

MATERIAL SAFETY DATA SHEET (MSDS)

安全技术说明书

报告号 Report No.	DKW20190110001
申请人 Applicant	MICA ELECTRONICS CO., LTD 东莞市米卡新能源有限公司
申请人地址 Address	Third floor, Songhu Yungu dream factory, no. 153, snake Guiling, Changtang community, Dalong town, Dongguan city 东莞市大朗镇长塘社区蛇归岭 153 号松湖云谷梦工厂三楼
制造商 Manufacturer	MICA ELECTRONICS CO., LTD 东莞市米卡新能源有限公司
制造商地址 Address	Third floor, Songhu Yungu dream factory, no. 153, snake Guiling, Changtang community, Dalong town, Dongguan city 东莞市大朗镇长塘社区蛇归岭 153 号松湖云谷梦工厂三楼
产品名称 Product	Li- ion Rechargeable Battery 可充电锂离子电池
型号 Model / Type	352074
核发日期 Issue Date	Jan. 10, 2019

制作
Report by

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审核
Approve by

Cindy Wang





1. PRODUCT AND COMPANY IDENTIFICATION 产品和公司信息

Product Description	Li- ion Rechargeable Battery
Model No.	352074
Capacity	450mAh
Voltage	3.7V
Energy	1.67Wh
Size	74.0 * 20.0 *3.5 mm
Supplier	MICA ELECTRONICS CO., LTD
Address	Third floor, Songhu Yungu dream factory, no. 153, snake Guiling, Changtang community, Dalong town, Dongguan city

2. COMPOSITION INFORMATION 组成成份

HAZARDOUS INGREDIENTS	%	CAS NUMBER
Aluminum Foil	3-6	7429-90-5
Metal Oxide (proprietary)	30-40	
Polyvinylidene Fluoride (PVDF)	<2	24937-79-9
Styrene Butadiene Rubber(SBR)	<2	9003-55-8
Copper Foil	7-10	7440-50-8
Carbon (proprietary)	20-25	7440-44-0
Electrolyte (proprietary)	10-15	
Aluminum can, Steel ,Nickel and inert materials	Remainder	N/A

3. HAZARDS IDENTIFICATION 危险性概述

Emergency Overview

May explode in a fire, which could release hydrogen fluoride gas and smoke.
Use extinguishing media suitable for materials burning in fire

PRIMARY ROUTES OF ENTRY

Skin contact, Skin absorption, Eye contact, Inhalation, and Ingestion: NO

Skin contact	No
Skin absorption	No
Eye contact	No
Inhalation	No
Ingestion	No



SIGNS AND SYMPTOMS OF EXPOSURE

Skin contact	No effect under routine handling and use
Skin absorption	No effect under routine handling and use
Eye contact	No effect under routine handling and use
Inhalation	No effect under routine handling and use
Ingestion	No effect under routine handling and use
Reported as Carcinogen	Not applicable

4. EMERGENCY AND FIRST AID MEASURES 急救措施

INHALATION, EYE CONTACT, and SKIN CONTACT: Not a health hazard.

INGESTION

If swallowed, obtain medical attention immediately.

CAUTION

If exposure to internal materials within cell due to damaged outer casing, the following actions are recommended.

INHALATION

Leave area immediately and seek medical attention.

EYE CONTACT

Rinse eyes with water for 15 minutes and seek medical attention.

SKIN CONTACT

Wash area thoroughly with soap and water and seek medical attention.

INGESTION

Drink milk/water and induce vomiting; seek medical attention

5. FIRE FIGHTING MEASURES GENERAL 消防措施

HAZARD

Cell is not flammable but internal organic material will burn if the cell is incinerated. Combustion products include, but are not limited to hydrogen fluoride, carbon monoxide and carbon dioxide.

EXTINGUISHING MEDIA

Use extinguishing media suitable for the materials that are burning.



SPECIAL FIREFIGHTING INSTRUCTIONS

If possible, remove cell(s) from fire fighting area. If heated above 130°C, cell(s) may Swell/explode/vent.

FIREFIGHTING EQUIPMENT

Use NIOSH/MSHA approved full-face self-contained breathing apparatus (SCBA) with full protective gear.

6. ACCIDENTAL RELEASE MEASURES 泄漏应急处理

ON LAND

Place material into suitable containers and call local fire/police department.

IN WATER

If possible, remove from water and call local fire/police department.

7. HANDLING AND STORAGE 操作和储存

HANDLING

No special protective clothing required for handling individual cells.

