd.
Ningbo Branch Chemical Laboratory

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Test Result(s) :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	NGB22-005659.001	Silvery battery

Remarks :

- (1) 1 mg/kg = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected (< MDL)
- (4) "-" = Not Regulated

Directive 2006/66/EC and its Article 4 amendment of Directive 2013/56/EU– Heavy Metals Content in Batteries and Accumulators

Test Method : Acid digestion method, analysis was performed by ICP-OES.

Test Item(s)	Limit	Unit	MDL	001
Lead (Pb)	-	%	0.001	ND
Cadmium (Cd)	0.002	%	0.001	ND
Mercury (Hg)	0.0005	%	0.0001	ND
Conclusion	PASS			

Notes :

- (1) Results shown are of total weight of the battery sample.
- Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule ($w=0$) stated in ILAC-G8:09/2019.



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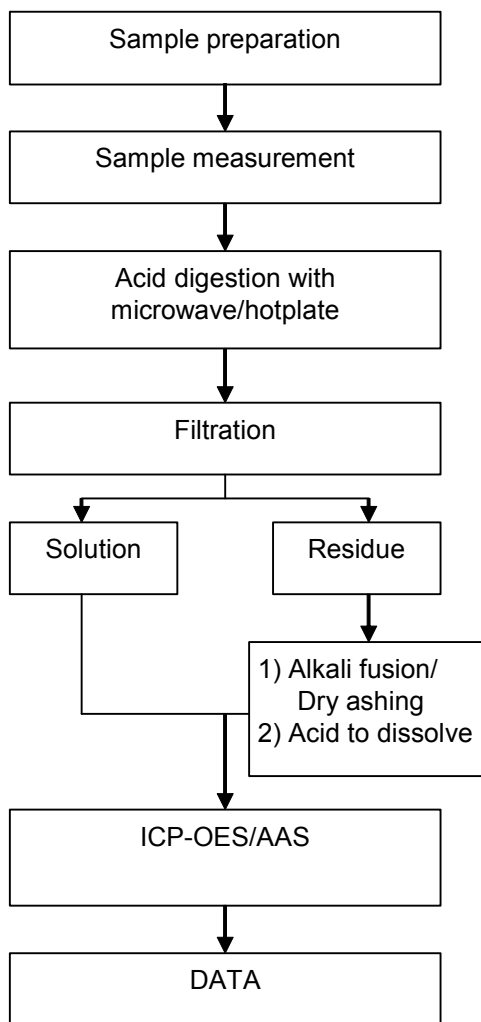
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ATTACHMENTS

Battery Testing Flow Chart



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Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***



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INSPECTION
CNAS IB0071



NO.2622010243

SAFETY DATA SHEET

Product Name: Rechargeable Li-ion battery 18650
3.7V 2000mAh 7.4Wh

Effective Date: 2022-01-18

Compiler: Zhoujuefei

Checker: Liu Lintian

Approver: Zhangxiangjin



Shanghai Institute of Chemical Industry Testing Co., Ltd.



扫描全能王 创建

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扫描全能王 创建

Ningbo Yiyang New Energy Technology Co., Ltd.

SAFETY DATA SHEET

Rechargeable Li-ion battery 18650 3.7V 2000mAh 7.4Wh

SECTION1 PRODUCT AND COMPANY IDENTIFICATION

Product name: Rechargeable Li-ion battery 18650 3.7V 2000mAh 7.4Wh
Company: Ningbo Yiyang New Energy Technology Co., Ltd.
Address: Luochimiao Industrial Zone, Chenhuang Village, Yunlong Town, Yinzhou District, Ningbo City, Zhejiang Province, 315100, P.R.China
Email: 2850375553@qq.com
Fax: 86-574-87419383
Emergency Phone: 86-574-82839683
Recommend use of the chemical and restrictions on use: /

SDS Number: 2622010243
Effective Date: 2022-01-18

SECTION2 HAZARDS IDENTIFICATION

The product is outside of the scope of GHS system.

Main Hazards:

Fire or Explosion Hazards:

Lithium ion battery contains flammable liquid electrolyte that may vent, ignite and produce sparks when subjected to high temperatures (>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 close proximity.

Health Hazards:

Contact with the electrolyte of battery may be irritating to skin, eyes and mucous membranes. Fire will produce irritating, corrosive and/or toxic gases. Fumes may cause dizziness or suffocation.

