

SDS

SAFETY DATA SHEET

Prepared For : JIEYANG AIR PORT AREA CHUANG GUAN
ENVIRONMENTAL PROTECTION NEW ENERGY
ELECTRONICS CO.,LTD.
MIDDLE SECTION OF RONGJING
ROAD,JINXIANMEN AVENUE,YUHU,JIEYANG
AIRPORT,GUANGDONG PROVINCE

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Report Number : KA2306120329A

Written by: Wendy

Approved by: Hu + Li



Safety Data Sheet

Version: V1.5

REPORT NO.: KA2306120329A

* The SDS is prepared based on the information provided by client. The contents and formats of this SDS are revised as per client's request.

Section 1- Identification

(a) Product identifier

Product name	Mercury-free alkaline manganese button cell
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(b) Other means of identification

Product description	Model: LR44 Nominal Voltage: 1.5V Weight: 2.0g
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(c) Recommended use of the chemical and restrictions on use

Recommended use	Alkaline Battery
Uses advised against	No information available.

(d) Details of the supplier of the safety data sheet

Applicant Name	JIEYANG AIR PORT AREA CHUANG GUAN ENVIRONMENTAL PROTECTION NEW ENERGY ELECTRONICS CO.,LTD.
Applicant Address	MIDDLE SECTION OF RONGJING ROAD,JINXIANMEN AVENUE,YUHU,JIEYANG AIRPORT,GUANGDONG PROVINCE
Manufacture Company	JIEYANG AIR PORT AREA CHUANG GUAN ENVIRONMENTAL PROTECTION NEW ENERGY ELECTRONICS CO.,LTD.
Manufacture Address	MIDDLE SECTION OF RONGJING ROAD,JINXIANMEN AVENUE,YUHU,JIEYANG AIRPORT,GUANGDONG PROVINCE
Supplier Phone Number	+86-663-8597319

(e) Emergency telephone number

+86-663-8597319

Section 2- Hazards Identification

(a) Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). This product is an article which is a sealed battery and as such does not require an MSDS per the OSHA hazard communication standard unless ruptured. The hazards indicated are for a ruptured battery.

Harmful if swallowed	Category 4
Causes severe skin burns and eye damage	Category 1A

(b) GHS Label elements, including precautionary statements

Emergency Overview

Signal word	Danger
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Hazard Statements

Harmful if swallowed
Causes severe skin burns and eye damage



Appearance: No information available

Physical State: Solid

Odor: No information available

P102	Keep out of reach of children.
P260 P261 P264 P270 P271 P280	Do not breathe dust/fume/gas/mist/vapours/spray Avoid breathing dust/fume/gas/mist/vapours/spray Wash ... thoroughly after handling Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area Wear protective gloves/protective clothing/eye protection/face protection
P301+P312 P330. P301+P330+P331 P303+P361+P353 P312 P330 P363 P304+P340 P310 P321 P305+P351+P338	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER/doctor if you feel unwell. Rinse mouth IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor Specific treatment (see ... on this label). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405	Store locked up
P501	Dispose of contents/container to ...

(c) Hazards not otherwise classified (HNOC)

Not applicable

(d) Unknown Toxicity

88.8 % of the mixture consists of ingredient(s) of unknown toxicity
11.5 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
88.8 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
58.7 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
58.7 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
58.7 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

(e) Other information

Very toxic to aquatic life with long lasting effects.

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(f) Interactions with Other Chemicals

No information available.

Section 3- Composition/Information On Ingredients

Chemical Name	CAS Number	Weight (%)	Trade Secret
Manganese dioxide	1313-13-9	22.93	*
Zinc	7440-66-6	11.29	*
Iron	7439-89-6	49.5	*
Potassium hydroxide	1310-58-3	3.07	*
Graphite	7782-42-5	3.91	*
Water	7732-18-5	5.24	*
Nylon 66	32131-17-2	4.06	*

* The exact percentage (concentration) of composition has been withheld as a trade secret.

Section 4- First-aid Measures

Description of first aid measures

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

Section 5- Fire-fighting measures

(a) Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

(b) Unsuitable extinguishing media

CAUTION: Use of water spray when fighting fire may be inefficient.

(c) Specific Hazards Arising from the Chemical

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.

(d) Hazardous Combustion Products

Carbon oxides.

