



Test Report

NO.: MQCVL7TG0483267D3

Issued Date: 2022-04-08

Page 1 of 9

Applicant:

Changzhou Jintan Chaochuang Battery Co.,Ltd.

Address:

Xiyang Industrial Zone, Xuebu Town, Jintan District, Changzhou
City, Jiangsu Province, China

The following sample(s) was/were submitted and identified on behalf of the client as:

Sample Name: CR Series lithium battery

Sample Model: CR2032 (Test Model)、CR927、CR1025、CR1130、CR1216、CR1220、CR1225、
CR1530、CR1616、CR1616H、CR1620、CR1620H、CR1625、CR1632、CR1632H、
CR2016、CR2016H、CR2016L、CR2016S、CR2016SC628、CR2020、CR2025、
CR2025L、CR2025H、CR2025S、CR2025SC628、CR2025LED、CR2032H、
CR2032L、CR2032S、CR2032SC628、CR2032LED、CR2050、CR2320、CR2325、
CR2330、CR2332、CR2335、CR2354、CR2430、CR2450、CR2450H、CR2477、
CR2477H、CR3032、CR3032H、CR3830、CR632、CR816、CR920

Manufacturer: Changzhou Jintan Chaochuang Battery Co.,Ltd.

Part Name: See the Results Page

Sample Description: Silver button cell

Sample Received Date: 2022-03-30

Testing Period: 2022-03-30 ~ 2022-04-08

Reference Requested: RoHS Directive 2011/65/EU & (EU)2015/863 Annex II

Reference Method:

- (1) IEC 62321-5 Edition 1.0:2013 method, Lead Analysis is performed by AAS
- (2) IEC 62321-5 Edition 1.0:2013 method, Cadmium Analysis is performed by AAS
- (3) IEC 62321-4:2013+AMD1:2017 CSV method,
Mercury Analysis is performed by ICP-OES
- (4) IEC62321-7-1 Edition1.0:2015 & IEC62321-7-2 Edition 1.0:2017 method,
Hexavalent Chromium Analysis is performed by UV-Vis
- (5) IEC 62321-6 Edition 1.0:2015 method,
PBBs and PBDEs Analysis is performed by GC-MS
- (6) IEC 62321-8 Edition 1.0:2017 method,
Phthalates Analysis is performed by GC-MS

Test Result: Please refer to next page(s)

Approved by:

Manzu aiy



微信扫一扫，使用小程序 小程序扫一扫，在线验证

Code: pvuy54zd

Pony Testing Group Shenzhen Co., Ltd.

Address: 3/F. of Building 2, Building 1, Xinhaosheng Industrial Park, Yonghe Road,
Qiaotou Community, Baoan District, Shenzhen, Guangdong, China

Tel: 0755-26050909

Testing Address: 3/F. of Building 2, Building 1, Xinhaosheng Industrial Park, Yonghe Road, Qiaotou Community, Baoan District, Shenzhen, Guangdong, China

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Test Results (Unit: mg/kg)

Sample No.	Part Name	Test Result					
		Pb	Cd	Hg	Cr ⁶⁺	PBBs	PBDEs
G0483267D3-1	Anode & cathode metal shell	38.0	N.D.	N.D.	Negative	—	—
G0483267D3-2	Cotton cushion	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
G0483267D3-3	Abatis	41.4	N.D.	N.D.	Negative	—	—
G0483267D3-4	Insulated rubber ring	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
G0483267D3-5	Anode power	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
G0483267D3-6	Cathode power	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Test Results (Unit: mg/kg)

Sample No.	Test Result			
	DEHP	DBP	BBP	DIBP
G0483267D3-2	N.D.	N.D.	N.D.	N.D.
G0483267D3-4	N.D.	N.D.	N.D.	N.D.
G0483267D3-5	N.D.	N.D.	N.D.	N.D.
G0483267D3-6	N.D.	N.D.	N.D.	N.D.



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- Note: (1) mg/kg = ppm
(2) “—” = Does not stipulate
(3) N.D. = Not Detected (<MDL)
(4) MDL = Method Detection Limit
(5) Unit: mg/kg

Test Item	MDL	RoHS Limit
Lead (Pb)	1	1000
Cadmium (Cd)	1	100
Mercury (Hg)	1	1000
Hexavalent Chromium(Cr ⁶⁺)	8(nonmetal)	1000
	See Note (7)(metal)	—
PBBs(Bro.~Dec.)	5	1000
PBDEs (Bro.~Dec.)	5	1000
DEHP	50	1000
DBP	50	1000
BBP	50	1000
DIBP	50	1000

(6) The most allowable limit value reference to RoHS Directive 2011/65/EU & (EU)2015/863 Annex II

(7) Boiling water extraction test:

<0.10 µg/cm² expressed as “negative” results, indicates without hexavalent chromium in the plating

0.10 µg/cm²~0.13 µg/cm² expressed as “not confirmative”, indicates that it can not be confirmative for the presence of hexavalent chromium in the plating, further test is needed.