STORAGE

Store in a cool, dry place

8. EXPOSURE CONTROLS/PERSONAL PROTECTION 接触控制与个人防护

ENGINEERING CONTROLS

Keep away from heat and open flame. Store in a cool dry place

PERSONAL PROTECTION

Respirator:

Not required during normal operations. SCBA required in the event of a fire

Eye/face protection:

Not required beyond safety practices of employer.

Gloves:

Not required for handling of cells.

Foot protection:

Steel toed shoes recommended for large container handling.



9. PHYSICAL AND CHEMICAL PROPERTIES 理化特性

State	Solid
Odor	N/A
PH	N/A
Vapor density	N/A
Boiling point	N/A
Solubility in water	Insoluble
Specific gravity	N/A
Density	N/A

10. STABILITY AND REACTIVITY 稳定性和反应性

REACTIVITY

None during normal operating or handling conditions.

INCOMPATIBILITIES

None (during normal operation). Avoid exposure to heat, open flame, and corrosives

HAZARDOUS DECOMPOSITION PRODUCTS

None (during normal operating conditions). If cells are opened, hydrogen fluoride and carbon monoxide may be released.

CONDITIONS TO AVOID

Avoid exposure to heat and open flame. Do not puncture, crush or incinerate.

11. TOXICOLOGICAL INFORMATION 毒理学信息

This product does not elicit toxicological properties during routine handling and use.

Sensitization	No
Acute toxicity	No
Teratogenicity	No
Reproductive toxicity	No

This product does not contain any kinds of the following substances and halogen-type flame retardants including Chlorine and Bromide type harmful flame retardants which are listed in appendix of TCO documents and relevant international ECO requirements.

Polybromated Biphenyls (PBB)
Polybromated Biphenyl Ethers (PBBE)



Polybromated Biphenyl Oxides	(PBBO)
Polybromated Diphenylethers	(PBDE)
Polychlorinated Biphenyl	(PCB)
Polychlorinated Diphenylethers	(PCDE)
Tetrabromophenol A	(TBBPA)
Asbestos, Antimonytrioxide, Dioxine	/

None of the following substances will be exposed, leaked, or emitted during transportation, storage or any operation and any temperature condition:

- Chlorinated Fluorohydrocarbon (FCKW)
- Acrylonitrile
- Styrol
- Phenol
- Benzol
- Mercury of greater than 0.0001 wt% for alkaline battery
- Mercury of greater than 0.0005 wt% for other battery
- Polymer content of greater than 0.5g/cell, 1.5g/battery
- Cadmium, lead, and other harmful heavy metal

This product does not contain mercury, cadmium and Polymer-metal.

Mercury content	N/A
Polymer-metal	N/A
Cadmium content	N/A

CAUTION

If the cells are opened through misuse or damage, discard immediately. Internal components of cell are irritants and sensitizers

12. ECOLOGICAL INFORMATION 生态学信息

Some materials within the cell are bio-accumulative. Under normal conditions, these materials are contained and pose no risk to persons or the surrounding environment.

13. DISPOSAL CONSIDERATIONS 废弃处置

CALIFORNIA REGULATED DEBRIS
RCRA Waste Code: Non-regulated
Dispose of according to all federal, state, and local regulations.

14. REGULATORY INFORMATION 法规信息



OSHA hazard communication standard (29 CFR 1910.1200)

Hazardous Non-hazardous

This Material Safety Data Sheet complies with the requirements of Regulation(EC) No.1907/2006.

15. TRANSPORT INFORMATION 运输信息

Polymer ion batteries containing no more than 20Wh/cell and 100 Wh /battery pack can be treated as “Non-dangerous goods” under the United Nations Recommendations on the Transport of Dangerous Goods, Special Provision 188, provided that packaging is strong and prevent the products from short-circuit.

With regard to air transport, the following regulations are cited and considered:

- I) The International Civil Aviation Organization (ICAO) Technical Instructions.
- II) The International Air Transport Association (IATA) Dangerous Goods Regulations (59th Edition (Year 2018), PI965 - PI967),
- III) The International Maritime Dangerous Goods (IMDG) Code (Amendment 38-2016) Special provision 188,
- IV) The US Hazardous Materials Regulation (HMR) pursuant to a final rule issued by RSPA (Part 49 CFR Sections 100-185),
- V) The Office of Hazardous Materials Safety within the US Department of Transportation's (DOT) Research and Special Programs Administration (RSPA), and
- VI) The UN Recommendations on the Transport of Dangerous Goods Model Regulations and the Manual of Tests and Criteria.

16. OTHER INFORMATION

None