SECTION3 INFORMATION ON INGREDIENTS

Product name: Rechargeable Li-ion battery 18650 3.7V 2000mAh 7.4Wh

Ingredient	Concentration	CAS No.	EC No.
Lithium nickel cobalt manganese oxide	32%	182442-95-1	695-690-9



Steel shell cap	21%	65997-19-5	266-048-1
Graphite	15.3%	7782-42-5	231-955-3
Carrier ampholyte	12.4%	37348-94-0	/
Copper foil	11.4%	7440-50-8	231-159-6
Aluminum foil	5.7%	7429-90-5	231-072-3
Polyvinylidene fluoride	0.8%	24937-79-9	607-458-6
Carbon black	0.5%	1333-86-4	215-609-9
Styrene-butadiene rubber	0.3%	/	/
Carboxymethyl cellulose	0.2%	9000-11-7	618-326-2
Lithium hexafluorophosphate	0.15%	21324-40-3	244-334-7
Nafion	0.1%	31175-20-9	/
Dimethyl carbonate	0.1%	616-38-6	210-478-4
Ethylene carbonate	0.03%	96-49-1	202-510-0
Ethyl methyl carbonate	0.02%	623-53-0	613-014-2

SECTION4 FIRST-AID MEASURES

Skin Exposure:

If in contact with the internal materials of battery, remove the contaminated clothing, shoes and socks, immediately flush with plenty of water for at least 20 minutes. Call a physician.

Eye Exposure:

If in contact with the internal materials of battery, lift your eyelids immediately and rinse them with running water for more than 20 minutes. Call a physician.

Inhalation Exposure:

If the internal materials of battery are inhaled, immediately remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician.

Oral Exposure:

Do not induce vomiting if the internal materials of battery are swallowed. Call a physician immediately.

Most Important Symptoms/Effects, Acute and Delayed:

No data available.

Indication of Immediate Medical Attention and Special Treatment Needed, if Necessary:

No data available.

SECTION5 FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Suitable: Water spray or regular foam.

Specific Hazards Arising from the Chemical:

May decompose upon combustion to generate irritating, corrosive or toxic fumes. Fumes may cause dizziness or suffocation.

Special Protective Action for Fire-fighters:

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Fire-extinguishing work is done from the windward. Uninvolved persons should evacuate to a safe place.



SECTION6 ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

Use personal protective equipment. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Entry to noninvolved personnel should be controlled around the leakage area by roping off. Remove all sources of ignition.

Environmental Precautions:

Avoid leakage getting into the earth, ditches or waters. Avoid directly releasing the washing waste-water into the environment.

Methods and Materials for Containment and Cleaning up:

If the electrolyte leaks, use soil, sand or other non-combustible materials to absorb. The leaked batteries and dirty adsorbents should be placed in metal containers.

SECTION7 HANDLING AND STORAGE

Precautions for Safe Handling:

Operators should be trained and strictly abide by operating procedures. Wear appropriate protective clothing and safety gloves. Keep away from ignition sources, heat and flame. No smoking at working site. Handling is performed in a well ventilated place. Avoid disassembling the battery at will and reversing battery polarity within the battery assembly. The battery must be firmly packed in inner packaging so as to effectively prevent short circuits and short circuits caused by movement. If the electrolyte leaks, avoid directly contacting with eyes and skin. Avoid inhalation. Incompatibilities: Strong oxidizing agents, combustible materials and corrosives.

Conditions for Safe Storage, Including Any Incompatibilities:

Store in a cool, dry, and well-ventilated area. Keep away from ignition sources, heat and flame. Incompatibilities: Strong oxidizing agents, combustible materials and corrosives. The battery must be firmly packed in inner packaging so as to effectively prevent short circuits and short circuits caused by movement. Storage place should be equipped with appropriate varieties and quantities of fire fighting equipment and leakage emergency treatment equipment.

SECTION8 EXPOSURE CONTROL/PPE

Control Parameters:

GBZ 2.1-2019 Occupational Exposure Limits for Hazardous Agents in the Workplace - Part 1: Chemical Hazardous Agents:

Metallic nickel and insoluble nickel compounds: PC-TWA 1 mg/m^3 , G1 (Nickel compounds), Sensitization

Cobalt and its oxides (calculated as Co): PC-TWA 0.05 mg/m^3 ; PC-STEL 0.1 mg/m^3 , G2B, Sensitization

Manganese and its inorganic compounds (calculated as MnO_2): PC-TWA 0.15 mg/m^3

Graphite dust: PC-TWA 4 mg/m^3 (Total dust); PC-TWA 2 mg/m^3 (Respirable dust)

Copper (calculated as Cu): Copper dust PC-TWA 1 mg/m^3 ; Copper smoke PC-TWA 0.2 mg/m^3

Aluminum metal, aluminum alloy dust: PC-TWA 3 mg/m^3 (Total dust)

Carbon black dust: PC-TWA 4 mg/m^3 (Total dust), G2B

ACGIH:

Graphite: TLV-TWA 2 mg/m^3

Copper: TLV-TWA 1 mg (Cu) /m^3 Dust, smoke; TLV-TWA 0.2 mg (Cu) /m^3 Smoke

Aluminum: TLV-TWA 1 mg/m^3

Appropriate Engineering Controls:

Mechanical exhaust required. Safety shower and eye bath.

Individual Protection Measures:



Eye/Face Protection:

Wear chemical safety glasses if needed.

Skin Protection:

Hand Protection: Wear safety gloves.

Body Protection: Wear appropriate protective clothing.

Respiratory Protection:

Wear government approved respirator if needed.

Thermal Hazards:

No data available.

Other Protect:

No smoking, drinking and eating at working site. Wash thoroughly after handling.

