PWS (COMERCIAL OFFSHORE DE MACAU) LIMITADA
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材料安全数据表

Material Safety Data Sheet

MSDS：PWS2014-00920006

貨 物 名 稱: 電動自行車用鋰離子電池

Name of Goods: **E-bike Li-ion Battery**

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材料安全資料表

Material Safety Data Sheet

1. Identification of the product and supplier（产品和厂商信息）	
样品名称 Name of goods	电动自行车用锂离子电池 E-bike Li-ion Battery
样品型号 Type/Mode	KL36HS32B.082 / 36V / 6.75Ah / 243 Wh
制造商 Manufacturer	- **PWS (COMERCIAL OFFSHORE DE MACAU) LIMITADA**
制造商地址 Manufacturer address	ALAMEDA DR.CARLOS D'ASSUMPCAO N'160-206 13 ANDAR , A EDIF CENTRO COMMERCIAL TONG NAM AH MACAU
鉴定依据 Inspection according to	- EEC Directive 93/112/EC 联合国《关于危险品货物运输的建议书》 UN "Recommendations on the TRANSPORT OF DANGEROUS GOODS"
紧急联系电话 Emergency telephone call	Tel: 852 - 2687 6323

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2. 样品所含元素的含量及危险性一览表

COMPOSITION / INFORMATION ON INGREDIENTS

材料及组分 MATERIAL OR INGREDIENT	重量含量 Wt %	备注
正极材料 Positive electrode （ lithium nickel manganese cobalt oxide）	12.78%~22.36%	343.04~600.08g/each sample
负极材料 Negative electrode （carbon）	6.39%~12.78%	
电解液 Electroyte （Organic electrolyte mainly composed of alkyl carbonate）	6.39%~12.78%	
铅 Lead	free	
镉 Cadmium	free	
汞 Mercury	free	
3主要危险性鉴定	鉴定结果	
爆炸危险性	该物品不属于爆炸危险品	
易燃危险性	该物品不属于易燃危险品	
氧化危险性	该物品不属于氧化危险品	
毒害危险性	该物品不属于毒害危险品	
放射危险性	该物品不属于放射危险品	
腐蚀危险性	该物品不属于腐蚀危险品	
其他危险性	该物品为锂离子电池,瓦时率313Wh - 417.60Wh，属于IMDG CODE 和IATA DGA 中的第九类危险品	

4. First aid measures（急救措施）

Inhalation: Remove from exposure, rest and keep warm, In severe cases obtain medical attention.

Skin contact: Wash off skin thoroughly with tap water. Remove contaminated clothing and wash before reuse. In severe cases obtain medical attention.

Eye contact: Irrigate thoroughly with water for at least 15 minutes. Obtain medical attention
Ingestion: Wash out mouth thoroughly with water and give plenty of water to drink. Obtain medical attention.
Further treatment: All cases of eye contamination, persistent skin irritation and casualties who have swallowed this substance or been affected by breathing its vapours should be seen by a Doctor.

5.Fire-fighting measures（灭火措施）

CO2 extinguishers or copious quantities of water-based foam can be used to cool down burning Li-MnO2 cells and batteries, as long as the extend of the fire has not progressed to the point that the Lithium metal they contain is exposed.

Use only metal (Class D) extinguishers on raw lithium.

Extinguishing Media: Use water or CO2 on burning Li-MnO2 cells or batteries and class D fire extinguishing agent only on raw lithium.

6. Accidental release measures（突发事故处理措施）

Do not breathe vapours or touch liquid with bare hands.

If the skin has come into contact with the electrolyte it should be washed thoroughly with water.

Earth or sand should be used to absorb the exudation, seal leaking battery and earth in a heavy duty polythene bag and dispose of as Special Waste in accordance with local regulations.

7. Handling and storage（(使用和储存)

Handling: Do not short circuit or expose to temperatures above the temperature rating of battery. Do not recharge, over-discharge, force discharge, immerse, puncture or crush.

Storage: Store in a cool place but prevent condensation on cells and batteries. Elevated temperatures can result in shortened battery life and degrade performance.
Do not store batteries in high humidity environments for long periods of times.

Other: Lithium Manganese dioxide batteries are not rechargeable and should not be tentatively charged.

Follow Manufacturers recommendations regarding maximum recommended currents and operating temperature range.

Applying pressure on deforming the battery may lead to disassembly.

8. Exposure controls/personal protection （个人保护）

Respiratory protection: In all fire situations, use self-contained breathing apparatus.

Hand protection: In the event of leakage wear gloves.

Eye protection: Safety glasses are recommended during handling.

Other: In the event of leakage, wear chemical apron.

9. Physical and chemical properties(物理和化学特性)

Appearance: a rectangular parallelepiped
Ref, No.:RZUN2010-0496

Odour: 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 （稳定性和反应性）

Product is stable under conditions described in Section 7.

Conditions to avoid: Heat above 70°C or incinerate. Deform. Mutilate. Crush. Pierce.

Disassemble. Recharge. Short circuit. Expose over a long period to humid conditions.

Materials to avoid: Oxidising agents, alkalis, water.

Hazardous reactions: Lithium metal reacts with water to produce highly flammable gasses.

Hazardous decomposition reactions: Toxic Fumes, and may form peroxides.

11. Toxicological information（有毒有害信息）

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(生态信息)

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.

13. Disposal consideration（回收考虑）

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（运输信息）

Label for conveyance: class 9 "Miscellaneous Dangerous Goods" label

UN Number: UN3480

Shipping name: Lithium ion Batteries

Hazard Classification: Depending on their watt-hour rating , the tested battery belong to class 9 materials, The goods shall be complied with the requirements of Section of Packing Instructions 965 Section IA of 55th DGR Manual of IATA or Packing Instructions 903 of IMDG CODE (2014 edition), including the passing of the UN38.3 test

Packing Group: II

EmS No: F-A,S-I

Marine pollutant: No

15. Regulation information（法规信息）

Here below are shown the nature of special risks and the advices of caution.

Nature of special risks
R14/15 (reacts with water and yields flammable gases)
R21 (harmful in contact with skin)
R22 (harmful if swallowed)
R35 (causes severe burns)
R41 (risk of serious damage to the eye)
R42/43 (may cause sensitation by inhalation and skin contact)

Safety advices
S2 (keep out of reach from children)
S8 (keep away from moisture)
S22 (do not breathe dust)
S24 (avoid contact with skin)
S26 (in case of contact with eyes, rinse immediately with plenty of water and seek medical attention)
S36 (wear suitable protective clothing)
S37 (wear suitable gloves)
S43 (in case of fire use extinguisher type D. DO NOT USE WATER)
S45 (in case of incident or indisposition seek medical attention)

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16. Other information（其他信息）

This information has been compiled from sources considered to be dependable and is, to the best of our knowledge and belief, accurate and reliable as of the date compiled, However, no representation, warranty (either expressed or implied) or guarantee is made to the accuracy, reliability, or completeness of the information contained herein.

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