



MATERIAL SAFETY DATA SHEET

Ref No:ARC 20220101-140

PRODUCT NAME:产品名称 Rechargeable Lithium Polymer multiple cell Battery, PACK
可充电聚合物锂离子电池组

TRADE NAME: 贸易名称 N/A

CHEMICAL SYSTEM:化学系统 Lithium Ion锂离子 Designed for Recharge: yes可充电设计: 是



Root-Deliverable	HP RMN NO	HP P/N	CosMX P/N	CosMX P/N	Cell applied
SP04061XL	<u>HSTNN-OB1B</u>	<u>L28538-AC1</u>	B00C436485D0001	B00C436485D0001	436485G-Q
RR03048XL	<u>HSTNN-OB1A</u>	<u>851477-AC1</u>	B00C606072D0001	B00C606072D0001	606072G-QA
RE03045XL	<u>HSTNN-OB1C</u>	<u>L32407-AC1</u>	B00C515974D0001	B00C515974D0001	515974G-Q
TF03041XL	<u>HSTNN-OB1E</u>	<u>920046-AC1</u>	B00C515974C0001	B00C515974C0001	515974HV
SA04055XL	<u>HSTNN-OB1F</u>	<u>L43248-AC1</u>	B00C515974C0004	B00C515974C0004	515974HV
SA04055XL	<u>HSTNN-OB1G</u>	<u>L43248-AC2</u>	B00C515974C0005	B00C515974C0005	515974HV-Q
HT03041XL	<u>HSTNN-OB1H</u>	<u>L11421-AC1</u>	B00C515974C0003	B00C515974C0003	515974HV-Q
HT03041XL	<u>HSTNN-OB1H</u>	<u>L11421-AC2</u>	B00C515974C0017	B00C515974C0017	515974HV-Q
PG03052XL	<u>HSTNN-OB1I</u>	<u>L48430-AC1</u>	B00C606072D0003	B00C606072D0003	606072G-QA
PG03052XL	<u>HSTNN-OB1I</u>	<u>L48430-AC2</u>	B00C606072D0007	B00C606072D0007	606072G-QA
RR04060XL	<u>HSTNN-OB1M</u>	<u>L60213-AC1</u>	B00C506373D0001	B00C506373D0001	506373G
MD02040XL	<u>HSTNN-OB1N</u>	<u>L63999-AC1</u>	B00C368598D0001	B00C368598D0001	368598G
RF03045XL	<u>HSTNN-OB1Q</u>	<u>L83685-AC1</u>	B00C545974D0002	B00C545974D0002	545974G-H
SD03052XL	<u>HSTNN-OB1R</u>	<u>L84357-AC1</u>	B00C606072D0006	B00C606072D0006	606072G-QA
BN03051XL	<u>HSTNN-OB1O</u>	<u>L76965-AC1</u>	B00C506479D0001	B00C506479D0001	506479G-Q
SA04055XL	<u>HSTNN-OB1F</u>	<u>L43248-AC3</u>	B00C515974C0015	B00C515974C0015	515974HV
SA04055XL	<u>HSTNN-OB1G</u>	<u>L43248-AC4</u>	B00C515974C0014	B00C515974C0014	515974HV-Q
RE03045XL	<u>HSTNN-OB1C</u>	<u>L32407-AC2</u>	B00C515974D0004	B00C515974D0004	515974G-Q
HT03045XL	<u>HSTNN-OB1L</u>	<u>L56025-AC1</u>	B00C515974D0002	B00C515974D0002	515974G-Q
PV03043XL	<u>HSTNN-OB1P</u>	<u>L83388-AC1</u>	B00C446872D0001	B00C446872D0001	446872G
AL08094XL	<u>HSTNN-OB1S</u>	<u>L86155-AC1</u>	B00C515961G0002	B00C515961G0002	515961E
AL08094XL	<u>HSTNN-OB1S</u>	<u>L86155-AC2</u>	B00C515961G0003	B00C515961G0003	515961E
PC03043XL	<u>HSTNN-OB1W</u>	<u>M24421-AC1</u>	B00C446872D0003	B00C446872D0003	446872G
RH03045XL	<u>HSTNN-OB1T</u>	<u>M01524-AC1</u>	B00C545974D0003	B00C545974D0003	545974G-H
PP03043XL	<u>HSTNN-OB1P</u>	<u>M01118-AC1</u>	B00C446872D0002	B00C446872D0002	446872G
HT03041XL	<u>HSTNN-OB1H</u>	<u>L11421-AC3</u>	B00C515974C0019	B00C515974C0019	515974HV-Q



