

LITHIUM CELL TEST SUMMARY AND SUPPLIER INQUIRY

IN ACCORDANCE WITH SUB-SECTION 38.3 OF MANUAL OF TESTS AND CRITERIA

Name/Description of cell
Technaxx 1200W Powerstation TX-231

Manufacturer of cell

Name	Henan Great Power Energy Co.,Ltd
Address	At the intersection of Huaihe Road and Zhongyuan Avenue,Zhumadian City,Henan Province
Phone	+86-0396-2709657
E-Mail	liyongju@greatpower.net
Website	http://www.greatpower.net

Manufacturer of the equipment (if the cell is contained in equipment)

Name	ZHEJIANG LEIYA ELECTRONICS CO.,LTD.
Address	No.528, 4th Avenue,Binhai, Economic and Technological Development Zone,Wenzhou,Zhejiang,China
Phone	TEL :86-577-86829999
E-Mail	Agnes1@erayak.com
Website	http://www.erayak.com

Test laboratory of cell

Name	Henan Great Power Energy Co.,Ltd
Address	At the intersection of Huaihe Road and Zhongyuan Avenue,Zhumadian City,Henan Province
Phone	+86-0396-2709657
E-Mail	liyongju@greatpower.net
Website	http://www.greatpower.net

ID-number and date

Unique test report identification number	1122081662
Date of test report	2022-08-19

DESCRIPTION OF CELL (Mark with an "X")

Lithium ion cell	X
Lithium metal cell	

Parameters

Mass in gram (g):	12021
Lithium ion: Indicate watt-hour rating (Wh):	917,28Wh
Lithium metal: Indicate lithium metal content in gram (g):	1.167

Physical description of cell

Appearance: cylinder	气味： 泄漏时，有醚的气味。 Odour: If leaking, smells of medical ether. 酸碱度： 不适用 pH: Not applicable as supplied. 闪点： 针对单个组分暴露情况，其他不适用。 Flash Point: Not applicable unless individual components exposed. 易燃度： 针对单个组分暴露情况，其他不适用。 Flammability: Not applicable unless individual components exposed. 相对密度： 针对单个组分暴露情况，其他不适用。 Relative density: Not applicable unless individual components exposed. 溶解性（水溶性）： 针对单个组分暴露情况，其他不适用。 Solubility (water): Not applicable unless individual components exposed. 溶解性（其他）： 针对单个组分暴露情况，其他不适用。 Solubility (other): Not applicable unless individual components exposed.
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Model numbers

INR18650-2600mAh

TESTS AND RESULTS

List of tests conducted and results - Mark N/A, pass or fail with an "X"	N/A	Pass	Fail
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T1 - Altitude simulation		X	
T2 - Thermal Test		X	
T3 – Vibration		X	
T4 – Shock		X	
T5 - External Short Circuit		X	
T6 - Impact - for cylindrical cells having a diameter of at least 18 mm		X	
T6 - Crush - for prismatic cells, pouch cells, button cells and cylindrical cells having a diameter of less than 18 mm		X	
T7 – Overcharge		X	
T8 - Forced Discharge		X	

Reference to the revised edition of the Manual of Tests and Criteria used and to amendments thereto

UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS Manual of Tests and Criteria" Seventh revised edition (ST/SG/AC.10/11/Rev.7).38.3

ADDITIONAL SUPPLIER INQUIRY

Mark Yes or no with an "X"	Yes	No
Quality management system for manufacturing cells Does the manufacturer of the cell/battery manufacture the products based on a documented quality management system according to transport regulations?	X	
Are the following parameters exceeded? Lithium ion cell: more than 20 Wh Lithium metal cell: more than 1 g Lithium	X	

Check point 13 – 15 need to be answered when 12 has been ticked "YES":

Mark Yes or no with an "X"	Yes	No
Does each cell incorporates a safety venting device or is designed to preclude a violent rupture under normal conditions of carriage?	X	
Is each cell equipped with an effective means of preventing external short circuits?	X	
Is each battery containing cells or series of cells connected in parallel equipped with effective means as necessary to prevent dangerous reverse current flow (e.g. diodes, fuses, etc.) Not relevant for cells	X	

Only in air transport: State of Charge (SoC) for UN 3480 Lithium ion cells and lithium polymer cells

State of Charge (SoC) max. 30 %	X	
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CELLS INSTALLED IN EQUIPMENT

Check point 17 needs to be answered when the cells are installed in articles: Mark N/A, pass or fail with an "X"	N/A	Pass	Fail
17c) Only button cells enclosed?		X	
17b) Number of enclosed cells (other than button cells) per equipment			
When the equipment is intentionally active/switched on during transport e.g. data loggers:			
17c) Confirmation that no dangerous amount of heat is emitted from the equipment		X	
17d) Confirmation that the equipment when transported by air fulfills the defined air transport standards for electromagnetic radiation according to DO-160		X	

Please mark the correct column with an X

Single Cell or Battery	Build in Cell/ Battery	Over 100Wh
		
		X

Place, Date	Pascal Pekcan	Company stamp
2022-12-07		Technaxx Deutschland GmbH & Co.KG Konrad-Zuse-Ring 16-18 61137 Schöneck-Kilianstädten Fon +49 (0)6187 / 200 92-0 • Fax -16



中国认可
检验
INSPECTION
CNAS IB0071



NO.2622100018

安全技术说明书 (SDS)

便携式储能电源

中文名称: BDS-1200AP2/5V/36.4Ah/917.28Wh

Portable Power Station

英文名称: BDS-1200AP2/5V/36.4Ah/917.28Wh

生效日期: 2022年11月24日

编制人: 贺小双

审核人: 周理斐

批准人: 董学胜



上海化工院检测有限公司



声 明

Statement

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The inspection conclusion of this report only applies to the sample as received.