>0.13 µg/cm² expressed as “positive”, indicates that hexavalent chromium is detected in the plating.



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扫描二维码
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Sample No. & Photo:

G0483267D3 Photo Finished



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Hotline 400-819-5688

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PONY-BGLS186-03C-002-2021A

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Sample No. & Photo:

G0483267D3 Photo Finished



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Sample No. & Photo:

Part Photo

G0483267D3-1

G0483267D3-2

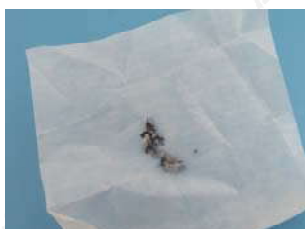
G0483267D3-3

G0483267D3-4



G0483267D3-5

G0483267D3-6



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Measurement Flow-chart

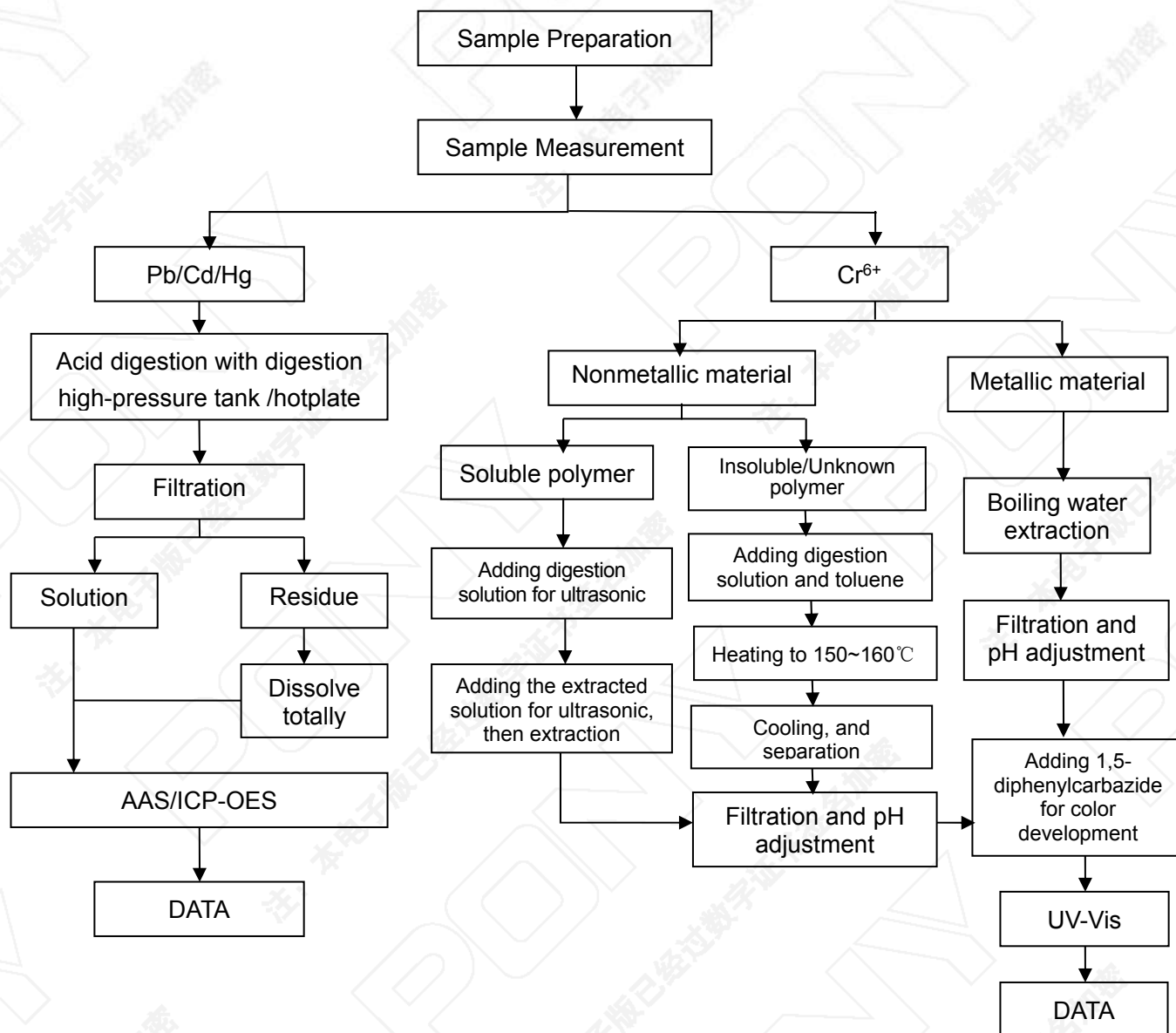
Tested by: Ou Yuanzhou

Checked by: Yang Xin

Person in charge of the lab by: Mao Zuqing

These Samples Were Dissolved Totally By Pre-conditioning Method According To Below Flow Chart.

(Cr⁶⁺ Test Method Excluded)