SECTION9 PHYSICAL/CHEMICAL PROPERTIES**Appearance:** Blue cylinder plastics film shell**Odor:** Odorless**pH Value:** 8-9**Solubility:** Partial soluble in water**Boiling Point,** No data available**Initial Boiling****Point and Boiling****Range:****Melting** >300°C**Point/Freezing****Point:** No data available**Flash Point** No data available**(Closed Cup):** No data available**Density/Relative** No data available**Density:** No data available**Kinematic** No data available**Viscosity:** No data available**Lower/Upper** No data available**Explosion****Limit/Flammabili****ty Limit:** No data available**Vapour Pressure:** No data available**Relative Vapor** No data available**Density:** No data available**Partition** No data available**Coefficient****N-Octanol/Water(****Log Value):** No data available**Autoignition** No data available**Temperature:** No data available**Decomposition** No data available**Temperature:** No data available**Particle** No data available**Characteristics:****Flammability** No data available**(Solid, Gas):**

SECTION10 STABILITY AND REACTIVITY

NO.2622010243

Reactivity:

No data available.

Chemical Stability:

Stable under normal temperatures and pressures.

Possibility of Hazardous Reactions:

No data available.

Conditions to Avoid:

Avoid misoperation, exposure to heat and open flame. Avoid mechanical or electrical abuse and overcharge. Prevent short circuits and short circuits caused by movement.

Incompatible Materials:

Strong oxidizing agents, combustible materials and corrosives.

Hazardous Decomposition Products:

Carbon oxides, metal oxides, etc.

SECTION11 TOXICOLOGICAL INFORMATION

Acute Toxicity:

No data available.

Skin Corrosion/Irritation:

The electrolyte in the battery causes skin irritation.

Serious Eye Damage/Irritation:

The electrolyte in the battery causes eye irritation.

Respiratory Sensitization:

No data available.

Carcinogenicity:

No data available.

Skin Sensitization:

No data available.

Germ Cell Mutagenicity:

No data available.

Reproductive Toxicity:

No data available.

Specific Target Organ Toxicity -Single Exposure:

No data available.

Specific Target Organ Toxicity -Repeated Exposure:

No data available.

Aspiration Hazard:

No data available.

SECTION12 ECOLOGICAL INFORMATION

Toxicity:

No data available.

Persistence and Degradability:

No data available.

Bioaccumulative Potential:

No data available.

Mobility in Soil:

No data available.

Other Adverse Effects:



No data available.

NO.2622010243

SECTION13 DISPOSAL CONSIDERATION

Disposal Methods:

The disposal of discarded battery shall comply with the requirements of relevant laws, regulations, policies and standards such as the "Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste" and "Technical Policy for the Prevention and Control of Waste Battery Pollution". Contact a licensed professional waste disposal service to dispose of wastes. Used battery being transported for disposal or reclamation should be carefully checked prior to shipment to ensure the integrity of each battery and its suitability for transport.

SECTION14 TRANSPORT INFORMATION

Only Lithium Battery during Transport:

The product has passed the test items of UN Model Regulations, Manual of Test and Criteria Section 38.3 and UN Model Regulations, SP188, 1.2m drop test. The total net weight of the Lithium batteries is less than 10 kg.

RID/ADR (2021 Edition) :

The product is not subject to RID/ADR according to special provision 188. According to 2.2.9.1.7 (g) of RID/ADR (2021 Edition), Manufacturers and subsequent distributors of cells or batteries manufactured shall make available the test summary as specified in the Manual of Tests and Criteria, Part III, sub-section 38.3, paragraph 38.3.5.

IATA DGR (63rd Edition) :

Proper Shipping Name: Lithium ion batteries
UN Number: UN3480
Hazard Class: 9
The product shall meet the General Requirements and section IB of Packaging Instruction 965.
According to 3.9.2.6.1(g) of IATA DGR (63rd Edition), Manufacturers and subsequent distributors of cells or batteries manufactured after 30 June 2003 shall make available the test summary as specified in the Manual of Tests and Criteria, Part III, sub-section 38.3, paragraph 38.3.5.

IMO IMDG CODE

(2020 Edition) :

The product is not subject to IMO IMDG CODE according to special provision 188. According to 2.9.4.7 of IMO IMDG CODE (2020 Edition), Manufacturers and subsequent distributors of cells or batteries manufactured shall make available the test summary as specified in the Manual of Tests and Criteria, Part III, sub-section 38.3, paragraph 38.3.5.

SECTION15 REGULATORY INFORMATION

Domestic Regulations:

Only Lithium Battery during Transport:

Regulations Concerning Road Transportation of Dangerous Goods (JT/T 617-2018) :

UN Number: UN3480 Name and Description: Lithiumion batteries

The product has passed the test items of UN Model Regulations, Manual of Test and Criteria Section 38.3.

The product is not subject to JT/T 617-2018 according to special provision 188.