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HW03041XL	<u>HSTNN-OB2A</u>	<u>L96887-AC1</u>	B00C515974C0021	B00C515974C0021	515974HV-Q
DS02032XL	<u>HSTNN-OB1Z</u>	<u>M37888-AC1</u>	B00C3169B6D0001	B00C3169B6D0001	3169B6G
WK04070XL	<u>HSTNN-OB2C</u>	<u>M38822-AC1</u>	B00C606072D0008	B00C606072D0008	606072G
WK06083XL	<u>HSTNN-OB2I</u>	<u>M41640-AC1</u>	B00C685257G0001	B00C685257G0001	685257E
SI03058XL	<u>HSTNN-OB1V</u>	<u>M12329-AC1</u>	B00C407792D0001	B00C407792D0001	407792G
MA04046XL	<u>HSTNN-OB1U</u>	<u>M07389-AC1</u>	B00C2662C0D0001	B00C2662C0D0001	CA266C20
GG02047XL	<u>HSTNN-OB1X</u>	<u>M25863-AC1</u>	B00C4473A9D0001	B00C4473A9D0001	4473A9G
GH02047XL	<u>HSTNN-OB1Y</u>	<u>L75253-AC1</u>	B00C4473A9D0002	B00C4473A9D0002	4473A9G
RH03045XL	<u>HSTNN-OB1T</u>	<u>M01524-AC2</u>	B00C545974D0004	B00C545974D0004	545974G-H
WP03051XL	<u>HSTNN-OB2J</u>	<u>M64304-AC1</u>	B00C566075G0001	B00C566075G0001	566075E
AN03042XL	<u>HSTNN-OB2K</u>	<u>M64308-AC1</u>	B00C545974D0005	B00C545974D0005	545974G-H
SS04045XL	<u>HSTNN-OB2L</u>	<u>M64309-AC1</u>	B00C484284G0001	B00C484284G0001	484284E-M
SS06068XL	<u>HSTNN-OB2M</u>	<u>M64310-AC1</u>	B00C484284G0002	B00C484284G0002	484284E-M
DM02032XL	<u>HSTNN-OB2P</u>	<u>M74961-AC1</u>	B00C3169B6D0002	B00C3169B6D0002	3169B6G
RH03042XL	<u>HSTNN-OB2X</u>	<u>M75017-AC1</u>	B00C545974D0007	B00C545974D0007	545974G-H
AL08094XL	<u>HSTNN-OB1S</u>	<u>L86155-AC2</u>	B00C515961G0003	B00C515961G0003	515961E
HT03041XL	<u>HSTNN-OB1H</u>	<u>L11421-AC3</u>	B00C515974C0019	B00C515974C0019	515974HV-Q
WF04066XL	<u>HSTNN-OB2Y</u>	<u>M89926-AC1</u>	B00C505295D0001	B00C505295D0001	505295G
ED03058XL	<u>HSTNN-OB2Z</u>	<u>N07220-AC1</u>	B00C407792D0002	B00C407792D0002	407792G
ED03035XL	<u>HSTNN-OB3A</u>	<u>N07219-AC1</u>	B00C386671D0001	B00C386671D0001	386671G-L
WP03051XL-OOB	<u>HSTNN-OB3B</u>	<u>M64304-AC2</u>	B00C566075G0003	B00C566075G0003	566075E
RH03042XL-OOB	<u>HSTNN-OB3C</u>	<u>M75017-AC2</u>	B00C545974D0009	B00C545974D0009	545974G-H
AN03042XL-OOB	<u>HSTNN-OB3D</u>	<u>M64308-AC2</u>	B00C545974D0008	B00C545974D0008	545974G-H
AE03041XL	<u>HSTNN-OB3E</u>	<u>N20951-AC1</u>	B00C515974C0028	B00C515974C0028	515974HV-B1
SA04055XL	<u>HSTNN-OB3F</u>	<u>L43248-AC5</u>	B00C515974C0029	B00C515974C0029	515974HV-B1

