



Material Safety Data Sheet

化学品安全技术说明书

ReportNo/报告编号
号

ZHT-230814029S

Applicant/申请
商.....

ZENDURE TECHNOLOGY CO., LIMITED
征途科技有限公司

Applicant address/申
请商地址....

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香港九龙观塘鲤鱼门道二号新城工商中心 517 室

Product name/产品
名称.....

Add-on Battery AB2000
扩展电源 AB2000

Product Model/产品
型号.....

ZDAB2000

Trademark/商
标.....

ZENDURE
SuperCharged[®]

Date of issue/发行日
期.....

Aug. 15, 2023

Guangdong Zhonghan Testing Technology Co., Ltd.

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**Material Safety Data Sheet/化学品安全技术说明书**

Product name/ 产品名称	Add-on Battery AB2000 扩展电源 AB2000		
Manufacture/ 制造商	ZENDURE TECHNOLOGY CO., LIMITED 征途科技有限公司		
Address/制造商 地址:	RM 517, NEW CITY CENTRE, 2 LEI YUE MUN ROAD, KWUN TONG, KOWLOON.HK 香港九龙观塘鲤鱼门道二号新城工商中心 517 室		
Telephone number/电话:	--	Emergency telephone/ 紧急联系电 话:	--
Fax/传真:	--	E-mail/邮 箱::	--

SAMPLE DESCRIPTION/样品描述:

The role of Add-on Battery AB2000 is ommonly used in electric vehicles, energy storage systems and other applications.

扩展电源 AB2000 的作用被广泛用于电动汽车、储能系统和其他应用中。

Version number/版本号: V 1.0

Report Record/报告记录

No.	Report No. 报告编号	Date of issue 发行日期	Report status 发行日期	Note 备注
1	ZHT-230814029S	Aug. 15, 2023	First issue/首次发行, valid/有效	--

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Section 1- Chemical Product & Company Identification

第一部分 化学品及企业标识

Chinese name 中文名称	扩展电源 AB2000	English name 英文名称	Add-on Battery AB2000
Name of the supplier 供应商名称	ZENDURE TECHNOLOGY CO., LIMITED 征途科技有限公司	Address of Supplier 供应商地址	RM 517 NEW CITY CENTRE, 2 LEI YUE MUN ROAD, KWUN 香港九龙观塘鲤鱼门道二号新城工商中心 517 室
Tel. of the supplier 供应商电话	13534254553	Emergency tel. of supplier 供应商应急电话	--
Fax of the supplier 供应商传真	--	Email of Supplier 供应商邮箱	kang.xiong@zendure.com

Section 2- Hazards Identification

第二部分 危险性概述

Hazard Description 危险性描述:	Not dangerous with normal use. Do not dismantle, open or shred the battery ingredients contained within or their ingredients products could be harmful. 正常使用没有危险，不能拆解、打开或分解电池，里面的材料或成分是有害的。
Primary Route(s) of Exposure 接触途径	Inhalation, Ingestion, Skin contact and Eye contact. 吸入、食入、皮肤接触、眼睛接触。
Potential Health Effects 潜在健康影响	Inhalation: Vapors or mists from a ruptured battery may cause respiratory irritation. 吸入：破裂的电池散发出来的气雾会引起呼吸道刺激。 Ingestion: The battery ingredients contained within or their ingredients products can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract. 食入：电池的组成成分或原料可以导致嘴，食道和胃肠道的严重化学烧伤。 Skin: Skin contact with contents of an open battery can cause severe irritation or burns to the skin. 皮肤：皮肤接触到电池的内部化学材料可能会导致严重的刺激或烧伤皮肤。 Eye: Eye contact with contents of an open battery can cause severe irritation or burns to the eye. 眼睛：眼睛接触到电池的内部化学材料可能会导致严重的刺激或烧伤眼睛。



Section 3- Composition/Information on Ingredients

第三部分 成分/组成信息

Chemical Name 化学名称	Concentration or concentration ranges (%) 浓度或浓度范围 (%)	CAS Number CAS 号 (化学文摘索引登记号)
Lithium Iron Phosphate (LiFePO ₄)	35-38	15365-14-7
Graphite 石墨	20-22	7782-42-5
Aluminum 铝	7-9	7429-90-5
Copper 铜	9-11	7440-50-8
Electrolyte		-
Ethylene carbonate 碳酸乙烯酯		96-49-1
Dimethyl carbonate 碳酸二甲酯		616-38-6
Ethyl methyl carbonate 甲基碳酸乙酯	15-20	623-53-0
Lithium Hexafluorophosphate 六氟磷酸锂		21324-40-3

Note: CAS number is Chemical Abstract Service Registry Number.
注意: CAS 号是化学文摘服务注册号。
N/A=Not apply.
N/A =不适用。