List of Dangerous Goods (GB 12268-2012) :



UN Number: UN3480 Shipping Name: Lithium ion batteries Packing Group: II
 The product has passed the test items of UN Model Regulations, Manual of Test and Criteria Section 38.3.
 The product is not subject to GB 12268-2012 according to special provision 188.
List of Dangerous Goods by Rail (2009 Edition) :
 Number: 91013 Name of Product: Lithium batteries

International Regulations:

Directive 2006/66/EC and 2013/56/EU:

The label, disposal and recycling of the battery shall meet the requirements of EU Directive 2006/66/EC and 2013/56/EU.

ICAO TI:

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.
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.
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.
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.

SECTION16 OTHER INFORMATION

Preparation Date:

2022-01-18

Preparation Department:

Shanghai Research Institute of Chemical Industry Testing Co., Ltd.
 Tel (Fax): +86-21-52815377/31765555

Revision:

0

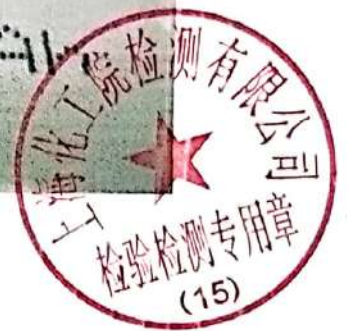
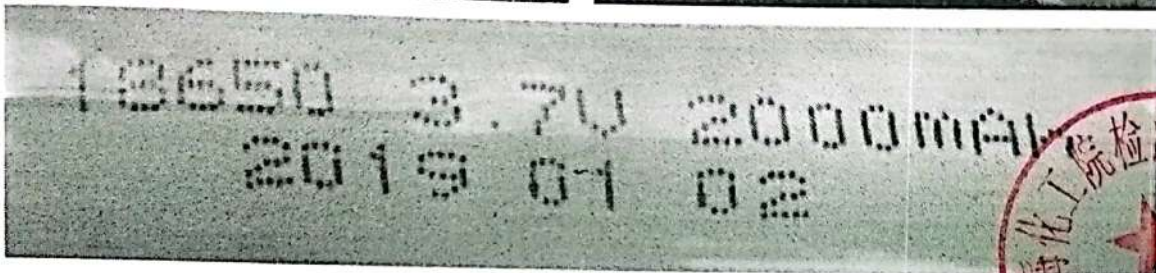
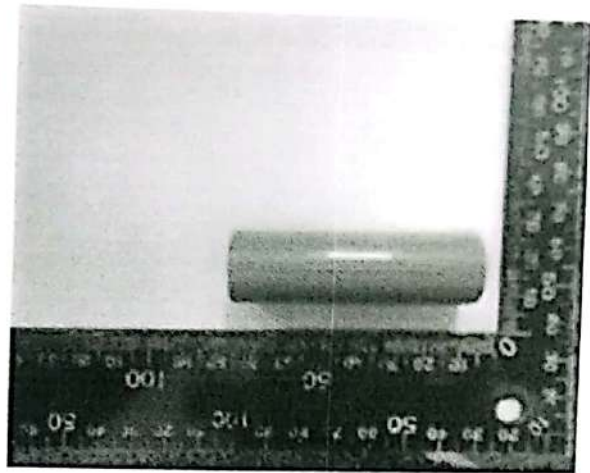
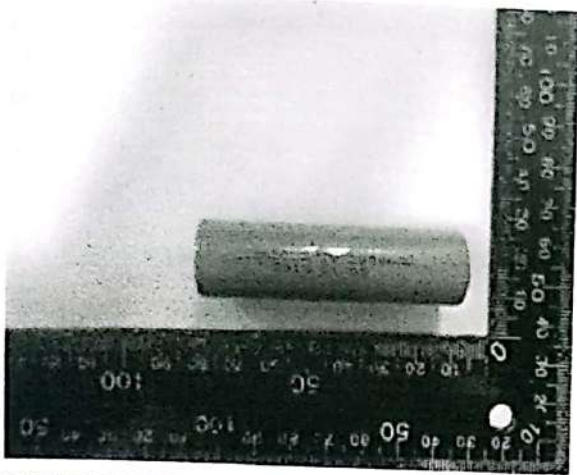
Abbreviations and Acronyms:

CAS: Chemical Abstracts Service EC: European Commission PC-TWA: Permissible concentration-time weighted average PC-STEL: Permissible concentration-short term exposure limit TLV-TWA: Threshold limit value-time weighted average ACGIH: American Conference of Governmental Industrial Hygienists G1: Carcinogenic to humans G2B: Possibly carcinogenic to humans Sensitization: The substance may have allergenic effects RID: Regulations concerning the International Carriage of Dangerous Goods by Rail ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road IATA DGR: International Air Transport Association Dangerous Goods Regulations IMO IMDG CODE: International Maritime Organization International Maritime Code for Dangerous Goods EU: European Union ICAO TI: International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air PI: Packaging Instruction

Other Information:

This SDS is compiled based on the information such as ingredients provided by the applicant and our current knowledge. This SDS shall be used only as a guide. The users of this SDS must make independent judgments on the correctness and completeness and then decide its suitability according to the actual situation. The users should take the relevant legal responsibilities for the consequences of use.