SECTION 1- MANUFACTURE INFORMATION 第1节-生产信息

Manufactured By:生产于:

Telephone Number for Information联系信息

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SECTION 2- MATERIAL COMPOSITION AND COMPOSITION INFORMATION 第2节-成分信息

IMPORTANT NOTE:The battery should not be opened or burned.Exposure to the ingredients contained within or their combustion products could be harmful.重要提示:不得打开或焚烧电池, 接触电池内部材料或其燃烧产物中可能有害。

MATERIAL OR INGREDIENT 产品主要成分	CAS NO.	wt%
Lithium cobaltate 钴酸锂	12190-79-3	30~50
Graphite 石墨	7782-42-5	15~30
Aluminium 铝	7429-90-5	5~10
Copper 铜	7440-50-8	5~10
Carbon Black 炭黑	1333-86-4	0~2
Carboxymethyl cellulose 羧甲基纤维素	9004-32-4	0~1
POLY(PROPYLENE-CO-ETHYLENE) 1-丙烯与乙烯的聚合物	9010-79-1	0.3~1.5
Polyvinylidene fluoride 聚偏氟乙烯树脂	24937-79-9	0~2
Benzene, ethenyl-, polymer with 1,3-butadiene聚苯乙烯丁二烯共聚物	9003-55-8	0~1.5
Aluminum oxide (AlO ₂)(9Cl) 氧化铝	11092-32-3	0~1.5
polyethylene 聚乙烯	9002-88-4	0~1
Nickel 镍	7440-02-0	0.1~2
4-Fluoro-1,3-dioxolan-2-one 氟代碳酸乙烯酯	114435-02-8	0~5
Ethylene carbonate 碳酸乙烯酯	96-49-1	0~10
Diethyl carbonate 碳酸二乙酯	105-58-8	0~10
Propylene carbonate 碳酸丙烯酯	108-32-7	0~10
Lithium hexafluorophosphate 六氟磷酸锂	21324-40-3	0~5
1,3-Propanesultone 1,3-丙烷磺内酯	1120-71-4	0~0.5
Epoxy resin 环氧树脂	25085-99-8	0~0.1
Acrylate monomer 丙烯酸酯单体	28961-43-5	0~0.1
acrylic acid 丙烯酸	79-10-7	0~0.2
glass fiber cloth 玻璃纤维布	65997-17-3	0~3
poly(ethylene terephthalate) 聚酯切片	25038-59-9	0~0.2
Tin 锡	7440-31-5	0~0.1
Titanium dioxide 二氧化钛	13463-67-7	0~0.1



SECTION 3-INDEPENDENT CERTIFICATION OF LITHIUM-LON CELL TRANSPORTATION MODEL REGULATION第3节-锂离子电池运输独立认证规范

There are being tested in accordance with the UN Model Regulation,Manual of Test and Criteria,Part III,subsection 38.3.

根据联合国规范进行测试，测试方法与标准参照38.3小节第三部分

T1	Altitude Simulation 模拟高空测试	No mass loss, leakage, venting, disassembly, rupture, and fire, OCV should not be less than 90% before testing无损重，无泄漏，无漏气，无分解，无破裂，无起火，开路电压损耗较测试前小于10%。	Passed合格	
T2	Thermal Test 热循环	No mass loss, leakage, venting, disassembly, rupture, and fire, OCV should not be less than 90% before testing无损重，无泄漏，无漏气，无分解，无破裂，无起火，开路电压损耗较测试前小于10%。	Passed合格	
T3	Vibration 振动	No mass loss, leakage, venting, disassembly, rupture, and fire, OCV should not be less than 90% before testing无损重，无泄漏，无漏气，无分解，无破裂，无起火，开路电压损耗较测试前小于10%。	Passed合格	
T4	Shock 冲击	No mass loss, leakage, venting, disassembly, rupture, and fire, OCV should not be less than 90% before testing无损重，无泄漏，无漏气，无分解，无破裂，无起火，开路电压损耗较测试前小于10%。	Passed合格	
T5	External Short circuit 外部短路	External temperature should not exceed 170 degree, No disassembly, rupture, and fire within six hours of this test外部温度小于170度，测试时间在6小时内无分解，无破损，无起火	Passed合格	
T6	Impact 撞击	External temperature should not exceed 170 degree, No disassembly and fire within six hours of this test外部温度小于170度，测试时间在6小时内无分解，无起火	Passed合格	
T7	Overcharge 过充	No disassembly and fire within seven days of this test7日内无分解或起火	Passed合格	Battery only 仅限电池
T8	Forced Discharge 过放	No disassembly and fire within seven days of this test 7日内无分解或起火	Passed合格	Cell only 仅限电芯