6. 除另有说明，检测检验类别都是指委托分析。

Unless noted otherwise, the test type is consignment test.

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The authenticity of the report can be checked via our website: <http://www.ghs.cn>.

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浙江雷亚电子有限公司

安全技术说明书

SDS

便携式储能电源 BDS-1200AP2/5V/36.4Ah/917.28Wh

第一部分 化学品及企业标识

中文名称：便携式储能电源 BDS-1200AP2/5V/36.4Ah/917.28Wh
英文名称：Portable Power Station BDS-1200AP2/5V/36.4Ah/917.28Wh
企业名称：浙江雷亚电子有限公司
地址：浙江省温州经济技术开发区滨海四道528号
邮编：325025
E-mail：lwl@erayak.com
传真号码：86-577-86822208
应急咨询电话：86-577-86829999
化学品的推荐用途和限制用途：/

技术说明书编码：2622100018

生效日期：2022年11月24日

第二部分 危险性概述

本品不在GHS体系涵盖的范围内。

主要危险性：

火灾或爆炸危险：当锂离子电池损坏或处理不当（机械损伤或过度充电），其内部的易燃液态电解质在温度高于150℃时会泄露、着火和产生火花；该类物品可能迅速燃烧并伴有闪燃；可能会引燃邻近的其他电池。

健康危害：电池的电解质会刺激皮肤、眼睛和黏膜组织。燃烧可能产生刺激性、腐蚀性和/或毒性气体。烟雾可能导致头晕或窒息。

第三部分 成分/组成信息

化学品名称：便携式储能电源 BDS-1200AP2/5V/36.4Ah/917.28Wh

成份	含量	CAS NO.	EC NO.
钢	31.1%	7439-89-6	231-096-4
三元材料	28.4%	182442-95-1	695-690-9
石墨	17.1%	7782-42-5	231-955-3
铜	5.7%	7440-50-8	231-159-6

碳酸二乙酯	4.7%	105-58-8	203-311-1
碳酸二甲酯	3.8%	616-38-6	210-478-4
碳酸乙烯酯	3.4%	96-49-1	202-510-0
铝	2.5%	7429-90-5	231-072-3
聚丙烯	2%	9003-07-0	618-352-4
六氟磷酸锂	1.3%	21324-40-3	244-334-7

第四部分 急救措施

皮肤接触:	若接触到电池内的物质,脱去受污染的衣物和鞋袜,立即用流动清水冲洗20分钟以上。如刺激持续,就医。
眼睛接触:	若接触到电池内的物质,立即提起眼睑,立即用流动清水冲洗20分钟以上。如刺激持续,就医。
吸入:	若吸入电池内的物质,立即脱离现场至空气新鲜处。若呼吸困难,给氧;若呼吸停止,人工呼吸。就医。
食入:	若食入电池内的物质,禁止催吐。立即就医。
最重要的急性和延迟症状/影响:	无资料。
必要时注明立即就医及所需的特殊治疗:	无资料。

第五部分 消防措施

适当的灭火剂:	可用水幕和普通泡沫灭火剂灭火。
化学品产生的具体危险:	燃烧可能产生刺激性、腐蚀性和或毒性气体。烟雾可能导致头晕或窒息。
消防人员的特别防护行动:	消防员应戴自给正压式呼吸器,穿消防防护服以防止皮肤和眼睛接触。在上风处灭火。不相关人员疏散至安全区域。

第六部分 泄漏应急处理

个人防护措施、防护设备和应急程序:	使用个人防护设备。确保足够的通风。确保人群远离泄露区或处于泄漏区上风向。不相关人员禁止进入。移除所有点火源。
环境防护措施:	避免泄露物进入地表、沟渠或水域。清洗废水避免直接释放至环境中。
控制和清洁的方法和材料:	如电解液泄漏,用土、沙或其他不可燃材料吸附,漏损的电池和污浊的吸附物应放入金属容器。

第七部分 操作处置与储存

安全操作的防护措施:	操作人员应经过培训,严格遵守操作规程。建议操作人员穿一般作业防护服,戴安全手套。远离火种、热源。避免高温。工作场所严禁吸烟。工作场所应有通风系统和设备。避免随意拆卸电池和弄错正负极。须牢固固定在内包装中,以有效防止短路和防止可导致短路的移动。万一电池内的物质泄漏,避免眼睛、皮肤直接接触,避免吸入。应与强氧化剂、易燃物和腐蚀品分开存放。
安全储存的条件,包括一切不相容性:	储存于阴凉、通风及干燥的库房内。远离火种、热源。避免高温。应与强氧化剂、易燃物和腐蚀品分开存放。须牢固在内包装中,以有效防止短路和防止可导致短路的移动。储存区配备相应品种和数量的消防器材、泄漏应急处理设备和合适的收容材料。

