No.MSDS20200101008

**Product Name:** Li-ion Polymer Battery HB446486ECW 3.82V 3900mAh

**Revision Date:** Jan 01 2020

**Compiler:** Gao Min

**Checker:** Zhang Xinzhi

**Approver:** Feng Qingwei

欣旺达电子股份有限公司
业务专用章

Sunwoda Electronic Co.,Ltd.

# SAFETY DATA SHEET

# Li-Battery

## SECTION1 PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Li-ion Polymer Battery HB446486ECW 3.82V 3900mAh

**Company:** Sunwoda Electronic Co.,Ltd.

**Address:** Yuyongxing First Industrial Area, No.339，Changfeng Road, Changzhen Community, Yutang District, Guangming District, Shenzhen City, Guangdong Province, P.R. China

**E-mail:** gaomin@sunwoda.com

**Fax:** 0755-29516999

**Emergency phone:** 0755-29516888

**SDS number:** MSDS20200101008

**SDS date:** 2020.01.01

## 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. It is not restricted to IATA DGR and IMO IMDG CODE.

**Emergency Overview:**

Avoid contact and inhalation the electrolyte contained inside the battery.

## SECTION3 INFORMATION ON INGREDIENTS

**Product name:** Li-ion Polymer Battery HB446486ECW 3.82V 3900mAh

| Ingredient | Concentration | CAS No. | EC No. |
|---|---|---|---|

| Portion | Material name | Concentration range (wt %) |
|---|---|---|
| Positive electrode | Lithium transition metal oxidate ($Li[M]_m[O]_n$ *2) | 20~60 |
| Positive electrode's base | Aluminum | 1~10 |
| Negative electrode | Carbon | 10~30 |
| Negative electrode's base | Copper | 1~15 |
| Electrolyte | Organic electrolyte principally involves ester carbonate | 5~25 |
| Outer case | Aluminum, iron, aluminum laminated plastic | 1~30 |

## SECTION4 FIRST-AID MEASURES

**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.

**Skin Exposure:**

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

**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

**Flash Point:** N/A

**Auto-Ignition Temperature:** N/A

**Extinguishing Media:** Dry powder, $CO_2$

**Fire-Fighting:** 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.

## SECTION6 ACCIDENTAL RELEASE MEASURES

**Procedure of Personal Precaution:**

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 batteries 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.

It is recommended to discharge the battery to the end, handing in the abandoned batteries to related department unified, dispose of the batteries in accordance with approved local, state, and federal requirements. Consult state environmental protection agency and/or federal EPA.

## SECTION7 HANDLING AND STORAGE

**Handling:**

The batteries 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.

**Storage:**

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**

Batteries may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.

## 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.

**Other Protect:**

Not smoking, drinking and eating at working site. Wash thoroughly after handing. .

## SECTION9 PHYSICAL/CHEMICAL PROPERTIES

**Appearance:** Black and orange plastics cement shell
**Odor:** Odorless
**Melting Point/℃:** >350℃
**Solubility:** Partial slightly soluble in water
**Nominal Voltage:** 3.82V
**Rated Capacity:** 3900mAh

## SECTION10 STABILITY AND REACTIVITY

**Stability:**

Stable

**Conditions to Avoid:**

Heating, mechanical abuse and electrical abuse.

**Materials to Avoid:**

Do not immerse in seawater or other high conductivity liquids.

**Hazardous Decomposition Products**

N/A .

**Hazardous Polymerization**

N/A.

If leaked, forbidden to contact with strong oxidizers, mineral acids, strong alkalis, halogenated hydrocarbons.

## SECTION11 TOXICOLOGICAL INFORMATION

**Toxicity Data:**

Not available.

**Irritation Data:**

Inhalation, skin contact and eye contact are possible when the battery is opened.

Exposure to internal contents, the corrosive fumes will be very irritating to skin, eyes and mucous membranes. Overexposure can cause symptoms of non-fibrosis lung injury and membrane irritation.

## SECTION12 ECOLOGICAL INFORMATION

When promptly used or disposed the battery does not present environmental hazard. When disposed, keep away from water, rain and snow.

## SECTION13 DISPOSAL CONSIDERATION

**Appropriate Method Of Disposal Substance:**

If batteries are still fully charged or only partially discharged, they can be considered a reactive hazardous waste because of significant amount of not creation, or unconsumed lithium remaining in the spent battery. The batteries must be neutralized through an approved secondary treatment facility prior to disposal as a hazardous waste. Recycling of battery can be done in authorized facility, through licensed waste carrier.

## SECTION14 TRANSPROT INFORMATION

Shipping Name (UN Number): Lithium ion batteries (UN3480)

Lithium ion batteries packed with equipment (UN3481)

Lithium ion batteries contained in equipment (UN3481)

Hazard Classification: Class 9(Not restricted, can be shipped as normal cargo)

Organizations governing the transport of lithium batteries

| Area | Method | Organization | Special Provision |
|---|---|---|---|
| International | Air | IATA,ICAO | Packing Instruction 965 |
| International | Marine | IMO | SP188 |
| U.S.A | Air,Rail,Road,Marine | DOT | 49 CFR Section 173.185 |

Their regulations are based on the UN Recommendations. Each special provision provides specifications on exceptions and packaging for lithium ion batteries shipping. Packaging complies with the requirements of packing instruction 965 Section IB or 966 Section Ⅱ or 967 Section Ⅱ of IATA-DGR(61th edition) or SP 188 of IMO-IMDG Code(39-18 edition).

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.

## Section15 REGULATORY INFORMATION

**Law Information**

《Dangerous Goods Regulation》
《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 Substances Control Act》(TSCA)
《Consumer Product Safety Act》(CPSA)
《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 .

## SECTION16 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 purpose. 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.