(e) Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6- Accidental Release Measures

(a) Personal precautions, protective equipment and emergency procedures

If the battery is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. The preferred response is to leave the area and allow the vapors to dissipate. Avoid skin and eyes contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerated. If leakage of the battery happens, liquid could be absorbed with sand, earth or other inert substance and contaminated area should be ventilated meantime.

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(b) Environment precautions

Do not allow product to reach sewage system or any water source.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.

(c) Methods and material for containment and cleaning up

If battery casing is dismantled, small amounts of electrolyte may leak. Collect all released material in a plastic lined container. Dispose off according to the local law and rules. Avoid leached substances to get into the earth, canalization or waters.

Section 7- Handling and Storage

(a) Precautions for safe handling

Handling

Handle in accordance with good industrial hygiene and safety practice. Wear personal protective equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

(b) Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible Products

Strong acids. Strong oxidizing agents. Strong bases

Section 8- Exposure Controls/Personal Protection

(a) Control parameters

Chemical Name	ACGIH TLV	OSHA PEL		NIOSH IDLH
Manganese dioxide 1313-13-9	TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	(vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn		IDLH: 500 mg/m ³ Mn TWA: 1 mg/m ³ Mn STEL: 3 mg/m ³ Mn
Potassium hydroxide 1310-58-3	Ceiling: 2 mg/m ³	(vacated) Ceiling: 2 mg/m ³		Ceiling: 2 mg/m ³
Zinc 7440-66-6	STEL: 10 mg/m ³ respirable fraction TWA: 2 mg/m ³ respirable fraction	TWA: 5 mg/m ³ fume TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction		IDLH: 500 mg/m ³ Ceiling: 15 mg/m ³ dust TWA: 5 mg/m ³ dust and fume STEL: 10 mg/m ³ fume
Carbo 7782-42-5	TWA: 2 mg/m ³ respirable particulate matter all forms except Carbo fibers	TWA: 15 mg/m ³ total dust synthetic TWA: 5 mg/m ³ respirable fraction synthetic (vacated) TWA: 2.5 mg/m ³ respirable dust natural (vacated) TWA: 10 mg/m ³ total dust synthetic (vacated) TWA: 5 mg/m ³ respirable fraction synthetic TWA: 15 mppcf natural		IDLH: 1250 mg/m ³ TWA: 2.5 mg/m ³ respirable dust
Chemical name	Alberta	British Columbia	Ontario TWAEV	Quebec

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Manganese dioxide 1313-13-9	TWA: 0.2 mg/m ³	TWA: 0.2 mg/m ³	TWA: 0.02 mg/m ³ TWA: 0.1 mg/m	TWA: 0.2 mg/m ³
Potassium hydroxide 1310-58-3	Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³	CEV: 2 mg/m ³	Ceiling: 2 mg/m ³
Carbo 7782-42-5	TWA: 2 mg/m ³	TWA: 2 mg/m ³	TWA: 2 mg/m ³	TWA: 2 mg/m ³
Other Exposure Guidelines	Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962(11th Cir., 1992) .			

(b) Appropriate engineering controls

Engineering Measures	Showers Eyewash stations Ventilation systems
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(c) Individual protection measures, such as personal protective equipment

Eye/Face Protection	Face protection shield.
Skin and body Protection	Wear protective gloves and protective clothing. Long sleeved clothing. Chemical resistant apron. Impervious gloves.
Respiratory Protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use.

Section 9- Physical and Chemical Properties

Form	Solid
Color	No information available
Odor	No information available
pH	No information available
Melting point/freezing point	No information available
Boiling Point and Boiling range	Not Available
Flash Point	Not Available
Upper/lower flammability or explosive limits	Not Available
Vapor Pressure	Not Available
Vapor Density	Not Available

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Relative density	Not Available
Solubility in Water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available
Evaporation rate	Not Available
Flammability (soil, gas)	Not Available
Viscosity	Not Available
Section 10- Stability and reactivity	
Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous Polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Exposure to air or moisture over prolonged periods. Excessive heat.
Incompatible materials	Acids. Bases. Oxidizing agent.
Hazardous Decomposition Products	Carbon oxides.
Section 11 – Toxicological Information	
Product Information	Product does not present an acute toxicity hazard based on known or supplied information In case of rupture:
Irritation	Specific test data for the substance or mixture is not available. Corrosive by inhalation.(based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. Harmful by inhalation.
Eye contact	Specific test data for the substance or mixture is not available. Causes burns. (based on components). Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes.
Skin contact	Specific test data for the substance or mixture is not available. Corrosive. (based on components). Causes burns.
Ingestion	Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth

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	and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.		
Information on toxicological effects			
Symptoms	Redness. Burning. May cause blindness. Coughing and/ or wheezing.		
Numerical measures of toxicity			
Acute Toxicity The following values are calculated based on chapter 3.1 of the GHS document . ATEmix (oral) 749.00 mg/kg ATEmix (inhalation-gas) 6,174.00 mg/L ATEmix (inhalation-dust/mist) 2.06 mg/L ATEmix (inhalation-vapor) 15.09 mg/L			
Unknown acute toxicity 88.8 % of the mixture consists of ingredient(s) of unknown toxicity 11.5 % of the mixture consists of ingredient(s) of unknown acute oral toxicity 88.8 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity 58.7 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas) 58.7 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor) 58.7 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)			
Component Information			
Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Iron 7439-89-6	= 984 mg/kg (Rat)	-	-
Manganese dioxide 1313-13-9	= 9000 mg/kg (Rat)	-	-
Potassium hydroxide 1310-58-3	= 284 mg/kg (Rat)	-	-
Delayed and immediate effects as well as chronic effects from short and long-term exposure			
Skin corrosion/irritation	Classification based on data available for ingredients. Causes burns.		
Serious eye damage/eye irritation	Classification based on data available for ingredients. Risk of serious damage to eyes. Causes burns.		
Respiratory or skin sensitization	No information available.		
Germ cell mutagenicity	No information available.		
Carcinogenicity	No information available.		
Reproductive toxicity	No information available.		
STOT - single exposure	No information available.		
STOT - repeated exposure	No information available.		

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Aspiration hazard		No information available.		
Section 12- Ecological Information				
Ecological Toxicity		Very toxic to aquatic life with long lasting effects.		
Chemical name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Iron 7439-89-6	-	96h LC50: = 13.6 mg/L (Morone saxatilis)	-	-
Potassium hydroxide 1310-58-3	-	96h LC50: = 80 mg/L (Gambusia affinis)	-	-
Zinc 7440-66-6	96h EC50: 0.11 - 0.271 mg/L (Pseudokirchneriella subcapitata) 72h EC50: 0.09 - 0.125 mg/L (Pseudokirchneriella subcapitata)	96h LC50: = 3.5 mg/L (Lepomis macrochirus) 96h LC50: = 7.8 mg/L (Cyprinus carpio) 96h LC50: = 0.24 mg/L (Oncorhynchus mykiss) 96h LC50: = 0.59 mg/L (Oncorhynchus mykiss) 96h LC50: = 0.41 mg/L (Oncorhynchus mykiss) 96h LC50: 0.211 - 0.269 mg/L (Pimephales promelas) 96h LC50: = 2.66 mg/L (Pimephales promelas) 96h LC50: = 30 mg/L (Cyprinus carpio) 96h LC50: = 0.45 mg/L (Cyprinus carpio) 96h LC50: 2.16 - 3.05 mg/L (Pimephales promelas)	-	48h EC50: 0.139 - 0.908 mg/L
Persistence and Degradability		No information available.		
Bioaccumulation				
Chemical name			Log Pow	
Manganese dioxide 1313-13-9			<0	
Potassium hydroxide 1310-58-3			0.83	
Section 13- Disposal Considerations				
Waste treatment methods				
Waste from residues/unused products		Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.		

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Contaminated packaging	Do not reuse empty containers.
California Hazardous Waste Codes 141	
This product contains one or more substances that are listed with the State of California as a hazardous waste.	
Chemical name	California Hazardous Waste
Potassium hydroxide 1310-58-3	Toxic Corrosive
Zinc 7440-66-6	Ignitable powder Toxic
Section 14 – Transport Information	
DOT Proper Shipping Name Hazard Class	NOT REGULATED NOT REGULATED N/A
TDG	NOT REGULATED
MEX	NOT REGULATED
ICAO	NOT REGULATED
IATA Proper Shipping Name Hazard Class	NOT REGULATED NON REGULATED N/A
IMDG/IMO Hazard Class Marine Pollutant	NOT REGULATED N/A Product is a marine pollutant according to the criteria set by IMDG/IMO
RID	NOT REGULATED
ADR	NOT REGULATED
ADN	NOT REGULATED
Section 15- Regulatory information	
Safety, health and environmental regulations/legislation specific for the substance or mixture	
<u>International Regulations</u>	
Ozone-depleting substances (ODS)	Not applicable
Persistent Organic Pollutants	Not applicable
Export Notification requirements	Not applicable
<u>International Inventories</u>	
TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AICS	Contact supplier for inventory compliance status.