第八部分 接触控制/个体防护

控制参数:	GBZ 2.1-2019 《工作场所有害因素职业接触限值 化学有害因素》： 三元材料： 金属镍与难溶性镍化合物：PC-TWA 1mg/m ³ 备注：G1（镍化合物），敏 钴及其化合物（按Co计）：PC-TWA 0.05 mg/m ³ ；PC-STEL 0.1 mg/m ³ 备注：G2B；敏 锰及其无机化合物（按MnO ₂ 计）：PC-TWA 0.15 mg/m ³ 铝：铝金属、铝合金粉尘：PC-TWA 3mg/m ³ （总尘） 铜：铜尘 PC-TWA 1mg/m ³ ；铜烟 PC-TWA 0.2mg/m ³ 石墨粉尘：PC-TWA 4 mg/m ³ （总尘）；PC-TWA 2 mg/m ³ （呼尘） 聚丙烯粉尘：PC-TWA 5mg/m ³ （总尘） ACGIH： 石墨：TLV-TWA 2 mg/m ³ 铝：TLV-TWA：1mg/m ³ 铜：TLV-TWA 1 mg(Cu)/m ³ ，粉尘，烟雾 TLV-TWA 0.2 mg(Cu)/m ³ 烟雾 有通风系统和设备。提供安全淋浴和洗眼设备。
适当的工程控制:	
个体防护措施:	
眼/面部防护:	若需要，戴安全防护眼镜。
皮肤防护:	手防护：戴安全手套。 身体防护：穿一般作业防护服。
呼吸系统防护:	若需要，戴管理部门认可的面罩。
高温危害:	无资料。
其他防护:	工作现场严禁吸烟、进食和饮水。工作后，淋浴更衣。

第九部分 理化特性

外观:	黑色塑胶及金属外壳
气味:	无臭
pH值:	8-9
溶解性:	部分溶于水
熔点/凝固点:	>300℃
沸点、初始沸点和沸程:	无资料
闪点(闭杯):	无资料
密度/相对密度:	无资料
运动黏度:	无资料
燃烧上下极限或爆炸极限:	无资料
蒸气压:	无资料
相对蒸气密度:	无资料
n-辛醇/水分配系数(对数 值):	无资料
自燃温度:	无资料
分解温度:	无资料
颗粒特征:	无资料
易燃性(固体、气体):	无资料

第十部分 稳定性与反应活性

反应性:	无资料。
化学稳定性:	常温常压下稳定。
危险反应的可能性:	无资料。
应避免的条件:	误操作, 明火, 高温, 机械滥用, 过充电, 防止短路和防止可导致短路的移动。
不相容材料:	强氧化剂、易燃物和腐蚀品。
危害性分解产物:	碳的氧化物、金属氧化物等。

第十一部分 毒理学资料

急性毒性:	无资料。
皮肤腐蚀/刺激:	电池内的电解液对皮肤有刺激性。
严重眼损伤/眼刺激:	电池内的电解液对眼睛有刺激性。
呼吸致敏:	无资料。
皮肤致敏:	无资料。
生殖细胞致突变性:	无资料。
致癌性:	无资料。
生殖毒性:	无资料。
特定目标器官毒性-单次接触:	无资料。
特定目标器官毒性-重复接触:	无资料。
吸入危险:	无资料。

第十二部分 生态学资料

毒性:	无资料。
持久性和降解性:	无资料。
潜在的生物累积性:	无资料。
在土壤中的流动性:	无资料。
其他有害效应:	无资料。

第十三部分 废弃处理

废弃处置方法:	废弃电池的处置应符合《中华人民共和国固体废物污染环境防治法》、《废电池污染防治技术政策》等有关法律、法规、政策和标准的要求。建议交给具有资格的化学废物处理部门处置。对于用过的而且将被运送去销毁或回收的电池, 在运输前应对其仔细检查, 以确保每节电池都是完好无损而且适合运输的。
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第十四部分 运输信息

锂电池单独运输:

通过联合国《试验和标准手册》UN38.3试验。

RID/ADR (2021版) :

危险性类别: 9

UN编号: UN3480

包装标识: 杂项

运输名称: 锂离子电池组

根据RID/ADR (2021版) 的2.2.9.1.7 (g), 锂电池或电池组的制造商和出厂后的销售商应提供联合国《试验和标准手册》第III部分第38.3小节第38.3.5段规定的UN38.3试验概要。

IATA DGR (63版) :

