



TEST REPORT NO: 1001865548

Mar 16, 2023

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Applicant:

CONRAD MANUFACTURING LIMITED

Test Date:

Mar 09 - 16, 2023

Address:

Room A,21/F,Gaylord Commercial Building,114-118 lockhart

Received Date:

Mar 09, 2023

Road, Hongkong

**Contact Person:** 

Contact Info:

Sample Description:

GEL CLING LIGHT UP

Country of origin:

China

**Tested Age Grading:** 

**Export To:** 

Labeled Age Grading:

USA

No. Of Sample

Style No.:

G89776/G91505

Submitted: Supplier:

Buyer:

**RPC** 

| <u>Test Item</u>  | Conclusion |  |
|---|------------|--|
| Total Lead Content in Substrates [CA Prop. 65 Settlement] | PASS       |  |
| Total Cadmium Content [CA Prop. 65 Settlement]            | PASS       |  |
| Total Phthalates Content [California Proposition 65]      | PASS       |  |
| Remark:   |            |  |

The results relate only to the samples tested.

The tested Samples/Components/Test Item were selected by client.

For and on behalf of UL VS Shanghai Limited

Lester. Xie- Operation Manager

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# Sample Information:

| Sample | Product  | Applicant's equivalent code / Color |
|--------|--|-------------------------------------|
| 001    | TRANSPARENT SOFT GLUE - BODY                     |                                     |
| 002    | WHITE PLASTIC - SWITCH                           |                                     |
| 003    | YELLOW PLASTIC - SWITCH                          |                                     |
| 004    | BLACK PLASTIC - BUTTON                           |                                     |
| 005    | TRANSPARENT SOFT PLASTIC - WIRE                  |                                     |
| 006    | TRANSPARENT PLASTIC WITH MULTICOLOR PRINT - BODY |                                     |
| 007    | SILVER METAL - WIRE                              |                                     |

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#### 1. Total Lead Content in Substrates [CA Prop. 65 Settlement]

Test Method: CPSC-CH-E1001-08.3 (Metal Substrates) / CPSC-CH-E1002-08.3 Section IA & IIA (Non-Metal Substrates)

Criteria: The submitted sample(s) must not exceed the Total Lead Limit as per Client's specification for California Proposition 65 Settlements.

Detection Limit: 20mg/kg

| <u>Sample</u> | Result(mg/kg) | Requirement(mg/kg) |      |
|---------------|---------------|--------------------|------|
| 001           | <20.0         | Max. 100           | PASS |
| 002+003+004   | <20.0         | Max. 100           | PASS |
| 005           | <20.0         | Max. 100           | PASS |
| 006           | <20.0         | Max. 100           | PASS |
| 007           | 22.2          | Max. 100           | PASS |

#### Total Cadmium Content [CA Prop. 65 Settlement] 2.

Wet digestion method was used and total Cadmium content was determined by ICP-OES or AAS.

Criteria: The submitted sample(s) must not exceed the Total Cadmium Limit as per Client's specification for California Proposition 65 Settlements.

Detection Limit: 7.5mg/kg

| Sample      | Result(mg/kg)                                 | Requirement(mg/kg)            |      |
|-------------|---|-------------------------------|------|
| 001         | <7.5  | Max. 90                       | PASS |
| 002+003+004 | <7.5  | Max. 90                       | PASS |
| 005         | <7.5  | Max. 90                       | PASS |
| 006         | <7.5  | Max. 90                       | PASS |
| 007         | 9.6   | Max. 90                       | PASS |
| "<" mea     | ns less than; ">" means greater than; "mg/kg" | means milligrams per kilogram |      |

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#### 3. **Total Phthalates Content [California Proposition 65]**

Test Method: CPSC-CH-C1001-09.4

|      | Sample 001 | <u>Sample</u><br><u>002+003+004</u> | Sample 005 | Sample 006 | Client Requirement (%) |
|------|------------|-------------------------------------|------------|------------|------------------------|
| Item | Result (%) | Result (%)                          | Result (%) | Result (%) | <u>Individual</u>      |
| BBP  | < 0.01     | < 0.01                              | < 0.01     | < 0.01     | < 0.1                  |
| DBP  | < 0.01     | < 0.01                              | < 0.01     | < 0.01     | < 0.1                  |
| DEHP | < 0.01     | < 0.01                              | < 0.01     | < 0.01     | < 0.1                  |
| DNHP | < 0.01     | < 0.01                              | < 0.01     | < 0.01     | < 0.1                  |
| DINP | < 0.02     | < 0.02                              | < 0.02     | < 0.02     | < 0.1                  |
| DIDP | < 0.02     | < 0.02                              | < 0.02     | < 0.02     | < 0.1                  |
|      | PASS       | PASS                                | PASS       | PASS       |                        |

