NO. SCUD2022010013
Issue data: 2022-01-01

Product Name: Rechargeable Li-ion Polymer Battery HB466589EFW

3.87V 4200/4300mAh 16.25/16.64Wh(Rated/Typ)

Revision Date: 2022-01-01

Compiler: Jindan Wang

Checker: Zhiqiang Liu

Approver: Weiyong Zhang

SCUD(FUJIAN)ELECTRONICS Co., Ltd.

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SAFETY DATA SHEET

Li-ion Polymer Battery

SECTION1PRODUCTANDCOMPANY IDENTIFICATION

Product name: Rechargeable Li-ion Polymer Battery HB466589EFW 3.87V 4200/4300mAh 16.25/16.64Wh(Rated/Typ)

Company: SCUD(FUJIAN)ELECTRONICS CO.,LTD

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SDS Number: SCUD2022010013

SDS Date: 2022-01-01

SECTION2 HAZARDS IDENTIFICATION

Hazards Identification:

The battery has passed the test items of UN Model Regulations, Manual of Test and Criteria Section UN38.3. It is not restricted to IATA DGR and IMO IMDG CODE.

Primary routes of entry:

Skin contact, Skin absorption; Eye contact , Inhalation.

Emergency Overview:

Avoid contact and inhalation the electrolyte contained inside the battery.

SECTION3 INFORMATION ON INGREDIENTS

Product name: Li-Battery

Ingredient	Concentration	CAS No.	EC No.
Lithium cobalt oxide	10－40%	12190-79-3	235-362-0
Aluminum	10%-40%	7429-90-5	231-072-3
Graphite	10－20%	7782-42-5/7740-50-8	231-955-3/NULL
Lead（Pb）	less than 0.004wt%	7439-92-1	231-100-4
Mercury（Hg）	less than 0.0005wt%	7439-97-6	231-106-7
Cadmium(Cd)	less than 0.002wt%	7440-43-9	231-152-8

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 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 potential for exposure to nickel fumes or dusts occurs, remove immediately to fresh air and seek medical attention.

Oral Exposure:

If swallowed, do not induce vomiting. Seek immediate medical attention.

SECTION5 FIRE FIGHTING MEASURES

Extinguishing Media:

Plenty of water, carbon dioxide gas, nitrogen gas, chemical powder fire extinguishing medium and fire foam.

Firefighting:

When the battery burns with other combustibles simultaneously, take fire-extinguishing method which correspond to the combustibles. Extinguish a fire from the windward as much as possible.

Hand protection : Protective gloves

Eye protection: Goggle or protective glasses designed to protect against liquid splashes.

Skin and body protection: Protective cloth.

SECTION6 ACCIDENTAL RELEASE MEASURES

Procedure of Personal Precaution:

Spilled internal cell materials, such as electrolyte leaked from a battery cell, are carefully dealt with according to the followings.

Precautions for human body :

Remove spilled material with protective equipment (protective glasses and protective gloves).Do not inhale the gas as much as possible. Moreover, avoid touching with as much as possible.

Environmental precautions:

Do not throw out into the environment.

Method of cleaning up :

The spilled solids are put into a container .The leaked place is wiped off with dry cloth.

SECTION7 HANDLING AND STORAGE

Handling: No special protective clothing required for handling individual pack.
Storage: Store in a cool, dry place.

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 anti-static clothing.
Other Protect: No smoking, drinking and eating at working site.

SECTION9 PHYSICAL/CHEMICAL PROPERTIES

State: Solid
Odor: No odor
Solubility: Insoluble
PH: NA
Density: NA
Flash point : NA

SECTION10 STABILITY AND REACTIVITY

Stability: Stable under normal use
Conditions to Avoid:

When a battery is exposed to an external short circuit , crushes, deformation, high temperature above
100 degree C ,it will be the cause of heat generation and ignition. Direct sunlight and high humidity.

Materials to Avoid :

Conductive materials, water, strong oxidizers and strong acids.

Hazardous Decomposition Products:
Acrid or harmful gas is emitted during fire

SECTION11 TOXICOLOGICAL INFORMATION

Toxicity Data: There is no available data on the product itself. This product does not elicit toxicological properties during routine handling and use.

SECTION12 ECOLOGICAL INFORMATION

No data available.

SECTION13 DISPOSAL CONSIDERATION

Appropriate Method of Disposal of Substance:

Recommended methods for safe and environmentally preferred disposal.

