

MSDS REPORT

Client Name : ZhongShan Sunrise Electronics Co., Ltd.
Address : No.7, DaMei Road Gangkou Town ZhongShan City
Product Name : Carbon Zinc-Manganese Dioxide Dry Battery
Effective Date : Jan. 01, 2023



Shenzhen Anbotek Compliance Laboratory Limited



MATERIAL SAFETY DATA SHEET

1. Chemical Product and Company Identification

Sample name: Carbon Zinc-Manganese Dioxide Dry Battery
Sample model: R03/ R6S/ R6P/ R20/ R20P/ R14/ R14P/ 6F22
Trade Mark: GREATCELL
Manufacturer: ZhongShan Sunrise Electronics Co., Ltd.
Address: No.7, DaMei Road GangKou Town ZhongShan City
Factory: ZhongShan Sunrise Electronics Co., Ltd.
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2. Composition/Information on Ingredients

Chemical Name	Percent of Content	CAS No.	EC No.
Zinc	30%	7440-66-6	231-175-3
Manganese Dioxide	25%	1313-13-9	215-202-6
Zinc Chloride(ZnCl ₂)	15%	7646-65-7	/
Water	10%	7732-18-5	231-791-2
Carbon Black(C)	10%	1333-86-4	215-609-9
Graphite	5%	7782-42-5	231-955-3
Polyethylene	5%	9002-88-4	618-339-3

3. Hazards Identification

Important notes : Use under normal conditions, the lithium battery is hermetically sealed.

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 ;

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

Skin Contact: Contents of an open battery can cause skin irritation/ or chemical burns.

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

4. Physical / Chemical Characteristics

Boiling Point: N/A

pH: N/A

Melting Point: N/A

Vapor Pressure (mm Hg): N/A Vapor

Density (AIR = 1): N/A Evaporation

Rate (Buty1 Acetate): N.A. Solubility in

Water : N/A

Appearance and Odor:

R03, R6S, R6P, R20, R20P, R14, R14P:
cylindrical shape with primary cell of 1.5V
nominal voltage.

6F22: prismatic shape with primary cell of 9V
nominal voltage.



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.

6. Reactivity Data

Stability:

Unstable Conditions to Avoid

Hazardous Decomposition or Byproducts

The 1.5V Alkaline Alkaline Secondary Battery do not meet any of the criteria established in 40 CFR 261.2 of reactivity.

7. First Aid Measures

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

Inhalation: Provide fresh air and seek medical attention.

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

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.

8. Accidental Release or Spillage

To cleanup leaking batteries:

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

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

Gloves: Use neoprene or natural rubber gloves if handling an open or leaking battery. Battery materials should be collected in a leak-proof container.

9. Handling and Storage

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

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.

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.

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.

10. Exposure Controls / Personal Protection

Ventilation Requirements:	N/A
Respiratory Protection :	N/A
Eyes Protection :	N/A
Gloves :	N/A under normal conditions

11. Toxicological Information

Manganese Dioxide: Harmful by inhalation or ingestion. Long term exposure to manganese compounds may reduce fertility in men.

Toxicity data: ORL-RAT LD50 > 3478 mg/kg

Zinc: May be harmful if swallowed or inhaled. May act as an irritant.

12. Ecological Information

Environmental Precautions: This product may be non-hazardous in ordinary use and may be discarded in accordance with applicable governmental regulations and take order with the demands of the environmental protection section.

Environmental Toxicity: On the basis of available information, this material is not expected to produce any significant adverse environmental effects when recommended use instructions are followed.



13. Disposal Method

Individual consumers may dispose of spent (used) batteries with household trash. This product does not recommend that spent batteries be accumulated (quantities of five gallons or more should be disposed of in a secure landfill), in accordance with Federal, State or Local Laws and Regulations. Do not incinerate, since batteries may explode at excessive temperature.

14. Transport Information

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. Alkaline Secondary Battery (sometimes 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 Goods Regulations, (2023 IATA Dangerous Goods Regulations 64th Edition), 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.

Regulatory Parties	Special Provisions
ADR	Not Regulated
IMDG	inc Amdt 40-20
UN, ICAO	Not Regulated
US DOT	49 CFR 172.102 Provision 130
IATA	A123

All Carbon Zinc-Manganese Dioxide Dry Batteries are packed in such a way to prevent short circuits or the generation of 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.



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.

16. Other Information

This data is offered in good faith as typical values and not as a product specification. The information in this data sheet was compiled from information supplied by the vendors of the components of this compound. No warranty, either expressed or implied is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

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