#### Remark:

Method detected limit: BBP/DBP/DEHP/DNHP=0.01% ; DINP/DIDP=0.02%

Benzyl butyl phthalate, BBP; Dibutyl phthalate, DBP; Bis(2-ethylhexyl) phthalate, DEHP

Di-n-hexyl phthalate, DNHP; Di-iso-nonyl phthalate, DINP; Diisodecyl phthalate, DIDP

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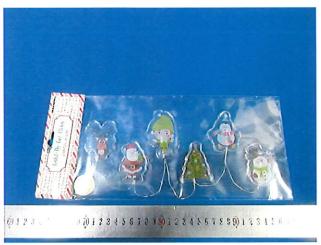
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\*\*\*\*\* End of Report \*\*\*\*\*

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优力驻邦质量检测(上海)有限公司

ADF-001 (2018-09-18)

#### **UL VS Terms and Conditions**

#### All services are governed by the following Terms and Conditions.

- 1. Verification Services. The UL Contracting Party ("we", "us", or "our" as the context requires) will perform commercial testing, verification, audit, assessment, inspection, and/or other services ("Services") in accordance with your instructions as described in this order, scope of work, project proposal, quotation, or order acknowledgment ("Quotation"). The Services will be limited to an assessment of your samples' conformity to requirements, specifications, and/or protocols you have established ("Your Requirements"), and do not express any opinion regarding the bulk from which the samples were drawn. The Services do not involve any assessment or evaluation to independent safety assessment of any samples.
- Retailer Programs. If you request us to test compliance with retailer, carrier or other third party program ("Retailer") by requesting Services under the Retailer's program, you consent to our disclosure of all associated information, materials, and deliverables to such Retailer and acknowledge that, notwithstanding any terms to the contrary in these Terms and Conditions, the ownership of the deliverables for the Services will be in accordance with the Retailer's program.
- 3. Payment Terms. You will pay, without set off, our fees and related expenses in accordance with the Quotation including the cost of all taxes, wire or transfer fees, duties, and other fiscal charges which become due on the quoted price and will indemnify us from and against labibles, incurred as a result of failure to pay any such sums when they become due. We may other arrive interest at 1% per month (12% per year), or the maximum legal rate if less than 1,0% per month, from the due date until paid fully. You gree to pay reasonable collection costs, including altoneys fees, if necessary, in the event of late or non-payment.
- 4. Your Requirements. You are responsible for establishing or selecting all Your Requirements that we will use in performing the Services. We may provide you with assistance in developing Your Requirements that meet your needs, however, in all cases you must review and approve Your Requirements to be used in performing the Services.
- 5. Estimated Schedule and Price. Any time schedule and pricing terms set forth in this Quotation are estimates only and subject to change upon reasonable notice from us depending upon the specific project.
- 6. On-Site Investigations. If we perform Services on site at your facitities, or at the facilities of other parties as directed by you; you will ensure that our representatives have safe, secure, and free access to the facilities. Our access will not be conditioned upon the execution of any agreement, waiver, or release. If our representatives are prevented from performing or completing any Services for any reason beyond our reasonable control, we will not be responsible for the nonperformance, and you may be charged for any actual expenses we incur and fees for Services performed.
- 7. Deliverables. We will provide you with a report outlining: (i) your instructions and request for Services accepted by us. (ii) Your Requirements used in providing the Services, (iii) the Services performed, and (iv) the results of those Services. We are under no obligation to refer to or report on any facts or circumstances which are outside your specific instructions received and accepted by us.
- 8. Our Findings. We do not guarantee that our opinions or findings will be recognized or accepted by third parties.
- 9. Use of Names and Marks. Except as otherwise authorized by us in writing, you will not use our name, abbreviation, symbols, marks, or the name of any of our subsidiaries, affiliates, or parent on any goods or their containers or packaging, or in connection with any advertising, promotions, or otherwise.
- 10. Cancellation Fees. If you cancel or change a Quotation: (i) for an inspection after 3.00 PM of the working day before the scheduled inspection date, we will charge you the Quotation price plus any travel costs incurred before the cancellation; (ii) for testing after we receive the sample(s) at the testing facility, we will charge you cancellation fees according to the amount of actual work performed with a minimum cancellation fee of \$100 USD; or (iii) for a scheduled audit date, you will be responsible for all incurred non-refundable travel costs associate with that audit. Any change or cancellation of an audit that occurs within 7 days of the scheduled audit will be charged a \$600 USD fee in addition to any incurred travel costs.
- 11. No Warranty. NO REPRESENTATION, WARRANTY, OR GUARANTEE, EXPRESS OR IMPLIED, IS INCLUDED IN THESE TERMS AND CONDITIONS, OR IN ANY QUOTATION, REPORT, OR OTHER DOCUMENT PROVIDED UNDER THESE TERMS AND CONDITIONS INCLUDING, BUT NOT LIMITED TO: (i) ANY "IMPLIED WARRANTY OF MERCHANTABILITY" OR "FITNESS FOR A PARTICULAR PURPOSE", (ii) NONINFRINGEMENT, AND (iii) THAT THE WEB SERVICES (AS DEFINED BELOW) WILL BE UNINTERRUPTED, TIMELY, SECURE, OR ERROR-FREE.