The lithium battery should pass the UN38.3 test, if the battery can not pass the testing, it can not transport, should redesign. If the battery through the test, for the lithium battery only, follow the UN3480 and the packing requirements for PI965, for the lithium battery which installed in equipment, follow the UN3481 and the packing requirements for PI967.

锂电池应该通过UN38.3测试，如果电池不能通过此测试，则不能运输，需要重新设计。如果仅限锂电池通过测试，遵循UN3480和PI965的包装要求，锂电池的设备安装需要遵循UN3481，包装需求遵循 PI967。

SECTION 4- HAZARDS IDENTIFICATION第4节-危害物鉴定

4.1 Classification 类别

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. 此产品是密封电池，不是每个OSHA hazard communication都需要一个SDS。

The hazards indicated are for a ruptured battery危害物质包括破损电池

Acute toxicity – Oral 急性中毒-口述	Category 4
Acute toxicity - Dermal 急性中毒-表层	Category 4
Skin corrosion/irritation 皮肤腐蚀/刺激	Category 1 Sub-category C
Serious eye damage/eye irritation 眼部严重受损/眼部刺激	Category 1
Skin sensitization 皮肤过敏	Category 1
Carcinogenicity致癌	Category 2
Specific target organ toxicity (repeated exposure)特殊器官中毒(反复接触)	Category 1

4.2 Label elements 标签内容

4.2.1 Singal word Danger 单个字体 危险

4.2.2 Hazard Statements 危害声明

Harmful if swallowed 鼓胀有危害性

Toxic if swallowed 鼓胀有毒性

Harmful in contact with skin 接触皮肤有危害性

Cause severe skin burns and eye damage 会引起皮肤严重烧伤，眼部灼伤

May cause an allergic or reaction可能会引起过敏与不适

May cause cancer 可能会引起癌症

Cause damage to organs 可能引起器官受损

May cause respiratory irritation 可能引起呼吸刺激

4.2.3 Symbol 标识



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist. 本产品是含有化学物质的物品。安全信息是针对暴露在固体中的物品给出的。产品的预期用途不应导致接触化学物质，此电池一旦发生破裂将存在上述危害

4.3 Precautionary Statements 预防声明

4.3.1 Precautionary Statements-Prevention预防声明--阻止

Obtain special instructions before use.使用前获取特殊说明

Do not handle until all safety precautions have been read and understood.所有安全措施阅读并理解后才能使用

Use personal protective equipment as required.如有需要请使用个人防护设备

Wash face, hands and any exposed skin thoroughly after handling.使用后彻底地用清水洗脸，洗手。

Contaminated work clothing should not be allowed out of the workplace.受污染的工作服不允许带离工作区域。

Keep away from flames and hot surface --no smoking.远离烟火和高温--不许吸烟

Do not breath dust/fume/gas/mist/vapors/spray.不能吸取粉尘/烟雾/气体/雾气/蒸汽/喷雾

Do not eat, drink or smoke when using this product.使用本产品时请勿进食、饮水或吸烟。

Wear protective gloves佩戴手套防护



4.3.2Precautionary Statements – Response预防声明--响应

If exposed or connected: Get medical advice/attention. Specific treatment(see supplemental first aid/instruction on this label).如有暴露或者接触：获取医学建议或警示。特殊治疗（查看补充的急救措施或在标签上说明）