Specified collection or disposal of lithium ion battery is required by the law like as “battery control law” in several nations .Collection or recycle of the battery is mainly imposed on battery’s manufacturer or importer in the nations recycle is required.

SECTION14 TRANSPORT INFORMATION

14.1The requirement of air transportation

The lithium battery should according with the International Air Transport Association (IATA DGR 62nd edition) requirements for transportation. The battery or cell should be packed and signed as following table (If the package according with PI-965 to PI-967 Section II, it is not classified as dangerous cargo)

UN NO	Proper Shipping Name	Power	Package requirements	Label which need to paste
UN3480	Lithium ion batteries	Cell ≤20Wh Battery≤100Wh State or charge≤30%rate design capcity	PI965 Section IB	Class 9 hazard label and lithium battery handling label
		Cell ＞20Wh Battery＞100Wh State or charge≤30%rate design capcity	PI965 Section IA	Class 9 hazard label
		Cell ≤20Wh Battery≤100Wh State or charge≤30%rate design capcity	PI965 Section II	Lithium battery handling label

Cells and/or batteries at a SOC of greater than 30% of their rated capacity may only be shipped with the approval or the State or Origin and the State or the Operator under the written condions established by those

authorities

Packages prepared according to Section II or PI965 must be offered to the operator separately from other cargo and must not be loaded into a unit load device before being offered to the operator.

Do not damage or mishandle this package. If package is damaged, batteries must be quarantined, inspected ,and repacked. Cells and batteries identified bu the manufacturer as being defective for safety reasons, or that have been damaged,that have the potential of producing a dangerous evolution of heat, fire recycling or disposal are prohibited from air transport unless approved by the appropriate national authority of the State of origin and the State of the operator.

The lithium battery should pass the UN38.3 test, if the battery can not pass the testing, it cannot transport, should redesign. If the batteries through the lithium battery only follow the UN3480 and the packing requirements for PI965, for the lithium batteries which installed in equipment follow the UN3481 and the packing requirements for PI967.

The lithium battery testing meets all requirements under UN Manual of Tests and Criteria Part III subsection 38.3

14.2The requirement of ocean shipping

According to International Maritime Dangerous Goods Code (39-18Edtion) to transport and according to the requirements of UN NO. 3480/3481 to management the goods, and require class II packaging firmly installation mutual isolation. Avoid short circuits. If the package contain more than 24 lithium batteries or more than 12 lithium battery packs, must provide the special program if package damage.

The clause 188 of IMDG requires the Watt of lithium ion batteries no more than 100 WH, and must mark the WHR ratio label. Otherwise, the battery and module should packed in a strong outer packaging or be contained in equipment.

The clause 230 of IMDG 39th require the lithium battery testing should meets all requirements under UN Manual of Tests and Criteria Part III , subsection 38.3

Shipping Name: Lithium ion batteries

Hazard Class:9*

UN Number: 3480/3481

Packing Group: Ⅱ*.

Codes and classifications according to：

＊ International regulations for transport Air IATA-DGR : section II/IB OF

PI965/966/967

＊International regulations for transport Sea IMDG CODE:special provision 188

＊National regulations for transport land GB12268-2012 and JT/T 617-2018: special provision 188

＊International regulations for ADR:special provision 188

The product is not restricted to IATA DGR according to corresponding packing instructions. The product is not restricted to IMO IMDG Code, GB12268-2012 and JT/T 617-2018 according to special provision 188.

SECTION15 REGULATORY INFORMATION

Regulations specifically applicable to the product:

Wastes Disposal and Public Cleaning Law [Japan]

Law for Promotion of Effective Utilization of resources[Japan]

US Department of Transportation 49 Code of Federal Regulations [USA]

SECTION16 OTHER INFORMATION

1.This safety data sheet is offered an agency who handles this product to handle it safely.

2.This safety data sheet provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.

3.The information contained in this Safety data sheet is based on the present state of knowledge And current legislation.

Reference:

Chemical substances information： Japan Advanced Information center of Safety and Health International

Chemical Safety Cards (ICSCs):

International Occupational Safety and Health Information Centre (CIS)

Dangerous Goods Regulations：

63rd Edition of IATA DGR Effective 1 January 2022: International Air Transport Association(IATA)；

IMDG Code-40-20th **Edition:**

40-20th Edition of IMDG CODE Effective 1 January 2020: International Maritime Organization(IMO)；

GB12268 Effective 1 November 2012：Standardization Administration of the People's Republic of China.

JT/T 617-2018 Effective 1 December 2018：Ministry of Transport of the People's Republic of China.