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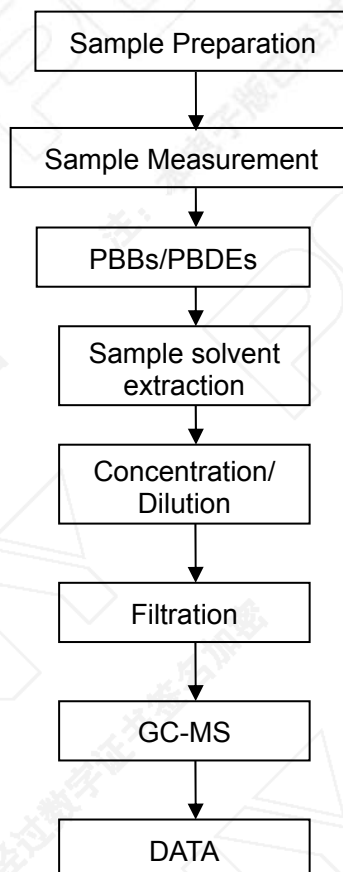
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Measurement Flow-chart

Tested by: Yang Feng

Checked by: Yang Xin

Person in charge of the lab by: Mao Zuqing



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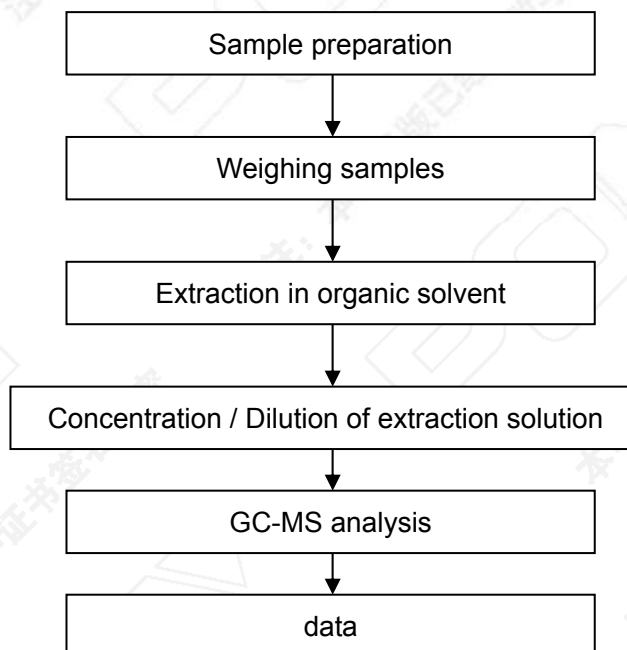
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Phthalates Measurement Flow-chart

Tested by: Yang Feng

Checked by: Yang Xin

Person in charge of the lab by: Mao Zuqing



End of Report



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中国认可
检验
INSPECTION
CNAS IB0011

货物运输条件鉴定报告书

Report for Safe Transport of Goods

Page 1 of 9 Pages

No.: UN2022-6531-2

 海运 By Sea	锂电池—非限制性货物 (SP 188) Lithium batteries—Non-restrictive goods (SP 188) 报告有效期 Period of validity: 2023-12-31
---	---

样 品 名 称

锂—二氧化锰扣式电池

CR2016 3V 75mAh

Sample Name..... :

Li-MnO₂ Button Cell

CR2016 3V 75mAh

委 托 单 位

常州金坛超创电池有限公司

Commissioner

CHANGZHOU JINTAN CHAOCHUANG BATTERY
CO.,LTD

威凯检测技术有限公司
CVC Testing Technology Co., Ltd.