Skin 皮肤

If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

如果在皮肤上：用大量肥皂和水清洗。如果发生皮肤刺激或皮疹，请在再次使用前脱掉受污染的衣服和水：如果感觉不适，请即刻就诊。

Eye 眼睛

If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

如果进入眼睛：用水小心冲洗几分钟，取下隐形眼镜（如果存在且易于操作），继续冲洗。呼叫急救中心或医生。

Inhalation 吸入

If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

如果吸入：如果呼吸困难，将患者转移到空气新鲜的地方，并保持一个适合呼吸的姿势休息。如果出现呼吸道症状：呼叫急救中心或医生。

Ingestion 摄入

If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

如果误食：漱口，不要催吐，如果感觉不适，请呼叫急救中心或医生。

4.3.3 Precautionary Statements – Storage预防声明-存储

Store locked up 关闭封锁存储

4.3.4 Precautionary Statements – Disposal 预防声明-处理

Dispose of contents/container to an approved waste disposal plant.将物品/容器弃置到认可的废物处理工厂。

4.4 Hazards not otherwise classified (HNOC)

Not applicable不适用

4.5 Other information 其他信息

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic 对水生生物有害，可能对水体造成长期不良影响。

4.6 Interactions with other chemicals与其他化学成分相互反应

Use of alcoholic beverages may enhance toxic effect.用含有酒精成分的饮料可能会增加毒性反应

Since electrolyte is flammable liquid, it does not bring close to fire. It may cause moderate to severe eye irritation, dryness of the skin. Breathing of its mist, vapor or fume may irritate nose, throat and lungs. Exposure of electrolyte material in the area which contains water may generate hydrofluoric acid, which can cause immediate burns on skin, severe eye burn. The ingestion of electrolyte can cause serious chemical burns of mouth, esophagus and gastrointestinal tract.由于电解液是易燃液体，它不能靠近火源。它会导致中度到重度的眼睛过敏、皮肤干燥。吸入它的雾气或蒸汽会刺激鼻子、喉咙和肺。电解液如果暴露于有水的环境，则会生成氢氟酸，这可能会导致皮肤瞬间烧伤，严重的眼睛烧伤。电解液的摄入可以导致口腔、食道和胃肠道严重的化学烧伤。

SECTION 5-FIRST-AID MEASURES

Eyes: Flush with water for at least 15 minutes. If irritation occurs and persists, contact a medical doctor.

Skin: Remove contaminated clothing and thoroughly wash with soap and plenty of water. If irritation persists, contact a medical doctor.

Inhalation: Remove to fresh air. If breathing difficulty or discomfort occurs and persists, see a medical doctor. If breathing has stopped, give artificial respiration and see a medical doctor IMMEDIATELY.

第5节 急救措施

眼睛：用水冲洗至少15分钟。如刺激仍存在，需要就医。

皮肤：移除被污染的衣服，用肥皂在大量的水下清洗彻底。如刺激仍存在，需要就医。

吸入：转移至新鲜空气中，如呼吸困难和难受仍存在，需要就医。如果呼吸停止，需要做人工呼吸并立即紧急就医。



SECTION 6-FIRE-FIGHTING MEASURE

Hazardous Combustion Products: When burned,hazardous products of combustion including fumes of carbon monoxide, carbon dioxide,and fluorine can occur.

Extinguishing Media: Water,carbon dioxide,dry chemical,or foam.

Basic Fire Fighting Procedures: Wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Unusual Fire & Explosion Hazards: This material does not represent an unusual fire or explosion hazard.

Flammability point:100°C(CC)(100F) .

Autolgnition Temperature:No Data.

Flammability Limits in Air,Lower,% by Volume:1.4.

Flammability Limits in air,Upper,% by Volume:11.

第 6 节 消防措施

有害燃烧产物: 燃烧时, 有害燃烧产物包括一氧化碳气体、二氧化碳、氟。

灭火剂: 水、二氧化碳、干粉灭火剂或泡沫。

基本消防程序: 穿通过美国职业安全与卫生研究院 / 矿山安全健康管理局批准的正压自给式呼吸器和防护服以防止有害物质与皮肤和眼睛接触。

特殊燃烧和爆炸危险: 这种物料并不代表特殊燃烧或爆炸危险。

燃点:100°C(CC)(100 f)。

自燃温度:没有数据。

在空气中可燃性限制, 下限,按体积%: 1.4。

在空气中可燃性限制, 上限,按体积%: 11。

SECTION 7- ACCIDENTAL RELEASE MEASURES

Procedure for Release and Spill:Sweep up and place in a suitable container, dispose or waste according to all local,state and Federal Laws and Regulations.

Befre cleanup measures begin,review the entire MSDS with particular attention potential Health Effects;and on

Recom-mended Personal Protective Equipment.