危险性类别: 9

UN编号: UN3480

包装标识: 杂项

运输名称: 锂离子电池组

本品应满足IATA DGR包装说明965的基本要求和第IA部分的规定。

根据IATA DGR (63版) 的3.9.2.6.1(g), 2003年06月30日之后生产的锂电池或电池组的制造商和出厂后的销售商应提供联合国《试验和标准手册》第III部分第38.3小节第38.3.5段规定的UN38.3试验概要。

IMO IMDG CODE (2020版) :

危险性类别: 9

UN编号: UN3480

包装标识: 杂项

运输名称: 锂离子电池组

EmS编号: F-A, S-I

根据IMO IMDG CODE (2020版) 的2.9.4.7, 锂电池或电池组的制造商和出厂后的销售商应提供联合国《试验和标准手册》第III部分第38.3小节第38.3.5段规定的UN38.3试验概要。

第十五部分 法规信息

国内法规:

锂电池单独运输:

《危险货物道路运输规则》联合国编号为: 3480, 中文名称和描述: 锂离子电池。
则》(JT/T 617-2018) :

《危险货物名称表》(GB联合国编号为: 3480, 名称和说明: 锂离子电池组, 包装类别: II。
12268-2012) :

《铁路危险货物名称表》编号为: 91013, 品名: 锂电池组。

(2009版) :

国际法规:

欧盟指令2006/66/EC及 电池的标记, 处置, 回收等应满足欧盟指令2006/66/EC及2013/56/EU中的规定。
2013/56/EU:

ICAO TI:

1. 除非依据《技术细则》的相关要求取得豁免, 单独包装的锂离子电池(芯)(UN 3480, PI 965)和锂金属电池(芯)(UN 3090, PI 968)货物禁止使用客机运输。
2. 除非依据《技术细则》的相关要求取得特别批准, 按照包装说明965要求运输的锂离子电池(芯)货物, 交运时锂离子电池(芯)的荷电状态不得超过其额定容量的30%。
3. 在任何一票货物中, 按照包装说明965第II节或968第II节要求运输的锂电池货物包装件不得超过一个。每个集合包装中所装的按照包装说明965第II节或968第II节要求运输的锂电池货物包装件不得超过一个。
4. 按照包装说明965或968第II节要求运输的锂电池货物包装件或集合包装必须与其它货物分开交运, 且在交运前不得装入集装器。

第十六部分 其他信息

编制日期:

2022年11月24日

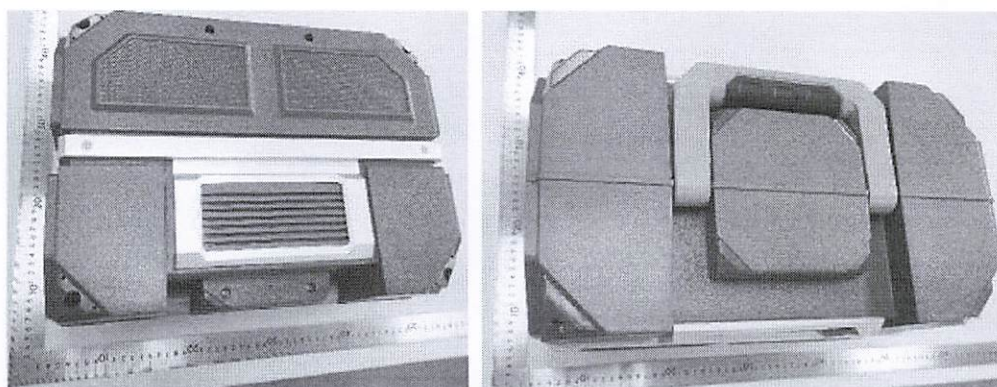
编制部门：上海化工院检测有限公司
电话（传真）：+86-21-52815377/31765555

修改信息：第0次修订

缩略语和首字母缩写：CAS：美国化学文摘社 EC：欧盟委员会 PC-TWA：时间加权平均容许浓度 PC-STEL：短时间接触容许浓度 TLV-TWA：时间加权平均阈值 ACGIH：美国政府工业卫生学家委员会 G1：确认人类致癌物 G2B：可疑人类致癌物 敏：该物质可能有致敏作用 RID：国际铁路运输危险货物规则 ADR：关于国际公路运输危险货物的欧洲协议 IATA DGR：国际航空运输协会 危险货物规则 IMO IMDG CODE：国际海事组织 国际海运危险货物规则 EmS：应急响应措施 EU：欧洲联盟 ICAO TI：国际民用航空组织 危险物品安全航空运输技术细则 PI：包装说明

其他信息：本SDS报告仅针对电池。报告内容是根据申请单位提供的成分含量等信息和我司现有知识编写，仅作为指导使用。如果电池被用于其它产品中的组件，本SDS报告的信息可能不适用。本SDS的使用者必须对内容的正确性与完整性做出独立判断，根据实际情况决定其适用性，并对使用后果承担相关法律责任。

