Report No.: HT20150303CE07

MATERIAL SAFETY DATA SHEET

Product Name: Lithium Ion Battery

Type/ Model: WT 14500 3.7V 700mAh 2.59Wh

Revision Date: Mar. 03, 2015

Ningbo Huitong New Energy Technology Co.,Ltd

Material Safety Data Sheet

SECTION 1 - CHEMICAL AND COMPANY IDENTIFICATION

Name of Sample:

Lithium Ion Battery

Type:

WT 14500. 3.7V 700mAh 2.59Wh

SECTION 2 – HAZARDS IDENTIFICATION

Hazards Identification:

The battery has passed the test items of UN Model Regulations, Manual of Test and Criteria Section UN38.3

Emergency Overview:

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

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENT

Ingredient	Molecular formula	CAS No.	Concentration
Lithium Cobalt Oxide	$LiCoO_2$	12190-79-3	35%
DNP	$C_6H_6N_4O_4$	119-26-6	5%
Copper	Cu	7440-50-8	10%
Aluminum	Al	7429-90-5	5%
Graphite Power	C	7782-42-5	16%
Lithium hexafluorophosphate	LiPF6	21324-40-3	≤ 20%
PVDF	$(CH_2\text{-}CF_2)n$	24937-79-9	1%
Acetylene black	C	1333-86-4	＜1
Polyethylene	$(C_2H_4)n$	9002-88-4	5%
Ni	Ni	7440-02-0	2%

SECTION 4 – FIRST AID MEASURES

Eye Exposure:

In case of contact with eyes, flush with copious 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 some into contact with skin, immediately flush with plenty of water.
Inhalation Exposure: If inhaled the internals of battery vomiting. Seeking Immediate medical attention.
Ingestion Exposure: If swallowed, do not induce vomiting. Seek immediate medical attention.

SECTION 5 – FIRE FIGHTING MEASURES

Danger characteristic:

Exposure to excessive heat can cause venting of the liquid electrolyte. Battery may burst and release hazardous decomposition products when exposed to a fire situation.

Hazardous combustion products:

Corrosive gas may be emitted during fire.

Fire-Fighting method& media

The stuff must equip with filter mask (full mask) or isolated breathing apparatus. The stuff must wear the clothes which can defense the fire in the upwind direction. Remove the container to the open space as soon as possible .Spray water on the containers in the fireplace to keep them cool until finish extinguishment Media: plenty of water, dry chemical powder or carbon dioxide .

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Emergency treatment:

If the battery material is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. 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 waste.

SECTION 7 – HANDLING AND STORAGE

Handling:

1. Do not allow battery terminates to contact each other, or contact with other metals.
2. Do not put the cell or battery into a fire or heat it. Do not solder the cell directly. Do not use or leave the cell or battery in a place near fire or heaters.
3. Do not expose the battery to excessive physical shock or vibration.
4 Do not immerse, throw, and wet a battery in water.
5 Short-circuiting should be avoided. Short circuit will reduces the life of the battery and can lead to ignition of surrounding materials. Physical contact with to short- circuited battery can cause skin burn.
6. 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.
7. Place the cell beyond the child packing and container.
8. Do not connect the battery directly to an electric outlet or cigarette socket in a car.
9. Be sure to use the specified charger for battery, and follow the charging instructions correctly.
10. Do not mix old and new batteries together, neither with Ni-Cd, dry batteries or another manufacturer batteries or product.

Storage:

1. Batteries should be separated from other materials and stored in a noncombustible, well ventilated,

sprinkler-protected structure with sufficient clearance between walls and battery stacks.

2. Keep the sample in the cool, dry and well-ventilated place(temperature:-20~30degree C humidity:45~85%). Do not exposure to direct sunlight for long periods. Keep away from fire and heating sources. Don't keep the samples with oxidizer and acid.

3. charge the battery every 6 months to the amount specified by the manufacture, even if the battery is not used.

4. Equip with relevant types and quantities of the extinguishment instruments. The storage place should be equipped with suitable shelter materials for divulgence handling.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Control:

Keep away from heat and open flame. Supply with sufficient partial air exhaust. Store in a cool, dry place.

Respiratory Protection:

Not necessary under conditions of normal use. Wear self-contained breathing filter mask if the density exceed in the air. Wear breathing apparatus under the condition of emergency rescue or evacuation.