第 7 节- 泄漏应急处理措施

释放和泄漏的处理程序: 清理收拾与存放在恰当的容器中, 根据当地或联邦的法律法规进行处理或报废。

在清理作业开始前, 检查整个产品的化学品安全技术说明尤其是潜在的健康影响, 并着装推荐的个人防护装备。

SECTION 8-HANDLING AND STORAGE

Handling

Specific safe handling advice: Never throw out cells in a fire or expose to high temperatures. Do not soak cells in water and seawater.Do not expose to strong oxidizers. Do not give a strong mechanical shock or throw down. Never disassemble,modify or deform.Do not connect the positive terminal to the negative terminal with electrically conductive material.

Storage conditions(suitable,to be avoided):Do not place the battery cell near heating equipment, nor expose to direct sunlight for long periods. Elevated temperatures can result in shortened battery cell life and degrade performance.

Store in cool place(temperature:-20-45°C, humidity:45-75%).

Incompatible products:conductive materials,water,seawater,strong oxidizers and strong acids.

Packing material (recommended,not suitable): Insulative and tearprllf materials are recommended.

第 8 节 - 作业与存储

作业:

具体安全操作建议: 不要将电芯扔入火中或暴露于高温环境中。不要将电芯浸泡水或海水里, 不要暴露于强氧化剂中。不要给电芯很强的机械冲击或扔落。千万不要对电芯做拆解、修改或改变形状。不要用电材料连接正负两极。

存储条件 (恰当的, 需要避免的): 不要存放在发热的设备附近, 或长时间直接暴露于阳光中, 高温会缩短电池的寿命和降低性能。

存放于阴凉地方 (温度: -20-45°C, 湿度:45-75%)

不相容的产品:导电材料、水、海水、强氧化剂、强酸。

包装材料(推荐的, 不适合的):推荐绝缘和耐磨材料。



SECTION 9-EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: Investigate engineering techniques to reduce exposures use with adequate ventilation and recommended personal protective equipment.

Eye/Face protection: Use good industrial practice to avoid eye contact. Processing of this product releases vapors or fumes which may cause eye irritation. Where eye contact may be likely wear chemical goggles and have eye flushing equipment available.

Skin protection: Minimize skin contamination by following good industrial hygiene practices. Wearing protective gloves is recommended. Wash hands and contaminated skin thoroughly after handling.

Respiratory protection: Avoid breathing dust and processing vapors. When adequate ventilation is not available, wear a NIOSH/MSHA respirator approved for protection against inorganic dusts.

Special clothing: Robber gloves.

第9节 - 泄露控制 / 个人防护

工程控制: 研究相应的工程技术, 通过足够的通风和推荐的个人防护设备以减少暴露作业。

眼睛/面部防护: 采用良好的工业实践来避免目光接触。产品生产中释放蒸汽或烟雾可能刺激眼睛。眼睛接触区域需要佩戴化学护目镜和在区域配置可用的眼冲洗设备。

皮肤保护: 通过遵循良好的工业卫生实践来减少皮肤污染。建议戴防护手套。作业后彻底清洗双手和被污染的皮肤。

呼吸防护: 避免吸入粉尘和工业废气。通风不充分时, 穿职业安全与卫生研究院 / 矿山安全 and 健康管理局批准的口罩加以防护。

专用工作服: 橡胶手套。

SECTION 10-HYSICA DATE

Physical state: Solid

Form: Geometric color (without outer PVC COVER)

Odor : No odor

pH: Not Applicable

Flash point: Not Applicable

Density: Not Applicable

Solubility: Not Soluble.

第10节 - 物理数据

物理状态: 固体

形式: 几何颜色(没有外PVC盖)

气味: 无味

pH值: 不适用

燃点: 不适用

密度: 不适用

溶解度: 不溶性。

SECTION 11-STABILITY AND REACTIVITY

Hazardous reactions may occur under some specific conditions.

Conditions to avoid: When a battery cell is exposed to an external short-circuit, crushes, modification, high temperature above 100 degree C, it will be the cause of heat generation and ignition. Avoid to be exposed to direct sunlight and high humidity.

Materials to avoid: Conductive materials, water, seawater, strong oxidizers and strong acids.

Hazardous decomposition products: Acrid or harmful gas is emitted during fire.