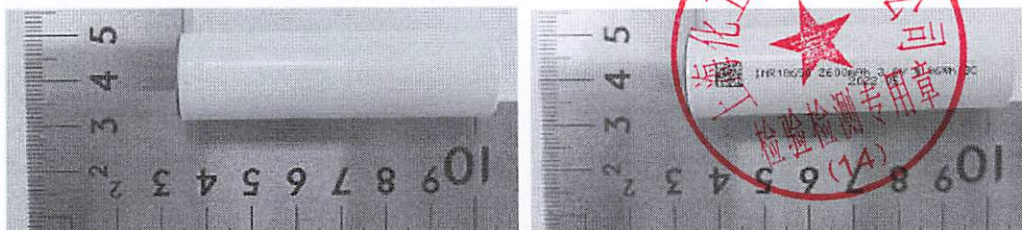




Item No: BDS-1200AP2
 Capacity: DC 25.2V/36.4Ah/917.28Wh
 AC Input: AC 230V, 750W Max
 DC Input: DC 11-36V, 10A(240W Max)
 USB-A Output (X2): DC 5V, 3.1A (Shared)
 USB-A Fast Charger (X2): DC 5V, 3A / 9V, 2A / 12V, 1.5A (18W Max)
 Type-C Output 1(X1): DC 5V, 3A / 9V, 3A / 12V, 3A / 15V, 3A / 20V, 3A (60W Max)
 Type-C Output 2(X1): DC 5V, 3A / 9V, 3A / 12V, 3A / 15V, 3A / 20V, 5A (100W Max)
 DC Ports Output(X3): DC12V, 10A (Max 120W Shared)
 AC Output(2X): AC 230V, 50Hz, 1200W Max
 Isolated inverter



ZHEJIANG LEIYA ELECTRONICS CO.,LTD.



报告结束



中国认可
检验
INSPECTION
CNAS IB0071



NO.2622100018

SAFETY DATA SHEET

Product Name: Portable Power Station
BDS-1200AP2/5V/36.4Ah/917.28Wh

Effective Date: 2022-11-24

Compiler: He Xiaoshuang

Checker: Zhoujuefei

Approver: Dongxuesheng



Shanghai Institute of Chemical Industry Testing Co., Ltd.



声 明

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电子信箱(E-mail): sds@ghs.cn

Zhejiang Leiya Electronics Co., Ltd.

SAFETY DATA SHEET

Portable Power Station BDS-1200AP2/5V/36.4Ah/917.28Wh

SECTION1 PRODUCT AND COMPANY IDENTIFICATION

Product name: Portable Power Station BDS-1200AP2/5V/36.4Ah/917.28Wh
Company: Zhejiang Leiya Electronics Co., Ltd.
Address: No. 528, 4th Avenue, Binhai, Economic and Technological Development Zone,
Wenzhou, Zhejiang Province, 325025, P.R.China
Email: lwl@erayak.com
Fax: 86-577-86822208
Emergency Phone: 86-577-86829999
Recommend use of the chemical and restrictions on use: /

SDS Number: 2622100018

Effective Date: 2022-11-24

SECTION2 HAZARDS IDENTIFICATION

The product is outside of the scope of GHS system.

Main Hazards:

Fire or Explosion Hazards:

Lithium ion battery contains flammable liquid electrolyte that may vent, ignite and produce sparks when subjected to high temperatures (>150°C), when damaged or abused (e.g., mechanical damage or electrical overcharging). May burn rapidly with flare-burning effect. May ignite other batteries in close proximity.

Health Hazards:

Contact with the electrolyte of battery may be irritating to skin, eyes and mucous membranes. Fire will produce irritating, corrosive and/or toxic gases. Fumes may cause dizziness or suffocation.

SECTION3 INFORMATION ON INGREDIENTS

Product name: Portable Power Station BDS-1200AP2/5V/36.4Ah/917.28Wh

Ingredient	Concentration	CAS No.	EC No.
Steel	31.1%	7439-89-6	231-096-4

Ternary Materials	28.4%	182442-95-1	695-690-9
Graphite	17.1%	7782-42-5	231-955-3
Copper	5.7%	7440-50-8	231-159-6
Diethyl carbonate	4.7%	105-58-8	203-311-1
Dimethyl carbonate	3.8%	616-38-6	210-478-4
Ethylene carbonate	3.4%	96-49-1	202-510-0
Aluminum	2.5%	7429-90-5	231-072-3
Polypropylene	2%	9003-07-0	618-352-4
Lithium hexafluorophosphate	1.3%	21324-40-3	244-334-7

SECTION4 FIRST-AID MEASURES

Skin Exposure:

If in contact with the internal materials of battery, remove the contaminated clothing, shoes and socks, immediately flush with plenty of water for at least 20 minutes. Call a physician.

Eye Exposure:

If in contact with the internal materials of battery, lift your eyelids immediately and rinse them with running water for more than 20 minutes. Call a physician.

Inhalation Exposure:

If the internal materials of battery are inhaled, immediately remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician.

Oral Exposure:

Do not induce vomiting if the internal materials of battery are swallowed. Call a physician immediately.

Most Important Symptoms/Effects, Acute and Delayed:

No data available.

Indication of Immediate Medical Attention and Special Treatment Needed, if Necessary:

No data available.

SECTION5 FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Suitable:Water spray or regular foam.

