



中国认可
检验
INSPECTION
CNAS IB0071



NO.2619110047

SAFETY DATA SHEET

Product Name: Li-ion battery 18650 3.7V 1500mAh

Effective Date: 2020-01-14

Compiler: He Xiaoshuang

Checker: Liu Lintian

Approver: Zhang Xiaojin



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



扫描全能王 创建

声 明

Statement

1. 本报告无本实验室公章无效。
The report is invalid if it is not affixed the official seal of the laboratory to it.
2. 复制本报告未重新加盖本实验室公章无效。
Copies of the report without the official seal of the laboratory are invalid.
3. 本报告无编制、审核、批准人签字无效。
The report is invalid without the signatures of compiler, checker and approver.
4. 本报告涂改无效。
The report is invalid if it is blotted out.
5. 未经本实验室书面批准，不得部分复制本报告。
It is forbidden to copy the report partially without the written approval of the laboratory.
6. 送样委托检验结果，仅对所送样品有效。
The conclusion of the consignment test is only valid for the provided sample.
7. 除另有说明，检测检验类别都是指委托分析。
Unless noted otherwise, the test type is consignment test.

地址：上海市云岭东路 345 号
邮政编码(Post Code): 200062
电话(Tel): (021) 31765555
网址 (web site): www.ghs.cn
电子信箱(E-mail): fz@ghs.cn

Address: No.345 East Yunling Road, Shanghai
传真(Fax): (021) 31015117



Ningbo Yiyang New Energy Technology Co., Ltd

SAFETY DATA SHEET

Li-ion battery 18650 3.7V 1500mAh

SECTION1 PRODUCT AND COMPANY IDENTIFICATION

Product name: Li-ion battery 18650 3.7V 1500mAh
Company: Ningbo Yiyang New Energy Technology Co., Ltd
Address: Luochimiao Industrial Zone, Chenhuang Cun, Yunlong Town, Yinzhou District, Ningbo City, 315100, P.R. China
Email: 2850375553@qq.com
Fax: 86-574-87419383
Emergency Phone: 86-18067244546
SDS Number: 2619110047
Effective Date: 2020-01-14

SECTION2 HAZARDS IDENTIFICATION

Hazards Identification:

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

Emergency Overview:

Caution: Avoid contact and inhalation the electrolyte contained inside the battery.

SECTION3 INFORMATION ON INGREDIENTS

Product name: Li-ion battery 18650 3.7V 1500mAh

Ingredient	Concentration	CAS No.	EC No.
Nickel cobalt lithium manganate (LiNiCoMnO ₂)	32%	182442-95-1	695-690-9
Stell shell cap	21.00%	65997-19-5	266-048-1
Graphite	15.3%	7782-42-5	231-955-3
Carrier ampholyte	12.40%	37348-94-0	/
Copper foil	11.40%	7440-50-8	231-159-6
Aluminum foil	5.70%	7429-90-5	231-072-3
Polyvinylidene fluoride (PVDF)	0.80%	24937-79-9	607-458-6
Carbon black	0.50%	1333-86-4	215-609-9
Styrene-butadiene rubber (SBR)	0.30%	9003-55-8	618-370-2
Carboxymethyl cellulose (CMC)	0.20%	9000-11-7	618-326-2



Lithium hexafluorophosphate (LiPF ₆)	0.15%	21324-40-3	244-334-7
Nafion	0.10%	31175-20-9	/
Dimethyl carbonate (DMC)	0.10%	616-38-6	210-478-4
Ethylene carbonate (EC)	0.03%	96-49-1	202-510-0
Ethyl methyl carbonate (EMC)	0.02%	623-53-0	/

SECTION4 FIRST-AID MEASURES

Skin Exposure:

If the internal battery materials of an opened battery cell come into contact with the skin, immediately flush with plenty of water.

Eye Exposure:

In case of the internal battery materials in contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Inhalation Exposure:

If inhaled the internal materials of battery, remove immediately to fresh air and seek medical attention.

Oral Exposure:

If swallowed the internal materials of battery, do not induce vomiting. Seek immediate medical attention.

SECTION5 FIRE FIGHTING MEASURES

Extinguishing Media:

Suitable: Dry chemical, Sandy soil, Carbon dioxide or appropriate foam.

Firefighting:

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific hazards: Emit toxic fumes under fire conditions.

SECTION6 ACCIDENTAL RELEASE MEASURES

Procedure of Personal Precaution:

If batteries show signs of leaking, avoid skin or eye contact with the material leaking from the battery. Use chemical resistant rubber gloves and non-flammable absorbent materials for clean up. Mix with inert material (e.g. dry sand, vermiculite) and transfer to sealed container for disposal.

SECTION7 HANDLING AND STORAGE

Handling:

Keep away from ignition sources, heat and flame. Such batteries must be packed in inner packages in such a manner as to effectively prevent short circuits and to prevent movement which could lead to short circuits. Avoid mechanical or electrical abuse. More than a momentary short circuit will generally reduce the battery service life. Avoid reversing battery polarity within the battery assembly. In case of a battery unintentionally be crushed, rubber gloves must be used to handle all battery components. Avoid contact with eyes, skin. Avoid inhalation. No smoking at working site. Materials to Avoid: Strong oxidizing agents, Corrosives.