第11节 - 稳定性与反应活性

在一些特定的条件下可能发生危险反应。

应避免之条件: 当电池暴露在外短路、挤压、变形、高温100度以上, 这些将导致发热和燃烧。避免暴露于阳光直射和高湿度环境中。

应避免之物质: 导电材料、水、海水、强氧化剂、强酸。

应避免之危险分解产品: 刺激或有害气体在火中的排放。



SECTION 12-TOXICOLOGICAL INFORMATION

Eco toxicological Information:No information available.

Local Environmental Effects: Unknown.

Since some internal materials remain in the environment,do not bury or throw out into the environment.

第12节 - 毒理学资料

生态毒理学资料:无可用信息。

当地的环境影响:未知。

由于一些内部材料会残留在环境里,故不要埋葬或扔到环境中。

SECTION 13-DISPOSAL INFORMATION

Waste disposal must be in accordance with the applicable regulations.Disposal of the lithium ion battery cells should be performed by permitted, professional disposal Page:

firms knowledgeable in State or Local requirements of hazardous waste treatment and hazardous waste transportation.Incineration should never be performed by battery but users,eventually by trained professional in authorized facility wity proper gas and fume treatment.

第 13 节 - 废弃处理

废物处置必须依照国家有关规定。锂离子电池的报废应该由专业的被核准的公司进行报废:

此公司应该通晓本国或当地关于危险废物处理和危险废物运输的要求, 焚化绝不能由用户来执行, 而最终由训练有素的人员采用有合适的废气和烟雾处理的经认可的专用设备来执行。

SECTION 14-TRANSPORTATION/SHIPPING INFORMATION 第14节 - 运输 / 运送信息

1.US DOT,ALL Cosmx batteries are not subject to the requirements of the Department of Transportation (DOT) subchapter C,Hazardous Material Regulations since each Cosmx battery meets the exceptions under 173.185(b). The Cosmx batteries are exempted from the US DOT regulations as long as they are separated to prevent short circuits and packed in strong packing for conditions normally encountered in transportation.

美国运输部US DOT, 冠宇所有的电池不受运输部门的分章C有害物质法规的要求, 因为冠宇的电池型号符合173.185(b)的免责条例。冠宇电池具有美国运输部门的豁免权, 即只要电池是隔开的防止短路并用牢固的包装箱包装以应对运输中的各种条件。

2.ICAO and IATA, The lithium battery should according with the International Air Transport Association (IATA DGR 63rd edition) requirements for transportation. The battery or cell should be packed and signed as following table (If the package according with PI-965 sectio IB / PI-966 section II / PI-967 Section II, it is not classified as dangerous cargo) .

国际民航组织ICAO 和国际航空运输协会 IATA, 锂电池必须按IATA(IATA-DGR 63rd 版)要求进行运输。锂电池组或锂电池应按下表进行包装。

UN NO.	Proper Shipping Name	Power	Package	Label which need to paste标签贴合需求
UN3480	Lithium Ion Batteries (limited to a maximum of 30% SoC)锂离子聚合物电池 (SOC等于或小于30%)	Cell≤20Wh Battery≤100Wh	PI965 section IB	Class 9 hazard label 第九类危险品标签 lithium battery handling label锂电池操作标签 Cargo Aircraft Only label仅限货机标签
		Cell > 20Wh Battery > 100Wh	PI965 section IA	Class 9 hazard label 第九类危险品标签 Cargo Aircraft Only label仅限货机标签
UN3481	Lithium Ion Batteries Contained in Equipment锂离子聚合物电池包含在设备中	Cell≤20Wh Battery≤100Wh	PI967 section II	lithium battery handling label锂电池操作标签
		Cell > 20Wh Battery > 100Wh	PI967 section I	Class 9 hazard label第九类危险品标签
UN3481	Lithium Ion Batteries Packed With Equipment锂离子聚合物电池与设备包装	Cell≤20Wh Battery≤100Wh	PI966 section II	lithium battery handling label锂电池操作标签
		Cell > 20Wh Battery > 100Wh	PI966 section I	Class 9 hazard label第九类危险品标签

Do not damage or mishandle this package. If package is damaged,batteries must be quarantined, inspected, and repacked.Cells and batteries identified by the manufacturer as being defective for safety reasons, or that have been damaged, that have the potential of producing a dangerous evolution of heat, fire or short circuit are forbidden for transport .Waste lithium batteries and lithium batteries being shipped for recycling or disposal are prohibited from air transport unless approved by the appropriate national authority of the State of origin and the State of the operator.