- 12. Your Information. You represent and warrant that all information and data provided to us by you, or on your behalf, is complete and accurate and may be reflect upon to provide Services. In addition, you represent and warrant that all of Your Information is owned or Icensed by you, and does not infinge on the intellectual property rights of any third party. If any information or data provided to us by you or on your behalf is either incomplete or inaccurate, we will not be lable in any manner for any deficiencies in the Services.
- 13. Ownership of Work Product. You will own the test reports or other materials provided to you pursuant to any Quotation. We may retain a copy of the test reports and other materials for our archives and for creating reports for you and third parties, as required by you.
- 14. Web Services. We may provide you with certain website tools and related services, including the ability to order services online through a website (collectively, the "Web Services"). The Web Services are provided to you as a convenience and are provided on an "as is, as available" basis. By using the Web Services, you acknowledge and agree that no data or content transmitted over our networks, the Internet, or wirelessly, or through or in connection with the Web Services, is guaranteed to be secure or free from unauthorized intrusion, and that data stored by us, our afficiency or our service providers may be debted, modified, or damaged. You acknowledge that if you wish to protect your transmission of data or fles to us, it is your responsibility to use a secure encrypted connection to communicate with and use the Web Services. Your use of the Web Services is at your scle risk and is subject to any terms of use applicable to such Web Services are included in the definition of Services above.
- 15. Confidentiality. We will not disclose your information obtained in confidence ('Confidential Information') to third parties, except our substituries, affisiates, or subcontractors, without your prior written authorization. Confidential information will not include information: (a) aiready known to us, (b) publicly available, (c) subsequently acquired by us from other sources without a breach of these Terms and Conditions, (d) disclosure that is necessary to perform the Services, (e) required to be produced by law or government order, or accreditation authority, or (i) related to a product bearing a UL Mark that should be disclosed to us or our affiliates pursuant to another agreement with your
- 16. Samples. If we require sample examination, you will ship samples to us at your expense. Upon completion of testing, the samples will be destroyed, unless other arrangements are made for return of the samples at your expense. You acknowledge that testing and sample preparation may damage or destroy the sample(s), for which we will not be liable.
- 17. LIMITATION OF LIABILITY. OUR LIABILITY FOR ANY CLAIMS FOR LOSS, DAMAGE, OR EXPENSE OF ANY NATURE AND HOWSOEVER ARISING FOR ANY BREACH OF CONTRACT AND/OR ANY FAILURE TO EXERCISE APPROPRIATE SKILL AND CABE BY US WILL UNDER NO CIRCUMSTANCE EXCEED THE FEES RECEIVED FOR THE SPECIFIC SERVICES WHICH GIVE RISE TO SUICH CLAIMS. UNDER NO CIRCUMSTANCE WILL WE HAVE ANY LIABILITY FOR ANY CLAIMS FOR INDIRECT, CONSEQUENTIAL, INCIDENTIAL, SPECIAL, EXEMPLARY, OR PUNITIVE DAMAGES OF ANY NATURE WHATSOEVER, INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, GOODWILL, USE, DATA, FUTURE BUSINESS, OR PRODUCTION; CANCELLATION OF CONTRACTS ENTERED INTO BY YOU; OR OTHER INTANSBILE LOSSES (EVEN IF WE HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES). UNDER NO CIRCUMSTANCE WILL WE BE LIABILE TO YOU FOR ANY CLAIMS FOR LOSS, DAMAGE, OR EXPENSE UNLESS SUCH CLAIM IS BROUGHT UNDER SECTION 25 (ISIPPLIES) WITHIN TWELVE MONTHS AFTER THE DATE OF THE PERFORMANCE BY US OF THE SERVICES WHICH GIVE RISE TO THE CLAIM OR, IN THE EVENT OF ANY ALLEGED NON-PERFORMANCE, WITHIN TWELVE MONTHS OF THE DATE OF THE PERFORMANCE, WITHIN TWELVE MONTHS OF THE DATE OF THE PERFORMANCE, WITHIN TWELVE MONTHS OF THE DATE OF THE PERFORMANCE PROPERTY.
- 18. Indemnification. You will defend, hold harmless, and indemnify us and our officers, directors, trustees, employees, agents, or subcontractors against all claims made by any third party for loss, damage, or expense arising out of these Terms and Conditions, including without limitation, the performance or non-performance of any Services or the Web Services.
- 19. Waiver. Any failure by a party to insist upon the performance of any section of these Terms and Conditions will not constitute a waiver of any rights under these Terms and Conditions or future performance of that section
- 20. No Third Party Beneficiaries. The parties intend that no provisions of these Terms and Conditions will in any way bind or benefit any third party or the public at large and that no third party will have any rights or cause of action under these Terms and Conditions. In particular, in the event Singapore law governs these Terms and Conditions pursuant to Section 24 (Governing Law), a person or entity who is not a party to these Terms and Conditions will have no right under the Contracts (Rights of Third Parties) Act (Chapter 53B) to enforce any term of these Terms and Conditions, regardless of whether such person or entity has been identified by name, as a member of a class, or as answering a particular description.
- 21. No Assignment. Neither party may assign any of its rights or obligations under these Terms and Conditions to any other person without the other party's written authorization. However, we may, upon written notice, assign our rights and obligations under these Terms and Conditions to any of our affiliates or subsidiaries.
- 22. Subcontracting. We may use subcontractors for certain testing or other Services. All subcontractors will meet our current qualification requirements and will comply with our requirements for confidentiality, conflicts of interest, and