Specific Hazards Arising from the Chemical:

May decompose upon combustion to generate irritating, corrosive or toxic fumes. Fumes may cause dizziness or suffocation.

Special Protective Action for Fire-fighters:

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Fire-extinguishing work is done from the windward. Uninvolved persons should evacuate to a safe place.

SECTION6 ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

Use personal protective equipment. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Entry to noninvolved personnel should be controlled around the leakage area by roping off. Remove all sources of ignition.

Environmental Precautions:

Avoid leakage getting into the earth, ditches or waters. Avoid directly releasing the washing waste-water into the environment.

Methods and Materials for Containment and Cleaning up:

If the electrolyte leaks, use soil, sand or other non-combustible materials to absorb. The leaked batteries and dirty adsorbents should be placed in metal containers.

SECTION7 HANDLING AND STORAGE**Precautions for Safe Handling:**

Operators should be trained and strictly abide by operating procedures. Wear appropriate protective clothing and safety gloves. Keep away from ignition sources, heat and flame. No smoking at working site. Handling is performed in a well ventilated place. Avoid disassembling the battery at will and reversing battery polarity within the battery assembly. The battery must be firmly packed in inner packaging so as to effectively prevent short circuits and short circuits caused by movement. If the electrolyte leaks, avoid directly contacting with eyes and skin. Avoid inhalation. Incompatibilities: Strong oxidizing agents, combustible materials and corrosives.

Conditions for Safe Storage, Including Any Incompatibilities:

Store in a cool, dry, and well-ventilated area. Keep away from ignition sources, heat and flame. Incompatibilities: Strong oxidizing agents, combustible materials and corrosives. The battery must be firmly packed in inner packaging so as to effectively prevent short circuits and short circuits caused by movement. Storage place should be equipped with appropriate varieties and quantities of fire fighting equipment and leakage emergency treatment equipment.

SECTION8 EXPOSURE CONTROL/PPE**Control Parameters:**

GBZ 2.1-2019 Occupational Exposure Limits for Hazardous Agents in the Workplace - Part 1: Chemical Hazardous Agents:

Ternary Materials:

Nickel metal and insoluble compounds PC-TWA $1\text{mg}/\text{m}^3$ Remarks: G1 (Nickel compounds), Sensitization

Cobalt and compounds, as Co: PC-TWA $0.05\text{mg}/\text{m}^3$; PC-STEL $0.1\text{mg}/\text{m}^3$ Remarks: G2B; Sensitization

Manganese and inorganic compounds, as MnO_2 : PC-TWA $0.15\text{mg}/\text{m}^3$

Aluminum metal, aluminum alloy dust: PC-TWA $3\text{mg}/\text{m}^3$ (Total dust)

Copper (calculated as Cu): Copper dust PC-TWA $1\text{mg}/\text{m}^3$; Copper smoke PC-TWA $0.2\text{mg}/\text{m}^3$

Graphite dust: PC-TWA $4\text{mg}/\text{m}^3$ (Total dust); PC-TWA $2\text{mg}/\text{m}^3$ (Inhalable dust)

Polypropylene dust: PC-TWA $5\text{mg}/\text{m}^3$ (Total dust)

ACGIH:

Aluminum: TLV-TWA $1\text{mg}/\text{m}^3$

Copper: TLV-TWA $1\text{mg (Cu)}/\text{m}^3$ Dust, smoke; TLV-TWA $0.2\text{mg (Cu)}/\text{m}^3$ Smoke

Graphite: TLV-TWA $2\text{mg}/\text{m}^3$

Appropriate Engineering Controls:

Mechanical exhaust required. Safety shower and eye bath.

Individual Protection Measures:**Eye/Face Protection:**

Wear chemical safety glasses if needed.

Skin Protection:

Hand Protection: Wear safety gloves.

Body Protection: Wear appropriate protective clothing.

Respiratory Protection:

Wear government approved respirator if needed.

Thermal Hazards:

No data available.

Other Protect:

No smoking, drinking and eating at working site. Wash thoroughly after handling.

SECTION9 PHYSICAL/CHEMICAL PROPERTIES**Appearance:** Black plastics cement and metal shell**Odor:** Odorless**pH Value:** 8-9**Solubility:** Partial soluble in water**Boiling Point,** No data available**Initial Boiling
Point and Boiling****Range:
Melting** >300°C**Point/Freezing****Point:****Flash Point** No data available**(Closed Cup):****Density/Relative** No data available**Density:****Kinematic** No data available**Viscosity:****Lower/Upper** No data available**Explosion****Limit/Flammabili****ty Limit:****Vapour Pressure:** No data available**Relative Vapor** No data available**Density:****Partition** No data available**Coefficient****N-Octanol/Water(****Log Value):****Autoignition** No data available**Temperature:****Decomposition** No data available**Temperature:****Particle** No data available**Characteristics:****Flammability** No data available
(Solid, Gas):**SECTION10 STABILITY AND REACTIVITY****Reactivity:**

No data available.

Chemical Stability:

Stable under normal temperatures and pressures.

Possibility of Hazardous Reactions:

No data available.