NO.212200311183522



货物运输条件鉴定书

Certification
for Safe Transport of Chemical Goods

锂电池类货物

样品名称：可充电锂电池 18650 3.7V 2000mAh 7.4Wh

Sample name: Li-ion battery 18650 3.7V 2000mAh 7.4Wh

委托单位：宁波易扬新能源科技有限公司
Ningbo Yiyang New Energy Technology Co., Ltd

生产单位：宁波易扬新能源科技有限公司
Ningbo Yiyang New Energy Technology Co., Ltd



Witness Better Life
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上海化工院检测有限公司
Shanghai Institute of Chemical Industry Testing Co., Ltd



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货物运输条件鉴定书

NO. 212200311183522

Certification for Safe Transport of Chemical Goods

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样品名称 Sample Name	中文 Chinese	可充电锂电池 18650 3.7V 2000mAh 7.4Wh		
	英文 English	Li-ion battery 18650 3.7V 2000mAh 7.4Wh		
委托单位 Consignor		宁波易扬新能源科技有限公司 Ningbo Yiyang New Energy Technology Co., Ltd		
生产单位 Manufacturer		宁波易扬新能源科技有限公司 Ningbo Yiyang New Energy Technology Co., Ltd		
检验方法、程序 Inspection method and procedure		国际海事组织《国际海运危险货物规则》(2020版) IMO International Maritime Dangerous Goods Code (2020 Edition)		
样品外观 Sample appearance		蓝色塑料薄膜外壳 Blue Plastic film shell		
包装件信息 Package information		重量≤30kg. weight≤30kg.		
序号 NO.	电池种类 Battery type	型号 Model	容量Capacity /锂含量Li content	放置方式 Placement
1	可充电锂离子电池芯 Rechargeable Li-ion cell	18650	2000mAh 7.4Wh	电池单独运输 Battery only
鉴定结论 IDENTIFICATION CONCLUSION	1. 危险性识别(Hazards identification) 锂离子电池。 Lithium ion battery.			
	2. 海运按照国际海事组织《国际海运危险货物规则》办理的类项(Suggestion according to IMO IMDG Code) 根据特殊规定188, 该物品不受IMO IMDG Code其他条款限制。 The article is not subject to other provisions of IMO IMDG Code according to special provision 188.			
	3. 包装要求(Packaging requirements) 无。 None.			
	<div style="display: flex; justify-content: space-between;"> <div>检验日期: 2022-01-07 Inspection Date:</div> <div>签发日期: 2022-01-07 Issue Date:</div> <div>生效日期: 2022-01-07 Effective Date:</div> </div>			
备注 Comment				



批准
Approver: 王军

审核
Checker: 董学胜

主检
Appraiser: 顾杨幸



扫描全能王 创建

货物运输条件鉴定书

Certification for Safe Transport of Chemical Goods

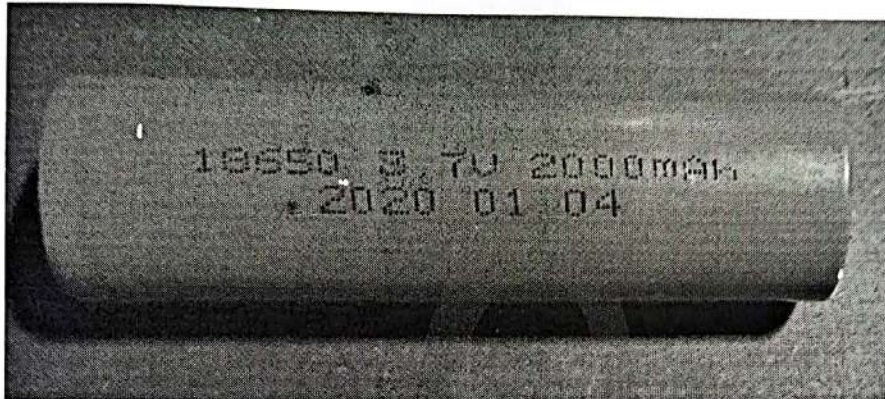
NO. 212200311183522

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序号 No.	检验结果及其他事项 Inspection results and other things
1	<p>本报告所述锂电池按照《国际海运危险货物规则》(2020版) 2.9.4.5规定的质量管理体系进行制造。 Lithium cells and batteries listed in this report were manufactured under the quality management program described in IMDG CODE 2020 EDITION 2.9.4.5.</p>
2	<p>本报告所述锂电池已通过《联合国试验和标准手册》第III部分38.3小节相应测试要求。 包装件能够承受1.2m跌落试验。 Lithium cells and batteries listed in this report are of the types proved to meet the requirements of each applicable test in the UN Manual of Tests and Criteria, Part III, sub-section 38.3. The package has passed the 1.2m drop test. UN38.3试验概要编号 The UN38.3 Test Summary No. (s) 811900800776770 详细信息请扫描右侧二维码。 Please scan the QR code on the right for more information.</p> 
3	<p>锂电池完全封装在内包装内, 位于坚固的外包装中。 Lithium cells and batteries are packed in inner packagings that completely enclose the cell or battery and placed in a strong outer packaging.</p>
4	<p>电池具有适当的防短路措施。 Cells and batteries are properly protected to prevent short circuits.</p>
5	<p>每个包装件必须标示恰当的锂电池标记。 装有锂电池的包装件, 符合国际民航组织《危险物品安全航空运输技术细则》第4部分第11章的包装说明965或968第IB部分规定的, 黏贴5.2.1.10(锂电池标记)和5.2.2.2所示的9A型标签, 应视为符合本特殊规定188的规定。 Each package shall be marked with the appropriate lithium battery mark. Packages containing lithium batteries packed in conformity with the provisions of part 4, chapter 11, packing instructions 965 or 968, section IB of the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by air that bear the mark as shown in 5.2.1.10(lithium battery mark) and the label shown 5.2.2.2, Model No.9A shall be deemed to meet the provisions of this special provision 188.</p>
6	/
7	/
-验证码:194399-	