- 23. Termination and Notice. These Terms and Conditions will continue in effect until terminated by either party upon thirty days written notice or, in the event of your breach of these Terms and Conditions, immediately upon receipt of written notice to you. You will pay those fees and expenses incurred by us prior to termination. Notice to either party may be made by hand delivery, courier service, mal, facsimile, or e-mail transmission at the receiving party's designated principal place of business. Notice to us must be sent both to: UL Verification Services Pte. Ltd, Attn: President, 1 Maritime Square, Harbour Front Centre, #11-03, Singapore 099253 with a copy to UL LLC, Attn: General Counsel at 333 Pfingsten Road, Northbrook, Illinois 60062. Notice will be effective upon receipt.
- 24. Governing Law: These Terms and Conditions will be governed and interpreted by the laws of the State of Illinois, United States of America, except if: (i) UL Contracting Party's principal place of business is Asia, Australia, or New Zealand, then Singapore law, and (ii) UL Contracting Party's principal place of business is Europe, then Swiss law, without reference to the applicable jurisdiction's choice of law principles.
- 25. Disputes. Any dispute or disagreement, other than nonpayment of fees, relating to these Terms and Conditions or the Services, will be settled by confidential, binding arbitration administered by the International Centre for Dispute Resolution of the American Arbitration Association ("AAA") pursuant to the AAA Commercial Arbitration Rules and the Procedures for Large, Complex Commercial Disputes. The arbitration venue will be Chicago, Illinois, except lif: (i) UL Contracting Party's principal place of business is in Asia, Austratia, or New Zealand, the venue will be Singapore, Reputible of Singapore. The arbitration will be conducted before a panel of three (3) arbitrators. In arbitration panel will be inclined as follows: the parties will request a list of ten (10) arbitrators drawn from the AAA's panel of the commercial arbitration selection, the two (2) arbitrators will agree on a third arbitrator from the 1st of ten (10), who the chair of the panel, and the panel will be final. The decision of the majority of the arbitrators will be selected on the two (2) arbitrators will be used to the chair of the panel, and the panel will be final. The decision of the majority of the arbitrators will be the chair of the panel will be final. The decision of the majority of the arbitrators will be the panels decision. The arbitrators will not have the authority to add, change, or disregard any term of these Terms and Conditions to award incidental, consequential, or punitive damages (including, but not firsted to, loss of use, unjust enrichment, and/or lost profits), or exceed the remedies provided by the firstation of liability of these Terms and Conditions. The panels decision will be binding and judgment on the arbitration award may be entered by a court of competent jurisdiction. Arbitration will be the final remedy for any dispute between the parties arising out of these Terms and Conditions, provided, however, that nothing herien will prevent either party from seeking a count order for injunctive relief (in addit
- 26. Severability. If any section of these Terms and Conditions is held invalid, void, or unenforceable for any reason that section will be severed, and all other sections of these Terms and Conditions will remain valid to the extended permissible under law.
- 27. Modifications. These Terms and Conditions are the entire and complete agreement between the parties and supersede any other communications, representations, or agreements with respect to its subject matter. Under no circumstances will any preprinted, additional, or different terms and conditions on your requests for quotation, purchase orders, invoices, sales or marketing materials, emails, any acceptance communications, or other business documents apply to any Services or Quotation or bind us in any manner. Modifications that have not been made by us or that have not been accepted by us in a written or emailed confirmation from us are not accepted by us, and commencement of performance will not signify acceptance by us of any such modifications, are excluded from our agreement, and such modifications will not be a binding agreement on us.
- 28. Order of Precedence, Except for conflicts with Section 3 (Payment Terms), Section 5 (Estimated Schedule and Price) and Section 10 (Cancellation Fees), these Terms and Conditions will take precedence over any conflicting terms in any Quotation,
- 29. Electronic Signature. These Terms and Conditions may be executed and delivered by facsimile, PDF, or by means of other electronic signature. Our electronic, digital, or hard copies of these Terms and Conditions, your acceptance, and Quotations as signed, or otherwise accepted, by you will be the true, complete, valid, authentic, and enforceable copies of these documents. You agree that you will not contest the admissibility or enforceability of our copies in a court or any proceeding arising out of such documents.
- 30. Force Majeure. Neither party will be liable for any failure or delay in the performance of its obligations due to fire, flood, earthquake, elements of nature, or acts of God, acts of war, terrorism, riots, civil disorder, rebellions, or other similar cause beyond the reasonable control of the party affected, provided such default or delay. (i) could not have been prevented by reasonable precautions; (ii) cannot reasonably be circumvented; (iii) and the party hindered or delayed immediately notifies the other party describing the circumstance causing delay.