Storage:

Store in a cool, well-ventilated area. Keep away from ignition sources, heat and flame. Such batteries must be packed in inner packages in such a manner as to effectively prevent short circuits and to prevent movement which could lead to short circuits. Materials to Avoid: Strong oxidizing agents, Corrosives.

SECTION8 EXPOSURE CONTROL/PPE**Engineering Controls:**

Use ventilation equipment if available. Safety shower and eye bath.

Personal Protective Equipment:

Respiratory System: Not necessary under conditions of normal use.

Eyes: Not necessary under conditions of normal use.

Clothing: Wear appropriate protective clothing.

Hand: Safety gloves.

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

Melting Point/°C: >300°C

Solubility: Partial soluble in water

SECTION10 STABILITY AND REACTIVITY**Stability:**

Stable under normal temperatures and pressures.

Conditions to Avoid:

Avoid exposure to heat and open flame. Avoid mechanical or electrical abuse. Prevent short circuits. Prevent movement which could lead to short circuits.

Materials to Avoid:

Strong oxidizing agents, Corrosives.

Hazardous Polymerization:

Will not occur.

Hazardous Decomposition Products:

Metal oxides, CO, CO₂.

SECTION11 TOXICOLOGICAL INFORMATION**Toxicity Data:**

Not available.

Irritation Data:

The internal battery materials may cause irritation to eyes and skin.

SECTION12 ECOLOGICAL INFORMATION

No data available.



SECTION13 DISPOSAL CONSIDERATION

Appropriate Method of Disposal of Substance:

Lithium batteries are best disposed of as a non-hazardous waste when fully or mostly discharged. Contact a licensed professional waste disposal service to dispose of large quantities materials.

SECTION14 TRANSPORT INFORMATION

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.

IATA DGR (61th 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 (61th 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 (2018 Edition): The product is not restricted to the other provisions of IMO IMDG Code according to special provision 188.

According to 2.9.4.7 of IMDG Code (2018 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

ICAO:

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

Date:

2020-01-14

Department:

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

Revision:

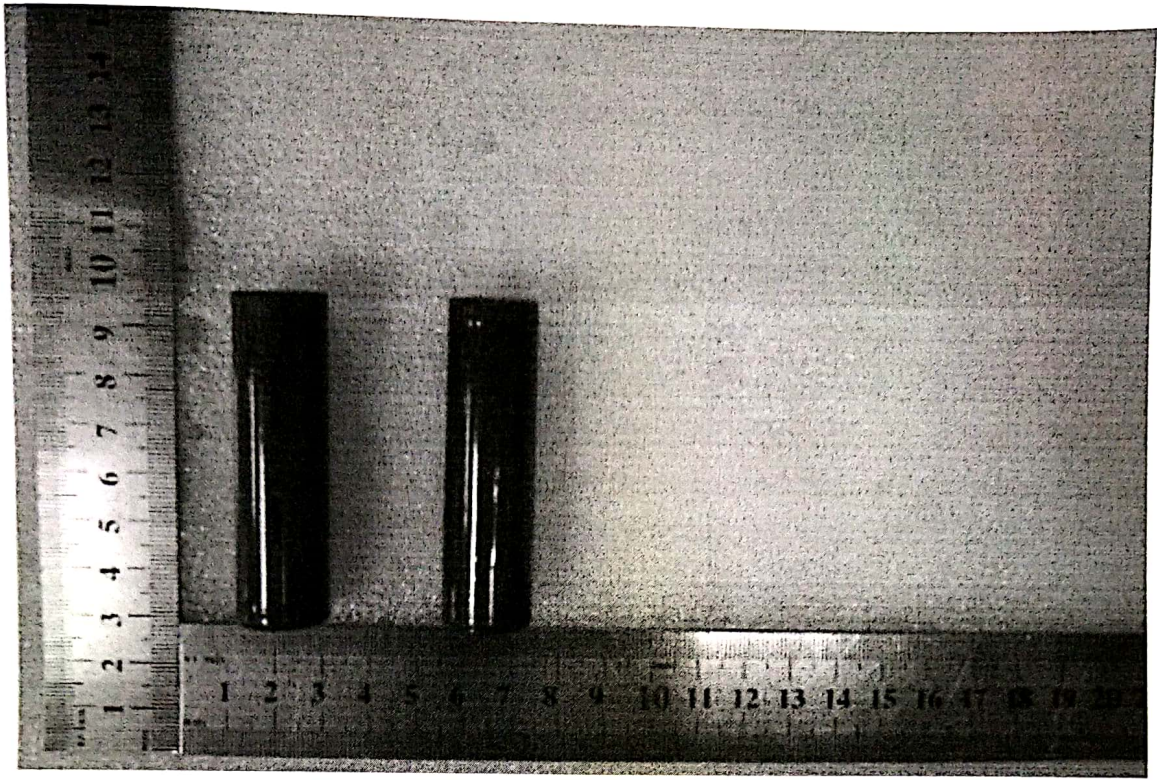
0

Other Information:



The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. We make 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 investigation to determine the suitability of the information for their particular purposes. In no way shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising from using the above information.





Mingbo Yiyang New Energy
Technology Co., Ltd
1000000 7U 1500max