扫描全能王 创建



报告结束



扫描全能王 创建



NO.1118090301

检 测 报 告

Test Report

样品名称： 可充电锂电池 18650 3.7V 2000mAh 7.4Wh

Name of Sample: Lithium battery 18650 3.7V 2000mAh 7.4Wh

委托单位： 宁波易扬新能源科技有限公司

Consignor: Ningbo Yiyang New Energy Technology Co., Ltd

上海化工院检测有限公司

Shanghai Research Institute of Chemical Industry Testing Co., Ltd.



上海化工院检测有限公司

检测报告

Shanghai Research Institute of Chemical Industry
Testing Co., Ltd. Test Report

NO. 1118090301

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样品名称 Name of Sample	中文 Chinese	可充电锂电池 18650 3.7V 2000mAh 7.4Wh	
	英文 English	Lithium battery 18650 3.7V 2000mAh 7.4Wh	
样品编号 Sample No.	1118090301		
委托单位 Consignor	宁波易扬新能源科技有限公司 Ningbo Yiyang New Energy Technology Co., Ltd		
生产单位 Manufacturer	宁波易扬新能源科技有限公司 Ningbo Yiyang New Energy Technology Co., Ltd		
检测方法 Test method	联合国《关于危险货物运输的建议书 试验和标准手册》 ST/SG/AC.10/11/Rev.6 38.3 UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS" Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 38.3		
判定标准 Criterion	联合国《关于危险货物运输的建议书 试验和标准手册》 ST/SG/AC.10/11/Rev.6 38.3 UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS" Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 38.3		
样品外观 Appearance	蓝色圆柱型塑料薄膜外壳 Blue Cylinder plastics film shell		
样品接受日期 Accepted Date	2018-09-27	检测起始日期 Test Date	2018-10-08 ~ 2018-10-24
检测项目 Test Items	高度模拟;热测试;振动;冲击;外短路;撞击;强制放电 Altitude simulation, Thermal test, Vibration, Shock, External short circuit, Impact, Forced discharge		
检测结论 Conclusion	经检验,该样品符合联合国《关于危险货物运输的建议书 试验和标准手册》 ST/SG/AC.10/11/Rev.6 38.3标准要求。 The sample has passed the test items of UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS" Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 38.3 生效日期(Date): 2018-10-25		
备注 Comment	可充电锂电池芯Rechargeable Lithium Cell./		
委托单位地址 Consignor Address	/		邮政编码 Post Code 315100

批准
Approver:

职务

Title:

张小明

副总工程师(Vice chief engineer)

审核
Checker:

许强

编制
Compiler:

夏浩



上海化工院检测有限公司 检测报告

Shanghai Research Institute of Chemical Industry
Testing Co., Ltd. Test Report

NO. 1118090301

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序号 No.	检测项目名称 Name of Test Items	标准要求或标准条款号 Standard requirement or The Clause Number of Standard	检测结果 Test Result	本项结论 Conclusion	备注 Remark
1	高度模拟 Altitude simulation	联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 38.3 试验T.1 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Section 38.3 Test T.1	见附表 1 See Appendix 1	合格 Passed	/
2	热测试 Thermal test	联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 38.3 试验T.2 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Section 38.3 Test T.2	见附表 2 See Appendix 2	合格 Passed	/
3	振动 Vibration	联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 38.3 试验T.3 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Section 38.3 Test T.3	见附表 3 See Appendix 3	合格 Passed	/
4	冲击 Shock	联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 38.3 试验T.4 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Section 38.3 Test T.4	见附表 4 See Appendix 4	合格 Passed	/
5	外短路 External short circuit	联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 38.3 试验T.5 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Section 38.3 Test T.5	见附表 5 See Appendix 5	合格 Passed	/
6	撞击 Impact	联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 38.3 试验T.6 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Section 38.3 Test T.6	见附表 6 See Appendix 6	合格 Passed	/
7	强制放电 Forced discharge	联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 38.3 试验T.8 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Section 38.3 Test T.8	见附表 7 See Appendix 7	合格 Passed	/
8	以下空白	This space intentionally left blank			
检测环境条件 Test Environment Condition		环境温度:24℃-25℃;环境湿度:/% Ambient temperature:24℃-25℃;Ambient humidity:/%			
分包检验情况 Subcontracted Test Condition		检测项目 Test Item	/		
		分包实验室 Subcontracted Laboratory	名称 Name	/	邮编 Post Code
			地址 Address	/	电话 Tel

