安全技术说明书(SDS)编制报告
MATERIAL SAFETY DATA SHEET

Date: 2025-05-30
File No.: GW-SDS-250530-01

1. 企业和物质标识
Identification of the substance/preparation and of the company/undertaking

产品名称：可充电锂离子电池系统
型号（1）：GW112.6-BAT-AC-G10
型号（2）：GW102.4-BAT-AC-G10
型号（3）：GW92.1-BAT-AC-G10
型号（4）：GW81.9-BAT-AC-G10
型号（5）：GW71.6-BAT-AC-G10
型号（6）：GW61.4-BAT-AC-G10

Product name: Rechargeable Li-ion Battery System
Model（1）: GW112.6-BAT-AC-G10
Model（2）: GW102.4-BAT-AC-G10
Model（3）: GW92.1-BAT-AC-G10
Model（4）: GW81.9-BAT-AC-G10
Model（5）: GW71.6-BAT-AC-G10
Model（6）: GW61.4-BAT-AC-G10

制造商/供应商识别
公司:固德威科技股份有限公司
咨询电话：中国苏州市新区紫金路 90 号，邮编：215011
紧急电话:+86—51—69582260
Manufacturer/supplier identification
Company: GoodWe Technologies Co.,Ltd.
Contact for information: No.90 Zijin Rd., New District, Suzhou, 215011, China
Emergency telephone No.: +86-512-69582260

2. 成分和组成信息
Composition/information on ingredients

成分 Component	CAS No.	EC No.	含量范围 Concentration (weight percent, %)
Lithium iron phosphate 磷酸铁锂	15365-14-7	476-700-9	49%
Phosphate(1-),hexafluoro,lithium 磷酸盐	21324-40-3	244-334-7	3%
Artificial graphite 人造石墨	7782-42-5	231-955-3	24%
Aluminum	7429-90-5	231-072-3	6%

铝			
Copper 铜	7440-50-8	231-159-6	13%
Polypropylene 聚丙烯	9003-07-0	-	5%

3. 危险识别
Hazards identification

健康危害（急性及慢性）：
对于电池单元，化学材料储存在一个密封的罐中，该罐设计用于承受，在正常使用过程中遇到的温度和压力。因此在正常使用过程中，没有物理着火或爆炸的危险，以及危险物质泄漏的化学危险。
然而如果暴露在火中，添加机械冲击分解或通过滥用添加电应力罐体可能破裂，危险品可能泄漏。此外，如果受到强烈加热，火灾周围可能会释放出刺鼻的气体。

Health Hazards (Acute and Chronic):
For the battery cell, chemical materials are stored in a hermetically sealed can, designed to withstand temperatures and pressures encountered during normal use. As a result, during normal use, there is no physical danger of ignition or explosion and chemical danger of hazardous materials leakage.
However, if exposed to a fire, added mechanical shocks, decomposed, or added electric stress by misuse the cell case will be breached and hazardous materials may be released. Moreover, if heated strongly by the surrounding fire, acrid gas may be emitted.

致癌性：
NTP：无　　IARC 专题报告：无　　OSHA 监管：无

Carcinogenicity:
NTP: None　　IARC Monograph: None　　OSHA Regulated: None

暴露通常会加重医疗状况：
急性暴露通常不会加重任何医疗状况。

Medical Conditions Generally Aggravated by Exposure:
An acute exposure will not generally aggravate any medical condition.

人类健康影响：
吸入：电解质的蒸汽具有麻醉作用，并刺激呼吸道。
皮肤接触：电解质的蒸汽刺激皮肤。电解质皮肤接触会引起疼痛和对皮肤的刺激。
眼睛接触：电解质产生的蒸汽刺激眼睛。电解质眼睛接触会引起疼痛和对眼睛的刺激。可能会发生眼睛的炎症。

Human health effects:
Inhalation: The steam of the electrolyte has an anesthesia action and stimulates a respiratory tract.
Skin contact: The steam of the electrolyte stimulates a skin. The electrolyte skin contact causes a sore and the stimulation on the skin.
Eye contact: The steam of the electrolyte stimulates eyes. The electrolyte eye contact causes a sore and the stimulation on the eye. Inflammation of the eyes may occur.

环境影响：
请不要将电池扔到自然环境中。

Environmental effects:
Since a battery cell remains in the environment, do not throw out it into the environment.

具体危害：
如果电解质与水接触，可能会产生有害的氟化氢。
由于泄漏的电解质是易燃液体，请不要靠近火源。

Specific hazards:
If the electrolyte contacts with water, it may generate detrimental hydrogen fluoride.
Since the leaked electrolyte is inflammable liquid, do not bring close to fire.