Section 4- First Aid Measures

第四部分 急救措施

Inhalation 吸入	Remove source of contamination or move victim to fresh air. Obtain medical advice. 移除污染源或者将受害者移至新鲜空气处。寻求医生建议。
Ingestion 食入	Please rinse mouth thoroughly with water. Induce vomiting under the guidance of professional personage. Please seek medical treatment in time. 立即用清水漱口，在专业人士的指导下催吐，速就医。
Skin contact 皮肤接触	Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid. 脱下已污染衣服，用大量的水冲洗至少 15 分钟，速就医。
Eye contact 眼睛接触	Irrigate with flowing water for 15 minutes. If irritation persists, consult a physician. 用流动水冲洗 15 分钟，如刺激持续发生，请求助于医生。
Inhalation 吸入	Remove source of contamination or move victim to fresh air. Obtain medical advice. 移除污染源或者将受害者移至新鲜空气处。寻求医生建议。



Section 5- Fire Fighting Measures

第五部分 消防措施

Characteristics of Hazard 危险特性	Toxic fumes, gases or vapors may evolve on burning. 火灾时可释放有害浓烟、气体或者蒸汽。
Harmful combustion product 燃烧产生的危险物品	Fire, excessive heat and/or over voltage conditions may produce hazardous decomposition products (i.e. electrolyte fumes and hazardous organic vapors). Vapors may be heavier than air and may travel along the ground or be moved by ventilation to an ignition source. 火灾、过热和/或过电压条件可能产生危险的分解产物（即电解质烟雾和危险的有机蒸汽）。蒸汽可能比空气重，并可能沿着地面传播，或通过通风移动到火源。
Fire-extinguishing Methods and Extinguishing Media 灭火方法及灭火剂	Plenty of water, Carbon dioxide gas, Chemical powder, fire extinguishing medium and foam. 大量的水、二氧化碳气体、化学粉末、灭火介质和泡沫。
Fire fighting precautions 灭火注意事项	Use a positive pressure self-contained breathing apparatus if batteries are involved in fire. Full protective clothing is necessary. During water application, caution is advised as burning pieces of flammable particles may be ejected from the fire. 如果电池涉及火灾，请使用自给式正压呼吸器。全套防护服是必要的。在用水时，应小心，因为燃烧的可燃颗粒可能会从火中喷出。



Section 6- Accidental Release Measures

第六部分 泄露应急处理

Personal Considerations 个人注意事项	Restrict access to area until completion of clean-up. Do not touch the spilled material. Wear adequate personal protective equipment as indicated in Section 8. 限制区域，直到完成清理工作。请勿触摸泄漏的材料。穿戴适当的个人防护设备，如第 8 部分所示。
Environmental Precautions 环境保护措施	Prevent material from contaminating soil and from entering sewers or waterway. 防止物质污染土壤和进入下水道或水道。
Methods and materials for Containment 方法和材料控制	Stop the leak if safe to do so. Contain the spilled liquid with dry sand or earth. Clean up spills immediately. 出于安全，阻止泄漏，可以用干砂或沙土来遏制液体泄露，立即清理泄漏。
Methods and materials for cleaning up 清理的方法和材料	Absorb spilled material with an inert absorbent (dry sand or earth). Scoop contaminated absorbent into an acceptable waste container collect all contaminated absorbent and dispose of according to directions in Section 13. Scrub the area with detergent and water; collect all contaminated wash water for proper disposal. 用惰性吸收剂(干砂或沙土)吸收溢出的材料。污染物转移到可吸收废物的容器。收集所有受污染的吸收剂和根据第 13 部分的指令处置。用洗涤剂和水清洁污染区域,收集所有受污染的洗涤水进行适当处置。



Section 7- Handling and Storage

第七部分 操作处置与储存

<p>Handling 操作</p>	<p>Do not open or disassemble the batteries. Do not expose the batteries to fire or store near open flame. Do not mix batteries of varying sizes or chemistries. Do not connect the positive and negative battery terminals with conductive material or throw into fire. Do not heat or solder the batteries. Keep the batteries in plastic or non-conductive trays. Do not expose batteries to direct sun light for a prolonged time.</p> <p>请勿打开或拆卸电池。不要将电池暴露在火灾中或储存在明火附近。不要混合不同大小或化学成分的电池。不要用导电材料连接电池正负极或着火。不要加热或焊接电池。将电池放在塑料或非导电的托盘中。不要让电池长时间暴露在阳光下。</p>
<p>Storage 储存</p>	<p>Batteries should be stored in a well ventilated, cool area with sufficient clearance between batteries and walls. Store the batteries in a cool (below 30°C) area and away from moisture. Keep the batteries away from sources of heat, open flames, food and drink. Do not store the batteries above 55°C or below -30°C . Storing at elevated temperatures may reduce the life of batteries. Keep batteries away from strong oxidizers and acids. Elevated temperature storage such as 100°C may result in battery venting flammable liquid and gases</p> <p>电池应储存在通风良好、凉爽的区域，电池和墙壁之间有足够的间隙。将电池储存在凉爽的（低于 30 摄氏度）区域，远离潮湿。让电池远离热源、明火、食物和饮料源。不要储存在 55 摄氏度以上或-30 摄氏度以下的电池。在高温下储存可能会降低电池的使用寿命。让电池远离强氧化剂和酸氧化剂。高温储存，如 100 C，可能导致电池排放易燃液体和气体</p>