SRICI Testing Co., Ltd. Test Report—Appendix 1 NO. 1118090301

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SRICI Testing Co., Ltd. Test Report—Appendix 2 NO. 1118090301

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NO. 1118090301

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SRICI Testing Co., Ltd. Test Report—Appendix 4 NO. 1118090301

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备注: L-泄漏 V-漏气 D-解体 R-破裂 F-起火 O-无泄漏、无漏气、无解体、无破裂、无起火。
Note: L-Leakage V-Venting D-Disassembly R-Rupture F-Fire O-No Leakage, No Venting,
No Disassembly, No Rupture & No Fire.

SRICI Testing Co. , Ltd. Test Report—Appendix 5 NO. 1118090301

[illegible]

SRICI Testing Co., Ltd. Test Report—Appendix 6 NO. 1118090301

[illegible]

上海化工院检测有限公司
检测报告-附表 7

SRICI Testing Co., Ltd. Test Report—Appendix 7 NO. 1118090301

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序号 No.	7	检测项目名称 Name of Test Items	强制放电 Forced discharge
样品编号 Sample No.	样品状态 Sample Status	其他现象 Other Event	
016	1CYC完全放电 1CYC Fully discharged	O	
017	1CYC完全放电 1CYC Fully discharged	O	
018	1CYC完全放电 1CYC Fully discharged	O	
019	1CYC完全放电 1CYC Fully discharged	O	
020	1CYC完全放电 1CYC Fully discharged	O	
021	1CYC完全放电 1CYC Fully discharged	O	
022	1CYC完全放电 1CYC Fully discharged	O	
023	1CYC完全放电 1CYC Fully discharged	O	
024	1CYC完全放电 1CYC Fully discharged	O	
025	1CYC完全放电 1CYC Fully discharged	O	
026	50CYC完全放电 50CYC Fully discharged	O	
027	50CYC完全放电 50CYC Fully discharged	O	
028	50CYC完全放电 50CYC Fully discharged	O	
029	50CYC完全放电 50CYC Fully discharged	O	
030	50CYC完全放电 50CYC Fully discharged	O	
031	50CYC完全放电 50CYC Fully discharged	O	
032	50CYC完全放电 50CYC Fully discharged	O	
033	50CYC完全放电 50CYC Fully discharged	O	
034	50CYC完全放电 50CYC Fully discharged	O	
035	50CYC完全放电 50CYC Fully discharged	O	

备注: D-解体 F-起火 O-无解体、无起火。
Note: D-Disassembly F-Fire O-No Disassembly & No Fire.

上海化工院检测有限公司
检测报告-附图

SRICI Testing Co., Ltd. Test Report—Appendix NO. 1118090301

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报告结束



声 明

Statement

1. 试验概要无本实验室公章（或检验检测专用章）无效。

The test summary is invalid if it is not affixed the official seal of the laboratory to it.

2. 复制试验概要未重新加盖本实验室公章（或检验检测专用章）无效。

Copies of the test summary without the official seal of the laboratory are invalid.

3. 试验概要无签字及签字者姓名和职务无效。

The test summary is invalid without the signature, name and title of the signatory.

4. 试验概要涂改无效。

The test summary is invalid if it is blotted out.

5. 未经本实验室书面批准，不得部分复制试验概要。

It is forbidden to copy the test summary partially without the written approval of the laboratory.

6. 试验概要中描述的检测结果，仅对所测样品有效。

The conclusion of the test summary is only valid for the tested sample.

7. 试验概要以中文为准，英文文本（如有）仅为译文，两者发生冲突时，应以中文文本为准。

The test summary has been drafted in Chinese and translated into English (if exist) for convenience only. In the event of discrepancy, the Chinese version shall prevail.

地址：上海市云岭东路 345 号 Address: No. 345 East Yunling Road, Shanghai

邮政编码(PostCode): 200062

电话(Tel): (021) 31765555 传真(Fax): (021) 31015117

网址(website): www.ghs.cn

电子信箱(E-mail): battery@ghs.cn



扫描全能王 创建



UN38.3 试验概要

UN38.3 Test Summary



811900800776770

单位信息 Company information

委托单位 Consignor	宁波易扬新能源科技有限公司 Ningbo Yiyang New Energy Technology Co., Ltd 宁波市鄞州区云龙镇陈黄村罗池工业区(宸业新能源内) Luochimiao Industrial Zone, Chen Huangcun, Yunlong Town, Yinzhou District, Ningbo City 18067244546 2850375553@qq.com /
生产单位 Manufacturer	宁波易扬新能源科技有限公司 Ningbo Yiyang New Energy Technology Co., Ltd 宁波市鄞州区云龙镇陈黄村罗池工业区(宸业新能源内) Luochimiao Industrial Zone, Chen Huangcun, Yunlong Town, Yinzhou District, Ningbo City 18067244546 2850375553@qq.com /
测试单位 Test lab	上海化工院检测有限公司 Shanghai Research Institute of Chemical Industry Testing Co., Ltd. 中国.上海.普陀区云岭东路 345 号, 200062 No.345 East Yunling Road, Putuo, Shanghai, China 200062 86-21-31765555 battery@ghs.cn www.ghs.cn

