



新利達電池有限公司 NEW LEADER BATTERY LIMITED.

Safety Data Sheet for (0.%Hg) Button Cell SR SERIES

Document Number: SDS-SR (0.%Hg) Series ****Not for recharge**** 不可充電 (Version : 2015)

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

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 Ingredients / Identity Information 成份表

IMPORTANT NOTE :

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

鋅錳鹼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

Substance Name 名稱	Chemical Identification CAS# 代號	% Weight
Zinc 鋅	7440 - 66 - 6	10%
Graphite 石墨	7782 - 42 - 5	5%
Manganese Dioxide 二氧化錳	1313 - 13 - 9	28%
Potassium Hydroxide 氫氧化鉀	1310 - 58 - 3	5%
Iron 鐵	7439 - 89 - 6	32%
Silver Oxide	20667-12-3	20%



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SECTION 3 – Health Hazard Data 危害健康之數據
Route(s) of Entry 進入人體之途徑
Inhalation 吸入 : N.A.
Skin 皮膚 : N.A.
Ingestion 攝取 : N.A.
Health Hazard (Acute and Chronic) / Toxicological information 危害健康/毒性信息
In case of electrolyte leakage , skin will be itchy when contaminated with electrolyte 如電解液洩漏了, 接觸到皮膚會導致皮膚發痒
In contact with electrolyte can cause severe irritation and chemical burns 接觸到電解液會引致化學性燒傷
Inhalation of electrolyte vapors may cause irritation of the upper respiratory tract and lungs 吸入了蒸發化的電解液, 會引致上呼吸道和肺部敏感

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 – Control Fire 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



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SECTION 6 – Accidental Release or Spillage 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

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

Mechanical Containment: If potting or sealing the battery in an airtight or watertight container is required, consult your New Leader Battery Limited representative for precautionary suggestions. Batteries normally evolve hydrogen which, when combined with oxygen from the air can produce a combustible or explosive mixture unless vented. If such a mixture is present, short circuits, high temperature, or static sparks can cause an ignition.

Do not obstruct safety release vents on batteries, Encapsulation (potting) of batteries will not allow cell venting and can cause high pressure rupture.

機械密封 : 電池必須在一個防水氣和空氣之情況下做焊接或密封之加工, 諮詢新利達電池有限公司查詢有關之安全建議. 電池在正常使用下會產生氫氣, 當開蓋後和空氣結合後會產生易燃或易爆的氣體, 放在通風通道例外. 短路, 高溫, 靜電火花也容易產生火點

不要忽略已開封電池之安全. 已封裝之電池是不容許打開外殼和有機會引起高壓擊破.

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.



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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 Characteristics 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

SECTION 10 – Reactivity Data 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 Alkaline Button Battery do not meet any of the criteria established in 40 CFR 261.2 of reactivity

鹼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 : N.A.

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

SECTION 13– Disposal Method : Dispose of the batteries according to government regulations.



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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.

Alkaline 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. 鹼性電池(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:

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 56th 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 56 版), 在非違禁品運輸中最基本之要求如下:

****All Alkaline 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.**

所有鹼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



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SECTION 15– Regulatory Information: 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，鋅錳鹼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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No.: HKHL1409068059JL

Date: SEP 16, 2014

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NEW LEADER BATTERY LTD.
FLAT A, 4/F, BLOCK 1, CAMELPAINT BUILDING,62 HOI YUEN ROAD,KWUN TONG,KOWLOON,
HONG KONG

The following samples were submitted and identified on behalf of the client as:
MERCURY FREE SILVER OXIDE BUTTON CELL

SGS Case No. : HKHL140900048763
 Style / Item No. : 1.5V 0.%HG SR 41
 Model No. : 0.%HG SR44, 0.%HG SR 43, 0.%HG SR721, 0.%HG SR1130, 0.% HG SR936, 0.%HG SR1120, 0.%HG SR927, 0.%HG SR921, 0.%HG SR754, 0.%HG SR626, 0.%HG SR726, 0.%HG SR621, 0.%HG SR521
 Manufacturer : NEW LEADER
 Country of Origin : CHINA
 Sample Receiving Date : SEP 02, 2014
 Test Performing Date : SEP 02 – 15 , 2014

Test Requested : Please refer to the result summary.

Test Method & Results : Please refer to next page(s).