Section 8 - Exposure Controls/Personal Protection

第八部分 接触控制和个体防护

Engineering Controls 工程控制	<p>No engineering controls are required for normal operation. In case of cell leakage, increase the ventilation and use self contained full-face respiratory equipment.</p> <p>正常运行不需要进行工程控制。如果出现电池泄漏，应增加通风量，并使用独立的全面呼吸设备。</p>
Personal Protective Equipment 个人防护设备	<p>Not required during normal use of the battery 在正常使用电池时不需要</p> <p>In the event of a ruptured battery or fire 如果发生电池破裂或发生火灾</p> <p>Respiratory Protection: In case of battery venting, provide as much ventilation as possible. Avoid confined areas with venting cell cores. Respiratory Protection is not necessary under conditions of normal use. Not necessary under conditions of normal use. 能多的通风。避免有通风电池芯的密闭区域。在正常使用的条件下，不需要进行呼吸保护。在正常使用条件下不必要。</p> <p>Hand Protection: Chemical protective gloves. 手防护：化学防护手套。</p> <p>Eye protection: Self-contained full-face respiratory equipment. 护眼防护：独立的全面部呼吸设备。</p> <p>Skin and body protectio Personal Protection is recommended for venting battery: Respiratory Protection, Protective Gloves, Protective Clothing and safety glass with side shields. 皮肤和身体的防护排气电池推荐个人防护：呼吸防护、防护手套、防护服和带侧护罩的安全玻璃。</p>



Section 9- Physical and Chemical Properties

第九部分 理化特性

Physical State 物理状态	Form: Solid 形态: 固体		
	Color: Light gray 颜色: 浅灰色		
	Odour: Odorless 味: 无气味		
Change in condition 变化条件:			
pH, with indication of the concentration 有浓度指示	Not applicable 不适用	Melting point/freezing point 熔点/凝固点	Not applicable 不适用
Boiling Point, initial boiling point and Boiling range 沸点, 初沸点	Not applicable 不适用	Flash Point 闪点	Not applicable 不适用
Upper/lower flammability or explosive limits 上/下燃烧或爆炸限值	Not applicable 不适用	Wapor Pressure 蒸汽压	Not applicable 不适用
Vapor Density: (Air = 1) 蒸汽密度: (空气= 1)	Not applicable 不适用	Density/relative density 密度/相对密度	Not applicable 不适用
Solubility in Water 水溶性	Insoluble 不能溶解	n-octanol/water partition coefficient 正辛醇/水分配系数	Not applicable 不适用
Auto-ignition temperature 自燃温度	Not applicable 不适用	Decomposition temperature 分解温度	Not applicable 不适用
Viscosity 粘度	Not applicable 不适用	Flammability (soil, gas) 易燃性 (土壤, 气体)	Not applicable 不适用



Section 10 - Stability and Reactivity

第十部分 稳定性和反应性

Stability 稳定性	Stable under normal temperatures and pressure. 在正常温度和压力下保持稳定。
Reactivity 反应性	When a battery is exposed to high temperatures, crushes, deformation, and external short circuit may result in venting harmful gases and volatile organics. In the event of rupture, hydrogen fluoride gas is produced in reaction with water. 当电池暴露在高温下时，挤压、变形和外部短路可能会导致有害气体和挥发性有机物的排放。在破裂时，氟化氢气体与水反应。

Section 11 - Toxicological Information

第十一部分 毒理学信息

Irritation 刺激	The electrolytes contained in the battery can irritate eyes with any contact. Prolonged contact with skin or mucus membrane may cause irritation. 电池中含有的电解质通过任何接触都会刺激眼睛。长期接触皮肤或粘液膜可能会引起刺激。
Sensitization 致敏	The nervous system of respiratory organs may be stimulated sensitively. 呼吸器官的神经系统可能会受到敏感的刺激。
Reproductive Toxicity 再生毒性	Not applicable. 不适用
Toxicologically Synergistic Materials 协同材料毒理学	Not applicable. 不适用



Section 12-Ecological Information

第十二部分 生态学信息

General note 通用信息	Don't immerse, throw, wet the battery in water / seawater 不要将电池浸泡在水中或海水中
Anticipated behavior of a chemical product in environment/possible environmental impact/ ecotoxicity 化学产品在环境/可能的环境预期的行为的一种生态毒性	Not applicable. 不适用
Mobility in soil 土壤中移动性	Not applicable. 不适用
Persistence and Degradability 持久性和降解性	Not applicable. 不适用