电池信息 Battery information

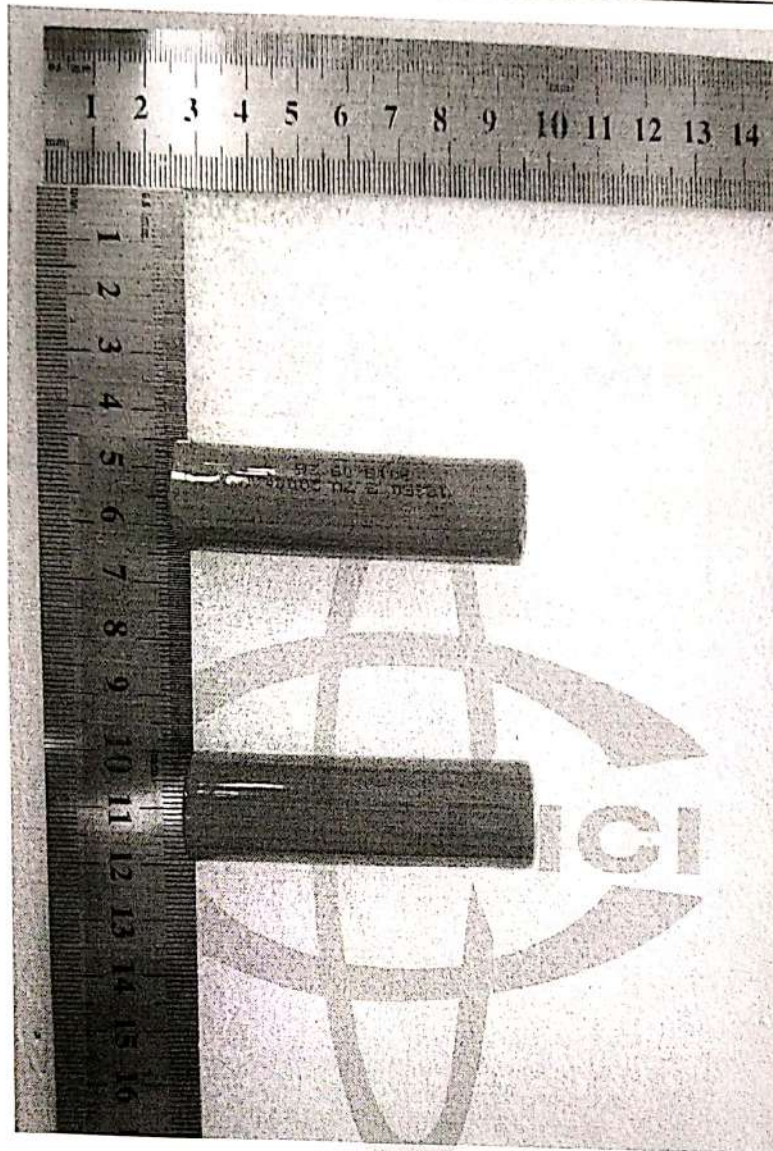
名称 Name	可充电锂电池 Lithium battery	品牌 Brand	易扬
型号 Type	18650	原始测试型号 Original tested type	/
标称电压(V) Nominal voltage	3.7	容量/能量 Capacity/energy	2000mAh 7.4Wh
描述 Description	可充电锂离子电池芯 Rechargeable Li-ion cell	锂含量(g) Li content	/
质量(kg) Mass	0.0441	外观 Appearance	蓝色圆柱型塑料薄膜外壳 Blue cylinder plastics film shell

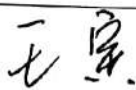

测试信息 Test information

原报告编号 Original test report No.	1118090301	测试报告日期 Date of test report	2018-10-25
测试标准 Test standard	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 UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS" Manual of Tests and Criteria 38.3 ST/SG/AC.10/11/Rev.6		
T.1 高度模拟 Altitude simulation	合格 Passed	T.2 温度测试 Thermal test	合格 Passed
T.3 振动测试 Vibration	合格 Passed	T.4 冲击测试 Shock	合格 Passed
T.5 外部短路 External short circuit	合格 Passed	T.6 撞击 Impact	合格 Passed
T.7 过度充电 Overcharge	/	T.8 强制放电 Forced discharge	合格 Passed
38.3.3 (f)	/	38.3.3 (g)	/



样品图片 Sample Picture



结论 Conclusion	测试样品符合联合国《关于危险货物运输的建议书试验和标准手册》ST/SG/AC.10/11/Rev.6 38.3 标准要求。The tested samples meet the requirements of test items of the UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS" Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 38.3		
备注 Remark	/		
签名 Signature 职务 Title	 王寅 副总工程师 Vice chief engineer	签发日期 Issued date	 2019-12-28

-验证码:653377-

报告结束