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Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

<u>Chemical name</u>	<u>CAS-No</u>	<u>Percent</u>	<u>SARA 313 - Threshold Values %</u>
Manganese dioxide - 1313-13-9	1313-13-9	30.1	1.0
Zinc - 7440-66-6	7440-66-6	8.2	1.0

Acute Health Hazard No

Chronic Health Hazard No

Fire Hazard No

Sudden release of pressure hazard No

Reactive Hazard No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

<u>Chemical name</u> <u>CWA - Reportable</u>	<u>Quantities</u>	<u>CWA - Toxic Pollutants CWA - Priority</u>	<u>Pollutants</u>	<u>CWA - Hazardous</u>
Potassium hydroxide 1310-58-3	1000 lb			X
Zinc 7440-66-6		X	X	

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

<u>Chemical name</u>	<u>Hazardous Substances RQs</u>	<u>Extremely Hazardous Substances RQs</u>	<u>RQ</u>
Potassium hydroxide	1000 lb		RQ 1000 lb final RQ

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1310-58-3			RQ 454 kg final RQ
Zinc 7440-66-6	1000 lb		RQ 454 kg final RQ RQ 1000 lb final RQ

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Manganese dioxide 1313-13-9	X		X	X	X
Potassium hydroxide 1310-58-3	X	X	X	X	
Zinc 7440-66-6	X	X	X	X	
Carbo 7782-42-5	X	X	X		

Section 16- Other Information

NFPA Health hazards 1 Flammability 0 Instability 0 Physical and Chemical Properties -

HMIS Health hazards 0 Flammability 0 Physical hazards 0 Personal Protection X

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet



新利達電池有限公司 NEW LEADER BATTERY LIMITED.

Safety Data Sheet for Zinc Chloride Manganese Battery (Extra Heavy Duty)

Document Number: SDS-R6P ,R03P Extra Heavy Duty **Not for recharge** 不可充電 (Version : 2017)

SECTION 1 – Manufacturer Information 生產商資料

Manufacturer's Name 生產商 : New Leader Battery Limited 新利達電池有限公司

Recommended for use: non-rechargeable primary battery

Emergency & Information Phone No 緊急和查詢電話 : 852 - 2790 6280

Address : Rm A, 4/F, Block 1, Camelpaint Building, 62 Hoi Yuen Road, Kwun Tong, Kowloon, Hong Kong.

Signature of Prepare (Optional)

SECTION 2 – Hazardous Identification

GHS Classification paragraph (d) of 1910.1200 N/A

GHS Classification: N/A

Signal Word: N/A

Hazard Classification: N/A

Under normal conditions of use, the battery is hermetically sealed.

TOXICITY Ingredient : N/A

IMPORTANT NOTE :

Use under normal conditions, the Zinc Chloride Manganese battery is hermetically sealed.

鋅錳酸性電池在正常使用下是密封的

Ingestion: Swallowing a battery can be harmful. Contents of an open battery can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract. IMMEDIATELY SEE DOCTOR; Do not induce vomiting or give food or drink.

誤服：吞服電池是有害的，誤服了的電池會導致化學性燒傷，使食道嚴重灼傷，萬一誤服應立即盡快找就近的醫生診斷，不要給誤服者飲食或企圖把誤服之電池吐出

Inhalation: Contents of an open battery can cause respiratory irritation.

吸入：吸入了開封的電池會刺激呼吸道

Skin Contact: Contents of an open battery can cause skin irritation.

皮膚接觸：接觸了開封的電池會導致皮膚過敏

Eye Contact: Contents of an open battery can cause severe irritation.

眼睛接觸：如眼睛不慎接觸了已開封的電池會導致眼睛刺痛

SECTION 3 - Composition

Substance Name 名稱	Chemical Identification CAS# 代號	% Weight
Zinc 鋅	7440 - 66 - 6	28%
Carbon 炭	1333 - 86 - 4	8%
Manganese Dioxide 二氧化錳	1313 - 13 - 9	22%



新利達電池有限公司 NEW LEADER BATTERY LIMITED.