4. 急救措施 First aid measures

吸入后接触：让受害者擤鼻涕，漱口。如有必要，寻求医疗帮助。
皮肤接触后：立即去除污染的衣物和鞋子。立即用肥皂和水清洗异物或接触部位。
眼睛接触后：不要揉眼睛。立即用清水连续冲洗眼睛至少 15 分钟。寻求医疗帮助。
误食后接触：使受害者呕吐。立即寻求医疗救助。

After inhalation contact: Make the victim blow his/her nose, gargle. Seek medical attention if necessary.
After skin contact: Remove contaminated clothes and shoes immediately. Immediately wash extraneous matter or contact region with soap and plenty of water.
After eye contact: Do not rub eyes. Immediately flush eyes with water continuously for at least 15 minutes. Seek medical attention.
After ingestion contact: Make the victim vomit. Immediately seek medical attention.

5. 消防措施 Fire-fighting measures

灭火介质：大量的水、二氧化碳气体、氮气、化学粉末灭火介质和灭火泡沫。
灭火方法：电池与其他可燃物同时燃烧时，采用与可燃物相适应的灭火方法，尽量从上风口灭火。
易燃极限：不可用

Extinguishing Media: Plenty of water, CO2 gas, nitrogen gas, chemical powder fire extinguishing medium and fire foam.
Specific methods of fire-fighting: When the battery burns with other combustibles simultaneously, take fire extinguishing method which corresponds to the combustibles. Extinguish a fire from the windward as much as possible.
Flammable Limits: Not available

6. 意外释放措施 Accidental release measures

优选的应对措施是离开该区域，让电池冷却，让蒸气消散。避免皮肤，避免眼睛接触或吸入蒸气。用吸收剂清除溢出的液体并焚化。
The preferred response is to leave the area and allow the batteries to cool and the vapors to dissipate. Avoid skin and eye contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerate.

7. 处理和储存 Handling and storage

避免机械或电气滥用。如果拆卸、压碎或暴露，电池可能会爆炸或引起烧伤，不要短路或高温。不要短路或安装错误极性。
Avoid mechanical or electrical abuse. Batteries may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.

8. 暴露控制/个人保护 Exposure controls/personal protection

特定控制参数：在正常使用条件下不需要。
个人防护装备：在正常使用条件下不需要。
呼吸保护（指定类型）：在正常使用的情况下不需要。
通风：在正常使用的情况下不需要通风。
防护手套：在正常使用情况下不需要。
眼部防护：在正常使用情况下不需要。
其他防护（服装或设备）：在正常使用情况下不需要。

Specific control parameter: Not necessary under conditions of normal use.
Personal protective equipment : Not necessary under conditions of normal use.
Respiratory protection (Specify Type): Not necessary under conditions of normal use.
Ventilation: Not necessary under conditions of normal use.
Protective Gloves: Not necessary under conditions of normal use.
Eye protection: Not necessary under conditions of normal use.
Other Protective(Clothing or Equipment): Not necessary under conditions of normal use.

9. 物理和化学性质 Physical and chemical properties

外观
物理状态:固体
形状:圆柱形
颜色:金属色
气味:无气味
水质:无
特定温度:物理状态的温度范围变化。
闪光点:无
爆炸性能:无
密度:无
溶解性:有溶剂指示:不溶于水

Appearance
Physical state: Solid
Form: Cylindrical
Color: Metallic color
Odor: No odor
PH: N/A
Specific temperatures: Temperature ranges changes in physical state occur.
Flash point: N/A

Explosion properties: N/A
Density: N/A
Solubility: with indication of the solvent(s): Insoluble in water

10. 稳定性和反应性
Stability and reactivity

稳定性：稳定
避免条件：当电池暴露于外部短路、挤压、变形、高于 100° C 的高温时，会引起发热和着火。避免直射阳光和高湿度。
危险分解：或副产品：火灾过程中会释放出刺鼻或有毒气体。
避免的材料：导电材料、水、海水、强氧化剂和强酸。
不会发生危险的聚合反应。

Stability: Stable
Conditions to Avoid: When cell is exposed to an external short-circuit, crushes, deformation, high temperature above 100 degree C, it will cause heat generation and ignition. Avoid direct sunlight and high humidity.
Hazardous Decomposition: or By-products: Acrid or harmful gas is emitted during fire.
Materials to avoid: Conductive materials, water, seawater, strong oxidizers and strong acids.
Hazardous polymerization will not occur.