# SAFETYDATASHEET

Lithium Battery Coin Cells

Product Name: CR2032/3. 0V/210mAH

**Effective Date:** 2023-01-12

Compiler: Huang Chaozheng

Checker: Lru Wanging

Approver: Dongxuesheng

Shanghai Institute of Chemical Industry Testing Co., Ltd.



# NINGBO CITY LI RONG POWER SUPPLY CO.,LTD.

# SAFETY DATA SHEET

# Lithium Battery Coin Cells CR2032/3.0V/210mAH

# SECTION1 PRODUCT AND COMPANY IDENTIFICATION

Product name:

Lithium Battery Coin Cells CR2032/3.0V/210mAH

Company:

NINGBO CITY LI RONG POWER SUPPLY CO., LTD.

Address:

NO. 3 West Zhenxing Road, Liang Hui Development Zone, Yuyao City, Zhejiang

Province, 315403, P. R. China

Email:

nblirong88@163. com

Fax:

86-574-22693548

Emergency Phone:

86-13486662866

Recommend use of the chemical and restrictions on use: /

SDS Number:

2623010193

Effective Date:

2023-01-12

# SECTION2 HAZARDS IDENTIFICATION

The product is outside of the scope of GHS system.

#### Main Hazards:

# Fire or Explosion Hazards:

Lithium metal emits spontaneously flammable gas in contact with water, and the electrolyte may contain flammable liquid.

# Health Hazards:

Lithium metal is corrosive to eyes and skin, and may cause burns or corrosion in contact. The electrolyte in the battery causes skin irritation and eye irritation.

# **SECTION3 INFORMATION ON INGREDIENTS**

Product name:

Lithium Battery Coin Cells CR2032/3. 0V/210mAH

| Ingredient                            | Concentration | CAS No.   | EC No.    |
|---------------------------------------|---------------|-----------|-----------|
| Manganese dioxide (MnO <sub>2</sub> ) | 84.2%         | 1313-13-9 | 215-202-6 |
| Lithium(Li)                           | 5.8%          | 7439-93-2 | 231-102-5 |
| Propylene carbonate(PC)               | 5%            | 108-32-7  | 203-572-1 |



| 1,2-Dimethoxyethane (DME)    | 3% | 110-71-4  | 203-794-9 |
|------------------------------|----|-----------|-----------|
| Lithium perchlorate (LiClO4) | 2% | 7791-03-9 | 232-237-2 |

#### SECTION4 FIRST-AID MEASURES

### Skin Exposure:

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

#### Eve 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.

# SECTIONS FIRE FIGHTING MEASURES

#### Suitable Extinguishing Media:

Suitable: Dry graphite powder, dry sand.

### Specific Hazards Arising from the Chemical:

Lithium metal can ignite spontaneously in the air when heated to a molten state. It can release hydrogen and energy when reacting with water or acids, which causes fire or even explosion. A molten stream is generated immediately after burning and will disperse and emit thick white smoke, which will shade the fire scene.

#### 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. Water treatment is strictly prohibited. Cut off the source of leakage as much as possible.

### Environmental Precautions:

Avoid leakage getting into the earth, ditches or waters.

#### Methods and Materials for Containment and Cleaning up:

In case of small leakage, use dry sand or other non-combustible materials to cover the leakage, and then cover with plastic cloth to reduce scattering and avoid raining. In case of powder leakage, cover the leakage with plastic cloth or canvas to reduce scattering. Keep it dry, and remove it under the guidance of an expert.