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Document Number: SDS-R6P ,R03P Extra Heavy Duty **Not for recharge 不可充電** (Version : 2017)

Zinc Chloride 氯化鋅	7646 – 85 - 7	4%
Iron 鐵	7439 - 89 – 6	20%
Distilled Water 純水	7732 – 18 - 5	18%

SECTION 4 – First Aid Measures 急救處理措施

Ingestion: Do not induce vomiting or give food or drink. Seek medical attention immediately. Call National Battery Ingestion Hotline for advice.

誤服：不要給誤服者飲食或企圖把誤服之電池吐出，應立即盡快找就近的醫生診斷，聯絡國際電池熱線尋求意見

Inhalation: Provide fresh air and seek medical attention.

吸入：提供新鮮的空氣和盡快找就近的醫生診斷

Skin Contact: Remove contaminated clothing and wash skin with soap and water. If a chemical burn occurs or if irritation persists, seek medical attention.

皮膚接觸：把受污染的衣物移走和應立即用肥皂水清洗患處

Eye Contact: Immediately flush eyes thoroughly with water for at least 15 minutes, lifting upper and lower lids, until no evidence of the chemical remains. Seek medical attention.

眼睛接觸：盡快用清水沖洗 15 分鐘，眨動上下眼皮，直至沒有化學物殘留在眼睛，盡快找就近的醫生診斷

SECTION 5 – Fire Fighting Measures

In case of fire, it is permissible to use any class of extinguishing medium on these batteries or their packing material. Cool exterior of batteries if exposed to fire to prevent rupture.

Fire fighters should wear self-contained breathing apparatus.

如遇上電池所引發之火警，可用任何認可之滅火器救火和他們的包裝材料，請勿把破裂的電池投入火堆中，滅火時應穿上有自動提供氧氣的滅火衣

SECTION 6 – Accidental Release Measures 處理意外釋放或溢出之電池

Ventilation Requirements: Room ventilation may be required in areas where there are open or leaking batteries

通風設備：如發生漏液或破損，應把電池移往室內通風地方

Eye Protection: Wear safety glasses with side shields if handling an open or leaking battery

眼部護理：應把已打開或漏液之電池，放入已盛載了水的水杯內

Gloves: Use neoprene or natural rubber gloves if handling an open or leaking battery.

Battery materials should be collected in a leak-proof container

手套：已打開或漏液之電池在處理時，應帶上橡膠手套和放入防漏之容器內



新利達電池有限公司 NEW LEADER BATTERY LIMITED.

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SECTION 7 – Handling and Storage

Storage : Store in a cool, well ventilated area. Elevated temperatures can result in shortened battery life.

存放：電池應存放在通風及清涼的地方,高溫存放會縮短電池之壽命

Handling: Accidental short circuit for a few seconds will not seriously affect the battery. Prolonged short circuit will cause the battery to lose energy, and can cause the safety release vent to open. Sources of short circuits include jumbled batteries in bulk containers, metal jewelry, metal covered tables or metal belts used for assembly of batteries into devices.

處理：短暫短路對電池不會有嚴重之影響，短路時間會對電池之容量構成影響，產生高熱影響安全。把其他電池或金屬物品混合和放在同一容器內,會對電池產生短路，被破壞之池在結構內會形成短路

Charging: This battery is manufactured in a charged state. Its is not designed for recharging. Recharging can cause battery leakage or in some case, high pressure rupture. Inadvertent charging can occur if a battery is installed backwards

充電：電池在生產時已有足夠電量,此款電池設計是不適用在充電池上，把電池再充電有機會令電池漏液及因高壓造成破壞，如不慎把電池充電可令電池發生反充。

SECTION 8 – Exposure Controls / Person Protection 接觸控制/個人保護

Ventilation Requirements 通風系統之要求 : N.A.

Respiratory Protection 呼吸道保護: N.A..

Eyes Protection 眼睛保護 : N.A.

Gloves 手套 : N.A.

SECTION 9 – Physical / Chemical Properties 物理/化學特性

Boiling Point 沸點 : N.A.

Specific Gravity 比重 (H₂O = 1) : N.A.

Melting Point 熔點 : N.A.

Vapor Pressure 蒸氣壓 (mm Hg) : N.A.

Vapor Density 蒸氣密度 (AIR = 1) : N.A.

Evaporation Rate (Butyl Acetate) : N.A.