Conditions to Avoid:

Avoid misoperation, exposure to heat and open flame. Avoid mechanical or electrical abuse and overcharge.
Prevent short circuits and short circuits caused by movement.

Incompatible Materials:

Strong oxidizing agents, combustible materials and corrosives.

Hazardous Decomposition Products:

Carbon oxides, metal oxides, etc.

SECTION11 TOXICOLOGICAL INFORMATION

Acute Toxicity:

No data available.

Skin Corrosion/Irritation:

The electrolyte in the battery causes skin irritation.

Serious Eye Damage/Irritation:

The electrolyte in the battery causes eye irritation.

Respiratory Sensitization:

No data available.

Carcinogenicity:

No data available.

Skin Sensitization:

No data available.

Germ Cell Mutagenicity:

No data available.

Reproductive Toxicity:

No data available.

Specific Target Organ Toxicity -Single Exposure:

No data available.

Specific Target Organ Toxicity -Repeated Exposure:

No data available.

Aspiration Hazard:

No data available.

SECTION12 ECOLOGICAL INFORMATION

Toxicity:

No data available.

Persistence and Degradability:

No data available.

Bioaccumulative Potential:

No data available.

Mobility in Soil:

No data available.

Other Adverse Effects:

No data available.

SECTION13 DISPOSAL CONSIDERATION

Disposal Methods:

The disposal of discarded battery shall comply with the requirements of relevant laws, regulations, policies and standards such as the "Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste" and "Technical Policy for the Prevention and Control of Waste Battery Pollution". Contact a licensed professional waste disposal service to dispose of wastes. Used battery being transported for disposal or reclamation should be carefully checked prior to shipment to ensure the integrity of each battery and its suitability for transport.

SECTION14 TRANSPORT INFORMATION

Only Lithium
Battery during
Transport:

The product has passed the test items of Manual of Tests and Criteria Section 38.3.

RID/ADR (2021
Edition) :

Hazard Class: 9
UN Number: UN3480
Packaging Marks: Miscellaneous
Proper Shipping Name: Lithium ion batteries
According to 2.2.9.1.7 (g) of RID/ADR (2021 Edition) , Manufacturers and subsequent distributors of cells or batteries manufactured shall make available the test summary as specified in the Manual of Tests and Criteria, Part III, sub-section 38.3, paragraph 38.3.5.

IATA DGR (63rd
Edition) :

Hazard Class: 9
UN Number: UN3480
Packaging Marks: Miscellaneous
Proper Shipping Name: Lithium ion batteries
The product shall meet the General Requirements and section IA of Packaging Instruction 965.
According to 3.9.2.6.1(g) of IATA DGR (63rd Edition) , Manufacturers and subsequent distributors of cells or batteries manufactured after 30 June 2003 shall make available the test summary as specified in the Manual of Tests and Criteria, Part III, sub-section 38.3, paragraph 38.3.5.

IMO IMDG CODE
(2020 Edition) :

Hazard Class: 9
UN Number: UN3480
Packaging Marks: Miscellaneous
Proper Shipping Name: Lithium ion batteries
EmS Number: F-A, S-I
According to 2.9.4.7 of IMO IMDG CODE (2020 Edition) , Manufacturers and subsequent distributors of cells or batteries manufactured shall make available the test summary as specified in the Manual of Tests and Criteria, Part III, sub-section 38.3, paragraph 38.3.5.

SECTION15 REGULATORY INFORMATION

Domestic Regulations:

Only Lithium Battery during Transport:

Regulations Concerning Road Transportation of Dangerous Goods (JT/T 617-2018) :

UN Number: 3480 Name and Description: Lithium ion batteries

List of Dangerous Goods (GB 12268-2012) :

UN Number: UN3480 Shipping Name: Lithium ion batteries Packing Group: II

List of Dangerous Goods by Rail (2009 Edition) :
 Number: 91013 Name of Product: Lithium batteries

International Regulations:

Directive 2006/66/EC and 2013/56/EU:

The label, disposal and recycling of the battery shall meet the requirements of EU Directive 2006/66/EC and 2013/56/EU.

ICAO TI:

1. Unless be exempted according to ICAO TI, the lithium ion cell/batteries (UN 3480, PI 965) and lithium metal cell/batteries (UN 3090, PI 968) are forbidden for carriage on passenger aircraft.
2. Unless be approved according to ICAO TI, Lithium ion cells/batteries (UN 3480, PI 965) must be offered for transport at a state of charge (SoC) not exceeding 30% of their rated design capacity.
3. A shipper is not permitted to offer for transport more than one (1) package prepared according to Section II of PI 965 and PI 968 in any single consignment. Not more than one (1) package prepared in accordance with Section II of PI 965 and PI 968 may be placed into an overpack.
4. Packages prepared according to Section II of PI 965 and PI 968 must be offered to the operator separately from other cargo and must not be loaded into a unit load device (ULD) before being offered to the operator.