Eyes Protection:

Not necessary under conditions of normal use. Wear protective glasses if handling a leaking or ruptured battery.

Skin and Body Protection:

Not necessary under conditions of normal use. Wear fireproofing, gas defense clothes in case of handling a leaking or ruptured battery.

Hands Protection:

Not necessary under conditions of normal use. Wear chemical resistant rubber .

Other Protections:

No smoking, dining and drinking water in the workplace. Keep good habit of hygiene.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

black **Physical state:** solid.

Form:

prismatic

Odor:

Odorless

Solubility:

Insoluble in water.

SECTION 10 – STABILITY AND REACTIVITY

Stability:

Stable under normal temperature and pressure.

Distribution of Ban:

Strong oxidizer, strong acid and corrosives

Conditions to Avoid:

Fire source, heating source, disassemble, external short circuit, crushes, deformation, high temperature above 100℃, direct sunlight and high humidity, immerse in water or overcharge.

Hazardous Polymerization:

Will not occur.

Hazardous Decomposition Products:

Metal oxides, CO, CO_2

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute Toxicity:

N/A

Sub-acute and Chronic Toxicity:

N/A

Irritation Data:

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

Sensitization:

Lithium transition metal oxidate-Li(M)m(O)n: the nervous system of respiratory organs may be stimulated sensitively

Copper: Sensitization of the skin may be caused by the long-term or repetitive contact.

Mutagenicity:

No information is available.

Carcinogenicity:

No information is available.

Others:

Since the materials in this battery are sealed in the can, the potential for exposure to the components of the battery is negligible, when the battery is used as directed. However technical or electrical abuse of the battery may result in the release of battery contents.

SECTION 12 – ECOLOGICAL INFORMATION

Eco-toxicity:

No data available.

Biodegradable:

No data available.

Mobility in soil:

No data available.

Bioconcentration or biological accumulation:

No data available.

Other harmful effects:

Don’t abandon the battery into environment, may cause water or soil pollution.

SECTION 13 - DISPOSAL CONSIDERATIONS

Appropriate Method of Substance:

The battery should be completely discharged prior to disposal in order to prevent short circuit. The battery contains recyclable materials. It is suggested recycle. Refer to National or Local regulations before handling. Disposal of the battery should be performed by permitted, professional disposal firms knowledgeable in National or Local regulations of hazardous waste treatment and hazardous waste transportation.

SECTION 14 – TRANSPORT INFORMATION

IATA:

Proper Shipping Name: Lithium ion batteries/packed with equipment/contained in equipment

UN Number: UN3480/UN3481

Hazard Class:
9

Packing Group:
/

The battery has passed the test items of UN Model Regulations, Manual of Tests and Criteria, Part III, sub-section 38.3. According to IATA DGR 56th Edition (Effective 1 January-31December 2015), PACKING INSTRUCTION 965 ~ 967 of section II or IB for transportation.

IMO:

Proper Shipping Name: Lithium ion batteries

UN Number: UN3480/UN3481

Hazard Class: 9

Packing Group:/

The battery has passed the test items of UN Model Regulations, Manual of Tests and Criteria, Part III, sub-section 38.3. The goods is not restricted to IMO IMDG Code (Amend 37-2014) according to special provision188.

SECTION 15 – REGULATORY INFORMATION

US DOT:

Effective December 29, 2004, the DOT requires that the outside of each package the contains primary lithium batteries, regardless of size of number of batteries, batteries, be labeled with the following statement:" PRIMARY LITHIUM BATTERIES-FOBIDDEN FOR TRANSPORT ABOARD PASSENGER AIRCRAFT", The labeling requirement covers shipments via highway, rail vessel or cargo-only aircraft and covers all shipment inside, into or out of the US. The label must be in contrasting color and the letters must be 12mm (0.5 in) in height for packages weighing more than 30Kg and 6mm (0.25 in) in height for packages weighting less than 30Kg.

SECTION 16 – ADDITIONAL INFORMATION

Date: 2015-1-3

Department:

Ningbo Huitong New Energy Technology Co., Ltd
Room 902,Block B,Building Liyuanshangdu,West Road,Ningbo,China
Tel.:0086-574-87681913 Fax.: 0086-574-87681912

Other Information:

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