# 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 an explosion-proof ventilation system and equipment. Do not let the lithium metal contact with water. 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. In case of leakage of the materials in the battery, avoid directly contacting with eyes and skin. Avoid inhalation. Incompatibilities: Acids. Halogens, Combustible materials and Corrosive substances.

# Conditions for Safe Storage, Including Any Incompatibilities:

Store in a cool, dry, and well-ventilated area. Keep away from ignition sources, heat and flame. Avoid exposure to moisture. Incompatibilities: Acids. Halogens, Combustible materials and Corrosive substances. 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:

Manganese and its inorganic compounds (calculated as  $MnO_2$ ): PC-TWA 0.15 mg/m<sup>3</sup> ACGIH:

Manganese dioxide: TLV-TWA 0.2 mg (Mn)/m'

# Appropriate Engineering Controls:

Mechanical exhaust required. Safety shower and eye bath.

# Individual Protection Measures:

# Eye/Face Protection:

Wear chemical safety glasses.

#### 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:

Silvery button 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℃

Point/Freezing

Point:

Flash Point

No data available

(Closed Cup):

Density/Relative

No data available

Density:

Kinematic Viscosity: No data available

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): Autoingnition

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. Prevent movement which could lead to short circuits. Avoid exposure to moisture.

# Incompatible Materials:

Acids, Halogens, Combustible materials and Corrosive substances.

# Hazardous Decomposition Products:

Carbon oxides, metal oxides, etc.

# SECTION11 TOXICOLOGICAL INFORMATION

# Acute Toxicity:

No data available.

# Skin Corrosion/Irritation:

Lithium metal is corrosive to skin, and may cause burns or corrosion in contact. The electrolyte in the battery causes skin irritation.

#### Serious Eye Damage/Irritation:

Lithium metal is corrosive to eyes, and may cause burns or corrosion in contact. The electrolyte in the battery causes eye irritation.

#### Respiratory Sensitization:

No data available.

#### Skin Sensitization:

No data available.

### Carcinogenicity:

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 Metal Battery during Transport:

The product has passed the test items of Manual of Tests and Criteria Section 38.3 and UN Model Regulations, SP188, 1.2m drop test. The net weight of the lithium batteries in the package is less than 2.5 kg. The content of Lithium is less than 1 g.

RID/ADR (2023

The product is not subject to the other provisions of RID/ADR according to special provision

Edition): 18

According to 2.2.9.1.7(g), 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.

Proper Shipping Name: Lithium metal batteries

IATA DGR (64th

Hazard Class: 9

Edition): UN Number: UN3090

The product shall meet the General Requirements and section IB of Packaging Instruction

968.

The package has passed the stacking test required in PI 968 IB.

According to 3.9.2.6.1(g), 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

The product is not subject to the other provisions of IMO IMDG CODE according to special

CODE (2020

provision 188.

Edition):

According to 2.9.4.7, 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 111, sub-section 38.3, paragraph 38.3.5.

# SECTION15 REGULATORY INFORMATION

# Domestic Regulations:

Only Lithium Metal Battery during Transport:

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

UN Number: 3090

Name and Description: Lithium metal batteries

The product is not subject to JT/T 617-2018 according to special provision 188.

List of Dangerous Goods (GB 12268-2012):

UN Number: 3090

Proper Shipping Name: Lithium metal batteries

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

The product is not subject to GB 12268-2012 according to special provision 188.

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.

# SECTION16 OTHER INFORMATION

#### Preparation Date:

2023-01-12

#### Preparation Department:

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

#### Revision:

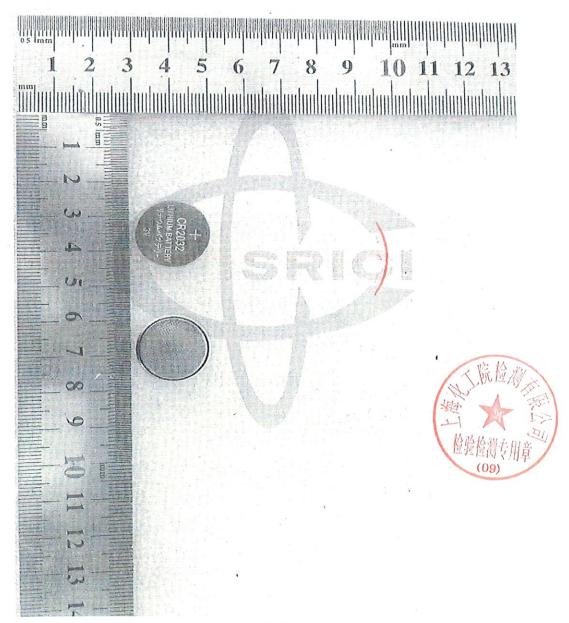
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# Abbreviations and Acronyms:

CAS: Chemical Abstracts Service EC: European Commission ACGIH: American Conference of Governmental Industrial Hygienists PC-TWA: Permissible concentration-time weighted average TLV-TWA: Time weighted average threshold limit 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 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.