请勿损坏或误操作此包裹。如果包装损坏, 必须对电池进行隔离、检查和重新包装。制造商确定出于安全原因有缺陷或已损坏的电池和电池可能会产生热、火灾或短路的危险演变 禁止运输。除非得到原产国和运营人所在国的有关国家当局的批准, 否则禁止航空运输废弃锂电池和运输以回收或处置的锂电池。



3.The lithium battery shall be complied with the special provision 188 of IMDG CODE(Amdt.40-20)and lithium battery packaging specification P903.

锂电池应遵守《国际海运危险货物规则》特殊规定188 (Amdt.40-20)和锂电池包装规范P903.

4.The lithium battery shall be complied with the requiremint in Special Provisions "188"and"230".

锂电池应符合“188”和“230”特殊规定的要求。

5.BUILDING OF NEW BATTERY PACK-if you build any of Cosmx lithium batteries into battery pack, you must assure that ther are being tested in accordance with the UN Model Regulation,Manual of Test and Criteria,Part III,subsection 38.3.

建设新电池包装-当你用冠宇锂电池做电池包装,你必须保证它能按照联合国监管模型做测试,测试遵循分段38.3第三部分,手动测试和标准。

The consignment should be fully described by proper shipping name and packed,marked and in proper condition for carriage by air . The consignment is not classified as dangerous under the current edition of the IATA 63rd edition (Effective 01-January-2022) and should be packed in UN special case.

托运货物应完整描述正确的运输名称,并包装、标记并处于适合空运的适当状态。

根据当前版本的 IATA 第 63 版 (2022 年 1 月 1 日生效),该托运货物未被归类为危险物品,应使用联合国特制箱包装。

SECTION 15-REGULATORY INFORMATION

1.The transportation of the lithium batteries is regulated by nations "Model Regulations on Transport of Dangerous Goods".

2.Lithium batteries and cells are subjected to shipping requirements exceptions under 49 CFR 173.185.

3.Shipping of lithium batteries in aircrafts are regulated by the international civil aviation organization (ICAO) and the international air transport association (IATA) requirements in special provision UN3480 PI965 ,UN3481 PI966 or PI967.

4. Shipping of lithium batteries on sea are regulated the international maritime dangerous goods (IMDG) requirements of UN3480.

5.Cobalt compounds supposed hazardous and e subjected to reporting requirements of section 313 of title 1:1 of the suspended are amendments and reauthorization act of 1986 (SARA) and 40 CFR part 372.

第15节-法规信息

1.锂电池的运输是由国家通过“危险货物运输管理条例”进行管制。

2.锂电池和电芯受制于航运要求的49 CFR 173.185 文件的例外规定。

3.在国际民用航空组织(ICAO)和国际航空运输协会(IATA)对空运运输锂电池的要求有特别规定UN3480 PI965,UN3481 PI966或PI967。

4.在国际海上危险物运输规则中(IMDG)海运运输锂电池的要求UN3480。

5.钴化合物的危险报告要求标题1:1的暂停修改和再授权法案1986(SARA)313条款和40 CFR 372。

SECTION 16-OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. We make 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 investigation to determine the suitability of the information for their particular purposes. In no way shall we be liable for any claims, losses, or damage of any third party or for last profits or any special, indirect, consequential or exemplary damages arising from using the above information.

第16节-其他信息

上述信息被认为是正确的,但并不意味着是全面的,只能用作指导。我们对此类信息的适销性或任何其他明示或暗示的担保不做任何保证,我们也不承担因使用此类信息而产生的任何责任。用户应自行调查,以确定信息是否适合其特定目的。对于任何第三方的任何索赔、损失或损害,或者由于使用上述信息而产生的任何特殊、间接、后果性或示范性损害,我们概不负责。

Remark:The batteries have past UN38.3 authentication and are safe for transportation,and it is advised to use dry power powder fire extinguisher in case of explosion or inflammation

备注:电池通过了UN38.3认证,运输也是安全的,并建议燃烧或爆炸时使用干粉灭火器灭火。