Solubility in Water 溶解度 : N.A.

Appearance and Odor 形狀和氣味 , Cylindrical Shape, Odorless 圓柱型 : 無氣味



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SECTION 10 – Stability and Reactivity 反應性數據

Stability 穩定性: stable 穩定

Conditions to Avoid 避免條件 : Stable 穩定

Hazardous Decomposition or Byproducts : 副產品或分解物是危險的

The Zinc Chloride Manganese Battery do not meet any of the criteria established in 40 CFR 261.2 of reactivity
鋅錳酸性電池的反應性達不到 40CFR 261.2 的標準

SECTION 11– Toxicological Information 毒物學的資料 : Non toxic.

SECTION 12– Ecological Information 生態學的資料 : N.A.

SECTION 13– Disposal Considerations : Dispose of the batteries according to government regulations. Do not incinerate. Disposal should be in accordance with the EC Battery Directive 2006/66/EC. Battery are labeled with “special collection” symbol(as shown) in accordance with the EC Battery Directive:



SECTION 14 – Transport Information 運輸資訊

The Batteries in all forms of transportation (e.g. Truck, air, or sea) must be packaged in a safe and responsible manner. Regulatory concerns from all agencies for safe packaging require that batteries be packaged in a manner that prevents short circuits and be contained in (Strong Carton / Packaging) that prevents spillage of contents.
所有電池之運送方式(e.g.航運,空運和陸運)必須要已負責任之態度和安全包裝來運送.所有代理在監管安全包裝的問題上,電池必須要裝放在(加厚紙箱/包裝)防止短路和防電池溢出之包裝容器內.

Zinc Chloride battery (sometime referred to as “**Dry Cell**” are not listed as dangerous goods under the **ADR** European Agreement Concerning the International Carriage of Dangerous Goods by Road, The IMDG International Maritime Dangerous Goods Code, UN Dangerous Good Regulations, IATA Dangerous Goods Regulation, ICAO Technical Instructions and the U.S. hazardous materials regulations (49 CFR). These batteries are not subject to the dangerous goods regulations provided they meet the requirement contained in the following special provisions.
鋅錳酸性電池(有需要時可參考“干電池”, 因干電池類在 **ADR** European Agreement Concerning the International Carriage of Dangerous Goods by Road, The IMDG International Maritime Dangerous Goods Code, UN Dangerous Good Regulations, IATA Dangerous Goods Regulation, ICAO Technical Instructions and the U.S. hazardous materials regulations (49 CFR)的危險品類別中. 此電池在下列的航運條例中也不屬於危險品:



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Regulatory Parties	Special Provisions
ADR	Not Regulated
IMDG	Not Regulated
UN, ICAO	Not Regulated
US DOT	49 CFR 172.102 Provision 130
IATA,	A123,

Ref: Summary of Packing Instruction (IATA Dangerous Goods Regulations 58th Edition) the minimum requirements necessary to transport as non-restricted goods are as follows

總括在包裝指引(IATA 危險品條例 58 版), 在非違禁品運輸中最基本之要求如下:

****All Zinc Chloride Manganese Batteries are packed in such a way to prevent short circuits or the generation dangerous quantities of heat and meet the special provisions listed above. In addition, The IATA Dangerous Goods Regulations ICAO Technical Instructions require the words “ Not Restricted” and the Special Provision No: A123 be provided on the air waybill, when an air waybill is issued.**

所有鋅錳酸性電池必需包裝在防止短路或在防止產生過熱之數量內和達到有關特別指引之要求下. 另外,有關國際危險品的規例中的 ICAO 技術指示 “Not Restricted”字眼, 在 A123 的特別條例中必須展示在空運提單中

SECTION 15– Regulatory Information: Zinc Chloride Manganese Batteries are not classified as dangerous goods by US Department of Transportation or the major international regulatory bodies and are therefore not regulated.

SARA/TITLE III – As an article, this battery and its contents are not subject to the requirements of the Emergency Planning and Community Right to Know Act.

在美國運輸局和主要國際之條例中, 鋅錳酸性電池是不介定在危險品的種類內.

SARA/TITLE III – 文章中, 此類電池沒有在有關急介定之項目中.