\*\*\*END OF REPORT\*\*\*







# 

# Certification for Safe Transport of Chemical Goods

# 锂电池类货物

样品名称: 俚锰扣式电池(组扣电池) CR2032/3. 0V/210mAH

Sample name: Lithium Button Battery (Coin Cells) CR2032/3.0V /210mAH

宁波市力荣电源有限公司

NINGBO CITY LI RONG POWER SUPPLY CO., LTD

小 · · · · · · · 宁波市力菜电源有限公司

NINGBO CITY LI RONG POWER SUPPLY CO., LTD

Estura 1960 检验检测专用章

SICIT上海化工院检测有限公司

Shanghai Institute of Chemical Industry Testing Co., Ltd

# 声 明

# Statement

- 鉴定书无上海化工院检测有限公司检验检测专用章、二维码无效。
   The certification is invalid if it is not affixed the dedicated inspection and testing seal of Shanghai Institute of Chemical Industry Testing Co., Ltd.and QR Code on it.
- 鉴定书复印件无效。
   Copies of the certification are invalid.
- 3. 鉴定书无主检、审核、批准签字无效。
  The certification is invalid without the signatures of appraiser, checker and approver.
- 4. 鉴定书涂改无效。 The certification is invalid if it is forged or altered.
- 5. 委托单位必须保证送至本公司的样品及资料与真实的出运货物相一致,如有不符,所涉及的法律责任及其他后果均由委托单位自行承担。
  The client must guarantee that samples and documents provided for appraisal are consistent with the goods to be transported. Otherwise, the client shall bear all legal responsibilities and other consequences due to it.
- 6. 本鉴定书的鉴定结论仅适用于最终收到的样品。
  The conclusion of this certification only applies to the final sample as received.
- 7. 本鉴定书当年有效,铁路运输方式除外。特殊情况参见鉴定书备注。 The certification is valid in the year subscribed on it except when transported by rail. Please refer to the comment of certification on special occasion.
- 8. 本鉴定书不考虑国家及经营人差异。
  The certification takes no account of the State and Operator Variations.
- 货物的运输方式应与鉴定结论中的运输方式相一致。不同的运输方式,鉴定结果可能会有差异。

The transportation mode of the goods shall be consistent with that in the appraisal conclusion. Different transportation modes may lead to different appraisal results.

- 10. 鉴定书真伪性可登入本公司网站 www.ghs.cn 或扫描鉴定书中二维码进行查询。 The authenticity of the certification can be verified by our website(www.ghs.cn)or the OR code in the certification.
- 11. 送检申请可登入本公司网站 www.ghs.cn 进行网上委托。
  The application of the certification can be done via our website: www.ghs.cn.

地址:上海市光复西路2779号接待大厅

Address: Reception Hall, Shanghai Institute of Chemical Industry Co., Ltd, No.2779 West Guangfu Road, Shanghai, China.

邮编(Post code): 200062 电话(Tel):(008621)31765555 邮箱(Email): center@ghs.cn 网址(Website): www.ghs.cn