Result Summary :

Test Requested	Conclusion
1. European Directive 2006/66/EC and its amendments – Lead, Cadmium and Mercury Content (Selected part as specified by client)	PASS
2. US Public Law No 104-142 (1996) Title II – Mercury-Containing Battery Management Act – Mercury Content (Selected part as specified by client)	PASS
3. Cadmium, Lead, Mercury, Hexavalent Chromium, Polybromobiphenyl (PBB) and Polybromodiphenyl ether (PBDE) content (As per client’s request) (Selected part as specified by client)	PASS

Signed for and on behalf of
SGS Hong Kong Ltd.

Che Wai Leuk, Jerry
Section Manager

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Test Results :

1. European Directive 2006/66/EC and its amendments – Lead, Cadmium and Mercury Content

Method : Acid digestion followed by Atomic Absorption Spectrometry analysis.

For button cells:

Test Item	Result (%)	Reporting Limit (%)	Labelling requirement (%)	Permissible Limit (%)
	1			
Lead (Pb)	0.002	0.001	> 0.004	--
Cadmium (Cd)	ND	0.001	> 0.002	0.002
Mercury (Hg)	ND	0.0001	> 0.0005	2
Comment	PASS	--	--	--

Sample Description :

1. MERCURY FREE SILVER OXIDE BUTTON CELL (1.5V 0.%HG SR 41)

- Note :
1. % = percentage by weight
 2. > = greater than
 3. ND = Not Detected

2. US Public Law No 104-142 (1996) Title II – Mercury-Containing Battery Management Act – Mercury Content

Method : Acid digestion followed by Atomic Absorption Spectrometry analysis.

For battery except alkaline manganese button cell :

Test Item	Result (mg/kg)	Reporting Limit (mg/kg)	Requirement
	1		
Mercury (Hg)	ND	1	Prohibited
Comment	PASS	--	--

Sample Description :

1. MERCURY FREE SILVER OXIDE BUTTON CELL (1.5V 0.%HG SR 41)

- Note :
1. mg/cell = milligram per cell
 2. mg/kg = milligram per kilogram
 3. ND = Not Detected

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Test Results (Cont'd) :

3. Cadmium, Lead, Mercury, Hexavalent Chromium, Polybromobiphenyl (PBB) and Polybromodiphenyl ether (PBDE) content (As per client's request)

Method : With reference to IEC 62321:2008. Lead, Cadmium and Mercury were analyzed by Inductively Coupled Argon Plasma Spectrometry, Chromium (VI) was analyzed by UV-Visible Spectroscopy and PBB, PBDE were analyzed by Gas Chromatography – Mass Spectrometry (GC-MS).

Test Item	Result (mg/kg)		Reporting Limit (mg/kg)	Permissible Limit (mg/kg)
	1			
Cadmium (Cd)	ND		5	100
Lead (Pb)	21		5	1000
Mercury (Hg)	ND		5	1000
Hexavalent Chromium by spot test / boiling water extraction (Cr(VI))	Negative		#	#
Sum of PBBs	ND		--	1000
Monobromobiphenyl	ND		5	--
Dibromobiphenyl	ND		5	--
Tribromobiphenyl	ND		5	--
Tetrabromobiphenyl	ND		5	--
Pentabromobiphenyl	ND		5	--
Hexabromobiphenyl	ND		5	--
Heptabromobiphenyl	ND		5	--
Octabromobiphenyl	ND		5	--
Nonabromobiphenyl	ND		5	--
Decabromobiphenyl	ND		5	--
Sum of PBDEs	ND		--	1000
Monobromodiphenyl ether	ND		5	--
Dibromodiphenyl ether	ND		5	--
Tribromodiphenyl ether	ND		5	--
Tetrabromodiphenyl ether	ND		5	--
Pentabromodiphenyl ether	ND		5	--
Hexabromodiphenyl ether	ND		5	--
Heptabromodiphenyl ether	ND		5	--
Octabromodiphenyl ether	ND		5	--
Nonabromodiphenyl ether	ND		5	--
Decabromodiphenyl ether	ND		5	--
Comment	PASS		--	--

Sample Description:
1. MERCURY FREE SILVER OXIDE BUTTON CELL (1.5V 0.0% HG SR 41)

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Test Results (Cont'd) :

Note : 1. mg/kg = milligram per kilogram
2. ND = Not Detected

Remark : 1.# = Negative means the absence of CrVI on the tested areas; Positive means the presence of CrVI on the tested areas. The detected CrVI concentration in the boiling-water-extraction solution is equal to or greater than 0.02 mg/kg with 50cm² sample surface area.



*** End of Report ***

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