11. 毒性信息
Toxicological information

急性毒性：
铜：60-100 毫克大小的颗粒可引起胃肠道紊乱，伴有恶心和炎症。TD Lo，皮下注射---兔---375 毫克/千克
有机电解质：LD50，口服 - 大鼠 2000 毫克/千克或更多
进一步的毒理学信息：
铝：长期吸入粗颗粒或烟雾，有可能导致肺损伤（铝肺）。
石墨：长期吸入高浓度的石墨粗颗粒可能会导致

Acute toxicity:
Copper: 60-100mg sized coarse particulate causes a gastrointestinal disturbance with nausea and inflammation. TDLo, hypodermic - Rabbit 375mg/kg
Organic electrolyte: LD50, oral - Rat 2,000mg/kg or more
Further toxicological information:
Aluminum: By the long-term inhalation of coarse particulate or fume, it is possible to cause lung damage (aluminum lungs).
Graphite: Long-term inhalation of high levels of graphite coarse particulate may cause lung disease or a tracheal disease.

12. 生态信息
Ecological information

生态毒性效应：无相关信息。
可生物降解：无相关信息。
土壤移动性：无资料。
生物富集或生物蓄积：无资料。

其他有害影响：不要将电池丢弃在环境中，可能会造成水污染或土壤污染。

Ecotoxic effects： No information is available.
Biodegradable ： No information is available.
Mobility in soil ： No information is available.
Bioconcentration or biological accumulation： No information is available.
Other harmful effects： Don' t abandon the battery into environment, may cause water or soil pollution.

13. 处理方式
Disposal considerations

废弃化学品：在处置前应参考相关国家和地方法律法规。
受污染的包装：容器在空时仍可能存在化学危险。远离热源和
火灾的点火源。如果可能的话，返回供应商进行回收。
处置建议：参见废物化学品和受污染的包装。

Waste Chemicals： Before disposal should refer to the relevant national and local laws and regulation.
Contaminated Packaging： Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.
Disposal Recommendations： Refer to Waste chemicals and Contaminated packaging.

14. 运输信息
Transport information

锂离子电池分为锂离子电池（包括锂离子电池聚合物电池）和锂离子电池（包括锂合金电池）。
锂离子蓄电池以“锂离子蓄电池”、“锂离子蓄电池成套设备”或“锂
“设备中含有的电池”在运输时可能不被归类为“危险品”
符合《IATA-DGR》第 II 节或《IMO-IMDG 守则》第 188 条特别规定。
根据 IATA-DGR 第 62 版（2021 年 1 月 1 日-12 月 31 日生效），航空运输
联合国编号 UN 3480
正确的运输名称：锂离子电池
危险等级：9 级
包装要求：I B 部分包装说明 965
海运，根据国际海事组织《国际散装运输液化气体规则》（修正案 39-18）联合国编号：UN 3480
正确的运输名称：锂离子电池
危险等级：9 级
包装指令：非限制性货物
编号：F-A，S-I

Lithium batteries are classified to Lithium ion batteries (including lithium ion polymer batteries) and Lithium metal batteries (including lithium alloy batteries).
Lithium batteries shipped as "Lithium batteries", "Lithium batteries packed with equipment", or "Lithium batteries contained in equipment" may not be classified as "Dangerous Goods" when shipped in accordance with "PI965-970 section II of IATA-DGR" or "special provision 188 of IMO-IMDG Code".
Air transportation, according to IATA-DGR 62nd Edition (Effective 1 January-31December 2021)
UN Number： UN 3480
Proper Shipping Name ： LITHIUM ION BATTERIES

Hazard Class ： Class 9
Packaging requirement ： PACKING INSTRUCTION 965 of section IB
Sea transportation, according to IMO IMDG Code (Amend 39-18) UN Number ： UN 3480
Proper Shipping Name ： LITHIUM ION BATTERIES
Hazard Class ： Class 9
Package instruction ： Not-restricted goods
EmS No. ： F-A, S-I

15. 监管信息
Regulatory information

Dangerous Goods Regulation (DGR)
Recommendations on the Transport of Dangerous Goods Model Regulations International Maritime Dangerous Goods (IMDG)
Occupational Safety and Health Act (OSHA)
Toxic Substances Control Act (TSCA)

危险品条例（DGR）
关于危险货物运输的建议《示范条例》国际海事组织
危险品（IMDG）
职业安全与健康法（OSHA）
有毒物质控制法（TSCA）

16. 其他资料信息
Other information

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