SECTION16 OTHER INFORMATION

Preparation Date:

2022-11-24

Preparation Department:

Shanghai Research Institute of Chemical Industry Testing Co., Ltd.
 Tel (Fax): +86-21-52815377/31765555

Revision:

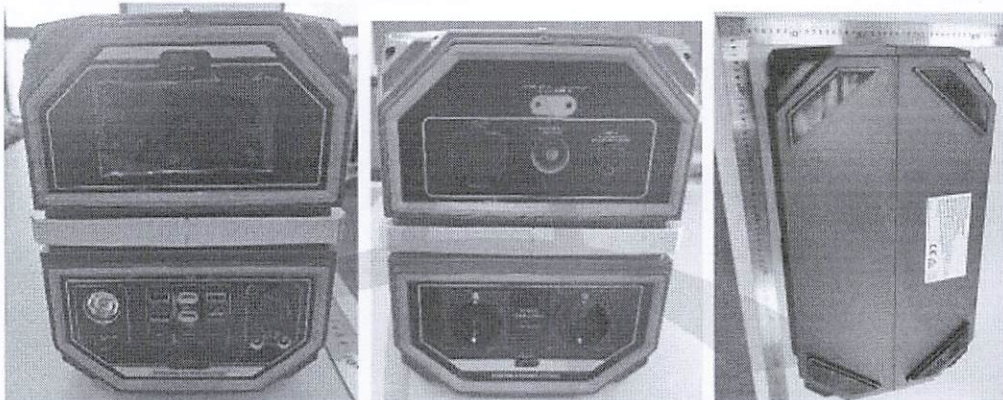
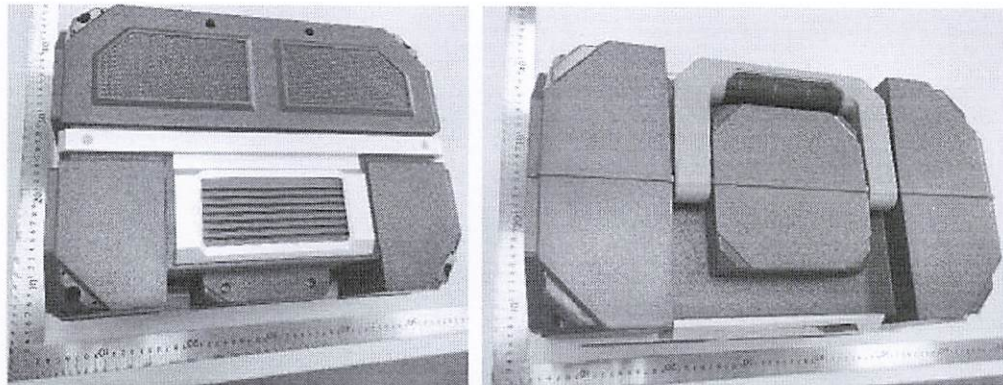
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Abbreviations and Acronyms:

CAS: Chemical Abstracts Service EC: European Commission PC-TWA: Permissible concentration-time weighted average PC-STEL: Permissible concentration-short term exposure limit TLV-TWA: Threshold limit value-time weighted average ACGIH: American Conference of Governmental Industrial Hygienists G1: Carcinogenic to humans G2B: Possibly carcinogenic to humans Sensitization: The substance may have allergenic effects RID: Regulations concerning the International Carriage of Dangerous Goods by Rail ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road IATA DGR: International Air Transport Association Dangerous Goods Regulations IMO IMDG CODE: International Maritime Organization International Maritime Code for Dangerous Goods EmS: Emergency schedule EU: European Union ICAO TI: International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air PI: Packaging Instruction

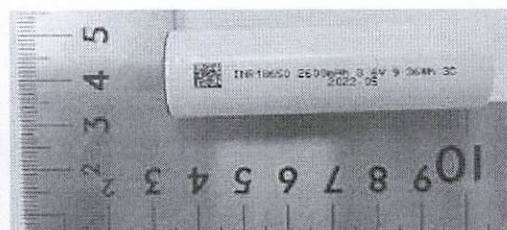
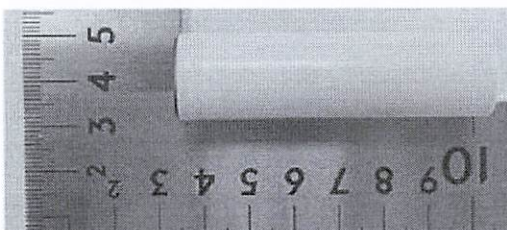
Other Information:

This SDS is only compiled for battery and based on the information such as ingredients provided by the applicant and our current knowledge. This SDS shall be used only as a guide. If the battery is used as a component in another product, the information in this SDS may not be applicable. The users of this SDS must make independent judgments on the correctness and completeness and then decide its suitability according to the actual situation. The users should take the relevant legal responsibilities for the consequences of use.



Item No: BDS-1200AP2
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 Type-C Output 2(X1): DC 5V, 3A / 9V, 3A / 12V, 3A / 15V, 3A / 20V, 3A (100W Max)
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 AC Output(2X): AC 230V, 50Hz, 1200W Max
 Isolated inverter

ZHEJIANG LEIYA ELECTRONICS CO.,LTD.



END OF REPORT