SECTION 16 – Other Information : None



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ARTICLE 1 – Informations sur le fabricant

Nom du fabricant 生產商: New Leader Battery Limited

Utilisation recommandée : batterie principale non rechargeable

téléphone d'urgence et d'information

Adresse : Salle A, 4/F, Bloc 1, Camelpaint Building, 62 Hoi Yuen Road, Kwun Tong, Kowloon, Hong Kong.

Signature de la préparation (facultatif)

ARTICLE 2 – Identification des produits dangereux

Classification paragraphe (d) de 1910.1200 N/A

Classification SGH : N/A

Mot-indicateur : N/A

Classification des dangers : N/A

Dans des conditions normales d'utilisation, la batterie est hermétiquement scellée.

TOXICITÉ Ingrédient : N/A

NOTE IMPORTANTE :

En utilisation dans des conditions normales, la batterie Zinc Chlorure Manganèse est hermétiquement scellée.

Ingestion : L'ingestion d'une pile peut être nocive. Le contenu d'une pile ouverte peut provoquer de graves brûlures chimiques de la bouche, de l'œsophage et du tractus gastro-intestinal. VOIR IMMÉDIATEMENT UN MÉDECIN; Ne pas faire vomir ni donner à manger ou à boire.

Inhalation : Le contenu d'une pile ouverte peut provoquer une irritation des voies respiratoires.

Contact avec la peau : Le contenu d'une pile ouverte peut provoquer une irritation de la peau.

Contact avec les yeux : Le contenu d'une pile ouverte peut provoquer une grave irritation.

Mot de passe :

ARTICLE 3 - Composition

Nom de la substance 名稱	Identification chimique N° CAS 代號	% Lester
Zinc 鋅	7440 - 66 - 6	28%
Carbone 炭	1333-86-4 _ _	8%
Dioxyde de manganèse 二氧化錳	1313 - 13 - 9	22%
Chlorure de zinc 氯化鋅	7646 - 85 - 7	4%
Fer 鐵	7439 - 89 - 6	20%
Eau distillée	7732 - 18 - 5	18 %

SECTION 4 – Premiers secours



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Ingestion : Ne pas faire vomir ni donner à manger ou à boire. Consultez immédiatement un médecin. Appelez la hotline nationale d'ingestion de batterie pour obtenir des conseils.

Nom :

Inhalation : Fournir de l'air frais et consulter un médecin.

Contact avec la peau : Enlever les vêtements contaminés et laver la peau avec de l'eau et du savon. Si une brûlure chimique se produit ou si l'irritation persiste, consulter un médecin

Mot de passe :

Contact avec les yeux : Rincer immédiatement et abondamment les yeux avec de l'eau pendant au moins 15 minutes, en soulevant les paupières supérieures et inférieures, jusqu'à ce qu'il ne reste plus aucune trace du produit chimique. Consulter un médecin.

Mot de passe :

ARTICLE 5 – Mesures de lutte contre l'incendie

En cas d'incendie, il est permis d'utiliser n'importe quelle classe de moyen d'extinction sur ces batteries ou sur leur matériel d'emballage. Refroidissez l'extérieur des batteries si elles sont exposées au feu pour éviter qu'elles ne se rompent.

Les pompiers doivent porter un appareil respiratoire autonome.

ARTICLE 6 – Mesures en cas de déversement accidentel

Exigences de ventilation : une ventilation de la pièce peut être nécessaire dans les zones où il y a des batteries ouvertes ou qui fuient

Protection des yeux : Portez des lunettes de sécurité avec écrans latéraux si vous manipulez une batterie ouverte ou qui fuit

Mot de passe :

Gants : Utilisez des gants en néoprène ou en caoutchouc naturel si vous manipulez une batterie ouverte ou qui fuit. Batteries les matériaux doivent être collectés dans un récipient étanche

Nom :

ARTICLE 7 – Manipulation et stockage

Stockage : Stocker dans un endroit frais et bien ventilé. Des températures élevées peuvent réduire la durée de vie de la batterie.

Manipulation : Un court-circuit accidentel de quelques secondes n'affectera pas sérieusement la batterie. Un court-circuit prolongé entraînera une perte d'énergie de la batterie et peut entraîner l'ouverture de l'évent de sécurité. Les sources de courts-circuits comprennent les batteries mélangées dans des conteneurs en vrac, les bijoux en



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métal, les tables recouvertes de métal ou les ceintures métalliques utilisées pour l'assemblage des batteries dans les appareils.