# 货物运输条件鉴定书 Certification for Safe Transport of Chemical Goods

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|           |                      | Ce                   | 理铥扣式电池(纽扣电池) CF            |   |  |
|-----------|----------------------|----------------------|----------------------------|---|--|
|           |                      | 中文                   | 建强排入电池(纽排电池) G             | (2032/3.01/210mm)                         |  |
| 样品。       | 名称                   | Chinese              |                            |   |  |
| Sample    |                      |                      | Lithium Button Battery     | (Coin Cells) CR2032/3.0V /210             | mAU  |
|           |                      | 英文                   | La chi dia maccon maccony  |   |  |
|           |                      | English              |                            |   |  |
|           | 6.14                 | 26.72                | 宁波市力荣电源有限公司                |   |  |
|           | 委托                   |                      | NINGBO CITY LI RONG POWE   | R SUPPLY CO., LTD                         |  |
|           |                      | ignor                | 宁波市力荣电源有限公司                |   |  |
|           |                      | 单位<br>acturer        | NINGBO CITY LI RONG POWE   | R SUPPLY CO., LTD                         |  |
|           |                      |                      | 国际海事组织《国际海运危               | ·   | y.   |
|           |                      | 去、程序                 | IMO International Mariti   | me Dangerous Goods Code (2020             | Edition)   |
| nspection |                      | od and procedure     | 银色钮扣状金属外壳                  |   |  |
| _         |                      | 外观                   | Silvery Button metal she   | 11  |  |
| Sar       |                      | ppearance            | ர(ந்≲30kg。                 | 177-141                                   |  |
| _         |                      | 件信息                  | weight≤30kg.               |   |  |
|           | ckage i              | nformation           | <b>전</b> 号                 | 容量Capacity                                | 放置方式   |
| 序号<br>NO. |                      | 电池种类<br>Battery type | Model                      | /包含量Li content                            | Placement  |
| 1         |                      | 定电锂金属电池芯             | CR2032                     | 210m\h / ≤0.3g                            | 电池单独运输   |
|           | Primar               | ry Li-metal cell     | 10.151                     | All or transfer but the                   | Battery only   |
| 鉴         | ח                    | Code)                |                            | 1000                                      | ggestion according to IMO IMD  |
| 23        |                      | 根据特殊規定188.           | 该物品不受IMO IMDG Code。        | 其他条款限制。<br>Isions of IMO IMDG Code accord | ing to special provision 188.  |
| 定         | CATI ON CONCL USI ON | The article is n     | not subject to other provi | ISIONS OF IMO THUS CODE ACCORD            | ting to special procession ross  |
|           | 2                    |                      |                            |   |  |
| 结         | 8                    |                      |                            |   | •  |
|           | NO.                  | o 石址冊式 (D.           | ckaging requirements)      |   |  |
| 论         |                      |                      | ckaging requirements       |   | 到右侧  |
| 16        | <u>s</u>             | 无.                   |                            | 11.00                                     | 15%日間法   |
|           | 2                    | None.                |                            |   | A STATE OF THE STA |
|           |                      |                      |                            |   | 11 11 11   |
|           |                      |                      |                            |   | ( ) ( ) ( ) ( ) ( ) ( )  |
|           |                      | 检验日期:                | 签发日期                       | 生效日                                       | 物: 2023-01-04  |
|           |                      | Inspection Da        | 2023-01-04                 | 2023-01-04                                | 2023-01-01   |
|           |                      | /                    |                            |   |  |
|           |                      | /                    |                            |   |  |
| 备         | 注                    |                      |                            |   |  |
|           | 注<br>ment            | ,                    |                            |   |  |

批准 Approver: 七星

审核 Checker:

主检 Appraiser:



# 货物运输条件鉴定书 Certification for Safe Transport of Chemical Goods

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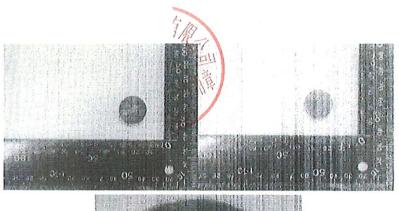
| 序号<br>No. | 检验结果及其他事项<br>Inspection results and other things   |
|-----------|--|
| 1         | 本报告所述锂电池按照《国际海运危险货物规则》(2020版) 2.9.4.5规定的质量管理体系进行制造。 Lithium cells and batteries listed in this report were manufactured under the quality management program described in IMDG CODE 2020 EDITION 2.9.4.5.  |
| 2         | 本报告所述锂电池已通过联合国《试验和标准手册》第111部分38.3小节相应阅试要求。<br>包装件能够承受1.2m 共落试验。<br>Lithium cells and batteries listed in this report are of the types proved to meet the requirements of each applicable test in the UN Manual of Tests and Criteria, Part III, sub-section 38.3.  The package has passed the 1.2m drop test. UN38.3 试验模要缩号 The UN38.3 Test Summary No. (s) 811900700354515 详细信息语扫描右侧二维码。 Please scan the QR code on the right for more information.  理电池完全封装在内包装内,位于坚固的外包装中。  |
|           | Lithium cells and batteries are packed in inner packagings that completely enclose the cell or battery and placed in a strong  |
| 3         | outer packaging.   |
|           |  |
| 1         | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1   |
|           | 电池具有适当的防短路指摘。<br>  Cells and batteries are properly protected to prevent short circuits.   |
| .,        |  |
| 4         |  |
| 1         |  |
| 5         | 每个包装件必须标示恰当的锂电池标记。<br>装有锂电池的包装件,符合国际民航组织《危险物品安全航空运输技术细测》第4部分第11章的包装说明965或968第18部分规定的,益贴<br>5. 2. 1. 10 (锂电池标记) 和5. 2. 2. 2所示的9A型标签,应视为符合本特殊规定188的规定<br>Each package shall be marked with the appropriate lithium battery mark.<br>Packages containing lithium batteries packed in conformity with the provisions of part 1. chapter 11, packing instructions<br>965 or 968, section 1B of the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by air that bear the<br>mark as shown in 5. 2. 1. 10 (lithium battery mark) and the label shown 5. 2. 2. 2. Model Vo. 9A shall be decided to meet the provisions<br>of this special provision 188. |
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