

NO.: 20190204069ZB-BR06

Material Safety Data Sheet

Name of Sample

Polymer lithium ion battery

Commissioner

Anren Duanshi New Energy Technology Co.,Ltd

Shenzhen Tiansu Calibration and Testing Co., Ltd.

This document is issued by the company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.51jl.org> and, for electronic format documents, subject to Terms and Conditions for Electrical Documents at www.51jl.org. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the company's finding at the time of its intervention only, and within the limits of Client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced in full without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the result shown on this report refer to the sample(s) tested.

Material Safety Data Sheet

1	
Chemical product and company identification	
Name of Sample	Polymer lithium ion battery
Type/Mode	401012
Sample Parameters	30mAh 0.111Wh
Commissioned by	Anren Duanshi New Energy Technology Co.,Ltd
Commissioner address	Yongle Jiang Industrial Concentration Zone,Anren County,Chenzhou,Hunan (Caoguzu,Junshan Village,Junshan Town)
Manufacturer	Anren Duanshi New Energy Technology Co.,Ltd
Manufacturer address	Yongle Jiang Industrial Concentration Zone,Anren County,Chenzhou,Hunan (Caoguzu,Junshan Village,Junshan Town)
Inspection according to	EEC Directive 93/112/EC UN "Recommendations on the TRANSPORT OF DANGEROUS GOODS"
Emergency telephone call	Mr. Cao 18823453405
	Receiving data 2019/2/20 Data of issue 2019/3/5

Tested by: Liu Cheng

Reviewed by: Jiang Xiaoxu

Approved by: Zhoujie



This document is issued by the company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.51jl.org> and, for electronic format documents, subject to Terms and Conditions for Electrical Documents at www.51jl.org. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the company's finding at the time of its intervention only, and within the limits of Client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offend me by prosecuted to the fullest extent of the law. Unless otherwise stated the result shown on this report refer to the sample(s) tested.

2		
Composition information		
Material or ingredient	CAS No.	Wt %
Lithium cobalt oxide	12190-79-3	40~45
Graphite	7782-42-5	20~23
Carbom nanotubes	1333-86-4	4~5
Methyl ethyl carbonate	623-53-0	2~3
Phosphate(1-),hexaf luoro-,lithium	21324-40-3	2~3
Copper	7440-50-8	6~8
Aluminium	7429-90-5	3~5
Nickel	7440-02-0	2~3
Poly(vinylidene flouride)	24937-79-9	2~3

This document is issued by the company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.51jl.org> and, for electronic format documents, subject to Terms and Conditions for Electrical Documents at www.51jl.org. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the company's finding at the time of its intervention only, and within the limits of Client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offend my be prosecuted to the fullest extent of the law. Unless otherwise stated the result shown on this report refer to the sample(s) tested.

3	
Hazards identification	
Explosive risk	This article does not belong to the explosion dangerous goods
Flammable risk	This article does not belong to the flammable material
Oxidation risk	This article does not belong to the oxidation of dangerous goods
Toxic risk	This article does not belong to the toxic dangerous goods
Radioactive risk	This article does not belong to the radiation of dangerous goods
Mordant risk	This article does not belong to the corrosion of dangerous goods
Other risk	This article is Polymer lithium ion battery ,Watt hour rate 0.111 Wh, which belong to the Lithium ion battery

4

First aid measures

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

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.

This document is issued by the company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.51jl.org> and, for electronic format documents, subject to Terms and Conditions for Electrical Documents at www.51jl.org. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the company's finding at the time of its intervention only, and within the limits of Client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced in full without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offend my be prosecuted to the fullest extend of the law. Unless otherwise stated the result shown on this report refer to the sample(s) tested.

6

Accidental release measures**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

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**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.

Protective Gloves

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.

This document is issued by the company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.51jl.org> and, for electronic format documents, subject to Terms and Conditions for Electrical Documents at www.51jl.org. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the company's finding at the time of its intervention only, and within the limits of Client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offend my be prosecuted to the fullest extend of the law. Unless otherwise stated the result shown on this report refer to the sample(s) tested.

9

Physical and chemical properties

Appearance: Prismatic

Rep No.: 20190204069ZB-BR05

Odour: Under normal circumstances, is odorless; 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

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

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

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.

This document is issued by the company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.51jl.org> and, for electronic format documents, subject to Terms and Conditions for Electrical Documents at www.51jl.org. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the company's finding at the time of its intervention only, and within the limits of Client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offend my be prosecuted to the fullest extend of the law. Unless otherwise stated the result shown on this report refer to the sample(s) tested.

13

Disposal consideration

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

Scope of application: This report applies to by sea, by air and by land
Label for conveyance: Lithium Battery Mark, class 9 hazard label, Cargo Aircraft Only Label
UN Number: UN3480
Packaging Group: N/A
EmS No: F-A, S-I
Marine pollutant: No
Proper Shipping name: Lithium Ion Batteries
Hazard Classification:

The goods shall be complied with the requirements of Section IB of Packing Instructions 965 of 60th DGR Manual of IATA(2019 edition) or special provision 188 of IMDG CODE(Amdt. 39-18)2018 Edition, including the passing of the UN38.3 test.

15

Regulation information**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》(CPSC)
 《Federal Environmental Pollution Control Act》(FEPCA)
 《The Oil Pollution Act》(OPA)
 《Superfund Amendments and Reauthorization Act Title III (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.

This document is issued by the company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.51jl.org> and, for electronic format documents, subject to Terms and Conditions for Electrical Documents at www.51jl.org. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the company's finding at the time of its intervention only, and within the limits of Client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offend my be prosecuted to the fullest extent of the law. Unless otherwise stated the result shown on this report refer to the sample(s) tested.

16

Other information

This report is valid only for products that meet the following criteria:

Commissioner: Anren Duanshi New Energy Technology Co.,Ltd

Manufacturer: Anren Duanshi New Energy Technology Co.,Ltd

Sample type&Mod Polymer lithium ion battery 401012

The commissioner provides the composition information of batteries, and promises its integrity and accuracy. Users should read this file carefully, and use the batteries in correct method.

Shenzhen Tiansu Calibration and Testing Co., Ltd., doesn't assume responsibility for any damage or loss because of misuse of batteries.

This document is issued by the company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.51jl.org> and, for electronic format documents, subject to Terms and Conditions for Electrical Documents at www.51jl.org. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the company's finding at the time of its intervention only, and within the limits of Client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced in full without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offend my be prosecuted to the fullest extent of the law. Unless otherwise stated the result shown on this report refer to the sample(s) tested.

Statements

- 1.The test report is invalid without the official stamp of Tiansu.
- 2.Nobody is allowed to photocopy or partly photocopy this test report without written permission of Tiansu.
- 3.The test report is invalid without the signatures of Ratifier, Reviewer and Testing engineer.
- 4.The test report is invalid if altered.
- 5.Objections to the test report must be submitted to Tiansu within 15 days.
- 6.The test report is valid for the tested samples only.
- 7.This report is only used for internal quality controlling of the client.

END



This document is issued by the company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.51jl.org> and, for electronic format documents, subject to Terms and Conditions for Electrical Documents at www.51jl.org. Attention is draw to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the company's finding at the time of its intervention only, and within the limits of Client's instruction, if any. The Company's solo responsibility is to its Client and this document does not exonerate parties to transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offend my be prosecuted to the fullest extend of the law. Unless otherwise stated the result shown on this report refer to the sample(s) tested.