Catégorie :

Chargement : Cette batterie est fabriquée dans un état chargé. Il n'est pas conçu pour être rechargé. La recharge peut provoquer une fuite de la batterie ou, dans certains cas, une rupture à haute pression. Une charge par inadvertance peut se produire si une batterie est installée à l'envers

SECTION 8 – Contrôles de l'exposition / Protection des personnes

Exigences de ventilation : NA

Protection respiratoire: NA.

Protection des yeux: NA

Gants: NA

SECTION 9 – Propriétés physiques/chimiques

Point d'ébullition: NA

Gravité spécifique (H₂O = 1) : NA

Point de fusion : NA

Pression de vapeur (mm Hg) : NA

Densité de vapeur (AIR = 1) : NA

Taux d'évaporation (acétate de Buty1) : NA

Solubilité dans l'eau : NA

Apparence et odeur , Forme cylindrique, Inodore

ARTICLE 10 –Stabilité et réactivité

Stability 穩定性: stable

Conditions : Stable

Décomposition ou sous-produits dangereux :

La batterie au chlorure de zinc et au manganèse ne répond à aucun des critères établis dans 40 CFR 261.2 de réactivité

ARTICLE 11 –Informations toxicologiques : Non toxique .

ARTICLE 12 –Informations écologiques: NA



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ARTICLE 13 –Considérations relatives à l' élimination : Éliminez les piles conformément aux réglementations gouvernementales.

Ne pas incinérer. La mise au rebut doit être conforme à la directive européenne sur les batteries 2006/66/CE. Les batteries sont étiquetées avec le symbole « collecte spéciale » (comme illustré) conformément à la directive européenne sur les batteries :



ARTICLE 14 –Informations sur le transport

Les batteries dans toutes les formes de transport (par exemple camion, air ou mer) doivent être emballées de manière sûre et responsable. Les préoccupations réglementaires de toutes les agences pour un emballage sûr exigent que les batteries soient emballées de manière à éviter les courts-circuits et soient contenues dans (carton solide / emballage) qui empêche le déversement du contenu.

chlorure de zinc (parfois appelées « piles sèches ») ne sont pas répertoriées comme des marchandises dangereuses en vertu de l' accord européen **ADR** concernant le transport international des marchandises dangereuses par route, du code maritime international des marchandises dangereuses IMDG, des règlements sur les marchandises dangereuses de l'ONU, du règlement sur les marchandises dangereuses de l'IATA , les instructions techniques de l'OACI et les réglementations américaines sur les matières dangereuses (49 CFR). Ces batteries ne sont pas soumises aux réglementations sur les matières dangereuses à condition qu'elles satisfassent aux exigences contenues dans les dispositions spéciales suivantes.

ADR Accord européen relatif au transport international des marchandises dangereuses par route, Code maritime international des marchandises dangereuses IMDG, Règlement sur les marchandises dangereuses de l'ONU, Règlement sur les marchandises dangereuses de l'IATA, OACI Instructions techniques et réglementations américaines sur les matières dangereuses (49 CFR)

Parties réglementaires	Dispositions spéciales
ADR	Non réglementé
IMDG	Non réglementé
ONU, OACI	Non réglementé
POINT ÉTATS-UNIS	49 CFR 172.102 Disposition 130
IATA,	A123,

Ref: Summary of Packing Instruction (IATA Dangerous Goods Regulations 5 8th^{Edition}) les exigences minimales nécessaires pour le transport en tant que marchandises non restreintes sont les suivantes



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****Toutes les batteries au chlorure de zinc et au manganèse sont emballées de manière à éviter les courts-circuits ou la génération de quantités dangereuses de chaleur et respectent les dispositions particulières énumérées ci-dessus. De plus, les instructions techniques de l'OACI sur les marchandises dangereuses de l'IATA exigent que les mots « sans restriction » et la disposition spéciale n° : A123 soient fournis sur la lettre de transport aérien, lorsqu'un lettre de voiture est émise.**

ARTICLE 15 –Informations réglementaires: Les batteries au chlorure de zinc et au manganèse ne sont pas classées comme marchandises dangereuses par le département américain des transports ou les principaux organismes de réglementation internationaux et ne sont donc pas réglementées.

SARA/TITLE III - En tant qu'article, cette batterie et son contenu ne sont pas soumis à la exigences de la Loi sur la planification d'urgence et le droit communautaire de savoir.

ARTICLE 16 –Autres informations : Aucune