货物运输条件鉴定报告书

Report for Safe Transport of Goods

Ref. No.: UN2022-6531-2

Page 2 of 9 Pages

样品信息/ Sample information	
样品名称	锂一二氧化锰扣式电池
Sample name.....	Li-MnO2 Button Cell
电池类别/Battery Category	锂金属电池/Lithium metal batteries
电池型号规格/Battery Type.....	CR2016 3V 75mAh
锂含量/Lithium content	0,025g
外观颜色/ Appearance.....	银色/ Silver
委托单位/ Commissioner information	
委托单位	常州金坛超创电池有限公司
Commissioned by	CHANGZHOU JINTAN CHAOCHUANG BATTERY CO.,LTD
制造商/Manufacturer information	
制造商:	常州金坛超创电池有限公司
Manufacturer	CHANGZHOU JINTAN CHAOCHUANG BATTERY CO.,LTD
包装件信息/Package information	
包装件重量/Package quantity. :	2,74kg
电池净重/ Battery net weight .. :	1,7kg
电池个数/ Battery Number	1000pcs
包装件尺寸/Package size	395mm*280mm*145mm
时间信息/ Date	
鉴定日期/ Inspection date.....:	2022-12-23~2022-12-30
报告有效期 Period of validity ...:	2023-12-31
鉴定依据/Inspection refer to	
《国际海运危险货物规则》 IMDG CODE (Amdt.40-20) 2020 Edition	
鉴定结论/ Certification	
1. 运输名称/Proper Shipping name: — 锂金属电池（包括锂合金电池）/ Lithium metal batteries (Including lithium alloy batteries)	
2. 危险性识别/ Hazards identification : — 锂金属电池/Lithium metal batteries	
3. 该物品符合 IMDG CODE（Amdt. 40-20）2020 版特殊规定 188 的要求，不受规则的其他条款限制。 / The article complies with the special provision 188 of IMDG CODE（Amdt. 40-20）2020 Edition, and not subject to other provisions of the code. — 包装件毛重不超过 30kg。/ The gross weight of the package does not exceed 30kg.	
签发日期: 2022-12-30 Issue Date:	鉴定单位盖章 (Seal of CVC)

批准人: 黄鲲

审核人:

张思瑶

鉴定人:

陈泽彦

Approved by:

黄鲲

Reviewed by:

张思瑶

Appraisal by:

陈泽彦

检查结果及其他事项 Inspection results and other information	
1	本报告所述锂电池已经通过联合国《试验和标准手册》第三部分第 38.3 节的相关测试要求。UN38.3 测试报告编号及试验概要的编号为: [RZUN2021-6903/R2-M2 / RZUN2021-6903/R2-M2-TS]。 The Lithium cells/batteries listed in the report are of type proven to meet the requirements of each test in the UN Manual of Tests and Criteria Part III subsection 38.3. The UN38.3 test report and test summary numbers are [RZUN2021-6903/R2-M2 / RZUN2021-6903/R2-M2-TS]. 本报告所述锂电池的包装箱能够承受 1,2 米跌落测试 1,2 米跌落测试报告编号: RZUN2022-6531-DT1 The package of Lithium batteries listed in the report is capable of withstood the 1,2m drop test. The 1,2m Drop Test report No. is RZUN2022-6531-DT1.
2	本报告所述锂电池按照《国际海运危险货物规则》(40-20 版) 2.9.4 (5) 规定的质量管理体系进行制造。 Lithium cells and batteries listed in this report were manufactured under the quality management program as described in IMDG CODE (Amdt. 40-20) 2020 Edition 2.9.4 (5).
3	锂电池具有适当的防短路措施。 Cells and batteries are properly protected so as to prevent short circuits.
4	锂电池装在能完全封闭其的内包装再放置在坚固外包装。 Cells and batteries are packed in inner packagings that completely enclose the cell or battery then place in a strong outer package.
备注: Remarks: 该报告中逗号用以代替小数点。 Throughout this report a comma is used as the decimal separator.	