Section 13 - Disposal Considerations

第十三部分 废弃处置

Waste Treatment 废弃处置方法	Recycle or dispose of in accordance with government, state & local regulations. 建议遵照国家和地方法规处置或再利用。
Attention for Waste Treatment 废弃注意事项	Deserted batteries couldn't be treated as ordinary trash. Couldn't be thrown into fire or placed in high temperature. Couldn't be dissected, pierced, crushed or treated similarly. Best way is recycling. 废电池不能被当做普通垃圾。不能扔进火中或置于高温下。不能解体，刺穿，破碎或类似的处理。最好的办法是回收利用。



Section 14 – Transport Information

第十四部分 运输信息

According to Section IA of PACKING INSTRUCTION 965, or Section I of PACKING INSTRUCTION 966~967 of the 2023 IATA Dangerous Goods regulations 64th Edition and the special provision 230 of IMDG (inc Amdt 40 - 20). The batteries should be securely packed and protected against short - circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles. Don't put the goods together with oxidizer and chief food chemicals. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don't stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

根据 2023 年 IATA 危险物品规则第 64 版包装指令 965 第 IA 部分或包装指令第 966~第 967 节第 I 部分运输和国际海运危险货物 (IMDG) 规则 (包括 Amdt 40-20)。电池应安全包装, 并防止短路。检查运输前集装箱包装是否一体化并拧紧。装载货物, 不坠落、跌落和破损。防止货物桩倒塌。不要把货物与氧化剂和主要的食品化学品放在一起。运输车辆、船舶必须进行清洗、消毒, 否则不得组装物品。在运输过程中, 车辆应防止暴露、下雨和高温。在中途停留时, 车辆应远离火源和热源。在海运时, 装配地点应远离卧室、厨房, 并与机舱、动力、火源隔离。在道路运输的条件下, 驾驶员应按规定的路线行驶, 不要在居民区和拥挤的区域内停车。禁止使用木制、水泥进行散装运输。

- | | |
|--|-----------------------|
| (a)UN number UN 编号 | 3480 or 3481 |
| (b)UN Proper shipping name UN | Lithium ion batteries |
| (b 合适的运输名称/描述 (技术名称) | 锂离子电池 |
| (c)Transport Hazard class(es) UN | Class 9 |
| (c)分类 (运输危险类别) | 9 类危险品 Class 9 |
| (d)Packing group (if applicable) | II |
| (d)包装组 (如适用) | 二类 |
| (e)Marine pollutant (Yes/No) 海洋污染物 (Y / N) | No |



Section 15 - Regulatory Information

第十五部分 法规信息

<p>Regulatory Information 法规信息</p>	<p>With regard to transport, the following regulations are cited and considered 关于运输，引用和考虑了以下法规:</p> <p>The International Civil Aviation Organization (ICAO) Technical Instructions. 国际民用航空组织（ICAO）技术细则。</p> <p>The International Air transport Association (IATA) Dangerous Goods Regulations. 国际航空运输协会（IATA）危险物品规则。</p> <p>The International Maritime Dangerous Goods (IMDG) Code. 国际海运危险货物（IMDG）规则。</p> <p>The Office of Hazardous Materials Safety within the US Department of Transportation (DOT) 美国交通部（DOT）范围内的危险材料安全办公室 Research and Special Programs Administration (RSPA) 研究与专项项目管理局（RSPA）</p>
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Section 16 – Additional Information

第十六部分 其他信息

Additional
Information
其他信息

The information above is believed to be accurate and represents the best information currently available to us. However, we makes 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 investigations to determine the suitability of the information for their particular purposes. Although reasonable precautions have been taken in the preparation of the data contained herein, it is offered solely for your information, consideration and investigation. This material safety data sheet provides guidelines for the safe handling and use of this product; it does not and cannot advise on all possible situations, therefore, your specific use of this product should be evaluated to determine if additional precautions are required.

The data/information contained herein has been reviewed and approved for general release on the basis that this document contains no export controlled information.

在我们看来上面的信息是准确的，这是我们目前能提供的最佳的信息。但是，对于这些信息，我们不对商品的性能做任何明示的或者暗示的保证，我们也不对使用这些信息造成的后果担负任何责任。用户应当自己调查研究后决定这些信息是否适用于他们的特定用途。尽管在该文档里提出了合理的预警，但是这仅仅只是给您做参考，考量和调查。这份化学品安全技术说明书提供了安全处理和使用该产品的指南，但是它没有，也不能对所有可能发生的情景提出建议，所以您需要根据您对该产品的特定使用情况来决定是否需要其他的预防措施。

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***** End of Report*****