样品照片
Photos of Samples

Cell/电芯 (CR2016 3V 75mAh)



样品照片
Photos of Samples

Cell/电芯 (CR2016 3V 75mAh)



样品照片
Photos of Samples

Cell/电芯 (CR2016 3V 75mAh)



Photos of Samples and Labels/样品照片及标识

Package/包装箱



注 意 事 项

Important Notice

1. 本鉴定报告书仅对送检样品有效。
This report is valid for the tested samples only.
2. 申请人提供的样品须与实际运输货物一致。
The goods applied for shipment must be in conformity with the tested samples.
3. 本鉴定报告书无鉴定单位印章无效。
This report is invalid without the seal of CVC.
4. 本鉴定报告书无批准人、审核人及鉴定人签名无效。
This report is invalid without the signatures of Ratifier, Reviewer and Appraiser.
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This appraisal report can be verified by scanning the QR code on the cover or on the website <http://www.cvc.org.cn>.

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Address: No.3,Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou, P. R. China.

电 话(Tel): (020)32293888

传 真(FAX): (020)32293889

邮政编码(Post Code): 510663

E-mail: office@cvc.org.cn

<http://www.cvc.org.cn>

MATERIAL SAFETY DATA SHEET

CHANGZHOU JINTAN CHAOCHUANG BATTERY CO., LTD.

MSDS No: 202301CR2016

Product Name: **Li-MnO₂ Button Cell**
(Lithium Metal Battery)

Issued and Revised Date: 01-JAN-2023

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Li-MnO₂ Button Cell(Lithium Metal Battery)

Applicable Models/Sizes: CR2016 3V 75mAh

Supplier Identification:

CHANGZHOU JINTAN CHAOCHUANG BATTERY CO., LTD.

Add: Xiyang Industrial estate, Maolu Town, Jintan City, Jiangsu Province,
China.

TEL: +86-519-82483588 FAX: +86-519-82480336

Contact Point:

SHENZHEN CHAOCHUANG BATTERY CO., LTD.

Add: Rm.13A10-11,Baoyuan Huafeng Headquarter Economy Building,Xiyang
Rd.Bao'an District,Shenzhen,China.

TEL: +86-755-27597836 FAX: +86-755-29369623

URL :<http://www.chaochuang.com/> E-mail: boss@chaochuang.com

2.HAZARDS IDENTIFICATION

Classification:

The lithium content of the product is 0.025g, it is belong to the lithium metal battery.
The product is tested according to Section 38.3 of the Manual of Tests and Criteria, the
test report number is: RZUN2021-6903/R2-M2.

Other information

Caution! Avoid short circuit place in high temperature environment, put into water, or
damage the shell.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Information about the chemical nature of product:

Ingredient Name	CAS No.	Concentration	Weight
Stainless Steel	12597-68-1	71.604%	1.228g
Polypropylene	9003-07-0	1.924%	0.033g
Manganese dioxide	1313-13-9	18.192%	0.312g
Lithium Sheet	7439-93-2	1.224%	0.021g
Lithium Perchlorate	7791-03-9	2.315%	0.039g
Polypropylene	9003-07-0	0.466%	0.008g
Teflon	9002-84-0	1.114%	0.019g
Graphite	7782-42-5	1.114%	0.019g
Propylene Carbonate	108-32-7	2.047%	0.033g

Independent Certification of Lithium-Manganese Button Cell Battery UN
Transportation Model Regulation

No	Test Item	Criteria	Result	Remark
T1	Altitude Simulation	No mass loss, leakage, venting, disassembly, rupture, and fire. OCV should not be less than 90% before testing.	Passed	
T2	Thermal Test	No mass loss, leakage, venting, disassembly, rupture, and fire. OCV should not be less than 90% before testing.	Passed	
T3	Vibration	No mass loss, leakage, venting, disassembly, rupture, and fire. OCV should not be less than 90% before testing.	Passed	
T4	Shock	No mass loss, leakage, venting, disassembly, rupture, and fire. OCV should not be less than 90% before testing.	Passed	
T5	External Short Circuit	External temperature should not exceed 170 degC. No disassembly, rupture, and fire within six hours of this test.	Passed	
T6	Impact	External temperature should not exceed 170 degC. No disassembly, and fire within six hours of this test.	Passed	
T7	Overcharge	No disassembly, and fire within seven days of this test.	Passed	Battery only
T8	Forced Discharge	No disassembly, and fire within seven days of this test.	Passed	

We confirmed the test results based on the UN manual of tests and criteria 38.3.

4. 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.

5. 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: 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.
- Flash Point: Not available
Auto-ignition Temperature: No Data.
Flammability Limits in Air, Lower, % by Volume: 1.4
Flammability Limits in Air, Upper, % by Volume: 11



6. 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.
- Before cleanup measures begin, review the entire MSDS with particular attention Potential Health Effects; and on Recommended Personal Protective Equipment.

7. 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 tearproof materials are recommended.

8. 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: Rubber gloves.

9. Physical / Chemical Characteristics

Physical state: Solid

Form: Geometric solid

Color: Metallic color (without outer PVC cover)

Odor: No odor

pH: Not Applicable

Flash point: Not Applicable

Explosion properties: Not Applicable

Density: Not Applicable

Solubility: Not Soluble

10. STABILITY AND REACTIVITY

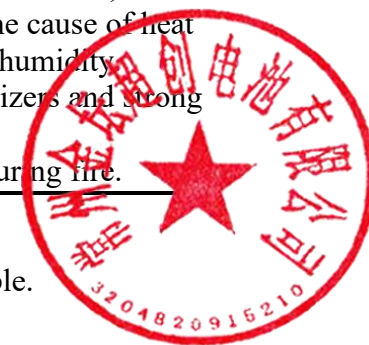
Hazardous reactions may occur under some specific conditions.

► 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.

11. TOXICOLOGICAL INFORMATION Acute toxicity: No data available.



Skin corrosion/irritation:No irritant effect.

Serious eye damage/irritation:Cause serious eye irritation.

Respiratory or skin sensitization:No sensitizing effects known.

Specific target organ system toxicity:No information available.

Note:The internal battery materials may cause irritation to eyes and skin.

12.ECOLOGICAL INFORMATION

Toxicity:No further relevant information available.

Persistence and degradability:No further relevant information available.

Bioaccumulative potential:No further relevant information available.

Mobility in soil:No further relevant information available.

Results of PBT and vPvB assessment:

PBT:Not applicable.

VPVB:Not applicable.

Other adverse effects:No information available.

13.DISPOSAL INFORMATION

Waste disposal must be in accordance with the applicable regulations. Disposal of the lithium-manganese button cell 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 with proper gas and fume treatment.

14.TRANSPORTATION/SHIPPING INFORMATION

► US DOT, All batteries are not subject to the requirements of the Department of Transportation (DOT) subchapter C, Hazardous Material Regulations since each battery meets the exceptions under 173.185 (b). The 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.

UN Number: UN3090/UN3091

► ICAO and IATA, all batteries are regulated as Hazardous Material by the International Civil Aviation Organization (ICAO),the International Air Transport Association (IATA) and International Maritime Dangerous Goods Regulations (IMDG). The only DOT requirement for shipping these batteries is special provision 130 which states: "Batteries, dry are not subject.

They must be transported according to Section 38.3 of the Seventh Revised Edition of the Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria (ST/SG/AC.10/11/Rev.7/Section 38.3) and Drop test of Section II of Packing Instructions 968~970 of 64th DGR Manual of IATA .

The lithium cell(CR2016)has passed the test UN38.3,according to the report ID: RZUN2021-6903/R2-M2.

► IMO, all batteries are regulated as Hazardous Material by the International Maritime Organization (IMO) when transporting more than 24 batteries or 12 batteries in a single package. These must be transported according to the requirement in Special Provisions “188” and “230”.

Batteries are as per IMDG SP:188 and tested as NON DG.

Package complies with the special provision 188 of IMDG CODE(Amdt.40-20)2020 Edition.

► ADR, RID, all batteries are regulated as Hazardous Material by the ADR (road) and RID (rail) when transporting more than 24 batteries or 12 batteries in a single package. These must be transported according to the requirement in Special Provisions “188” and “230”.

► BUILDING OF NEW BATTERY PACK- if you build any of lithium batteries into battery pack, you must assure that they are being tested in accordance.

15.REGULATORY INFORMATION

International Regulation:

Globally Harmonized System of Classification and Labeling of Chemicals

Recommendations on the Transport of Dangerous Goods Model Regulations IATA

Dangerous Goods Regulations(DGR)

International Maritime Dangerous Goods (IMDG CODE)

EU Regulation:

EU regulation (EC)1272/2008 on "Classification,Labeling and Packaging of Substances and Mixtures"(CLP)

Registration,Evaluation and Authorization of Chemicals (REACH)

Agreement concerning the International Carriage of Dangerous Goods by Road(ADR)

US Regulation:

American National Standard for Hazardous Workplace Chemicals -Hazard Evaluation and Safety Data Sheet and Precautionary Labeling Preparation.

16. OTHER INFORMATION.

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