



PRODUCT SAFETY DATA SHEET

The batteries are exempt articles and are not subject to the OSHA Hazard Communication Standard Requirement. This sheet is provided as technical information only. The information and recommendations set forth are made in good faith and are believed to be accurate as of the date of preparation. However, **Maxell makes no warranty expressed or implied.**

Section 1 - Product and Company Identification

Product Name	Sizes:	Date of preparation:
Zinc Silver Oxide Battery (SR) MF *	All	Jan. 1, 2014
Company: Hitachi Maxell, Ltd., Energy Division, Micro Battery Design Department	Telephone Numbers: 81-(0)794-63-8054	
Address (Number, Street, City, State, and ZIP Code): 5, Takumidai, Ono-shi, Hyogo 675-1322, Japan	Fax Numbers: 81-(0)794-63-8445	

MF *) means Mercury Free.

Section 2 - Composition/Information on Ingredients

Ingredient		CAS#	Content (wt%)
Positive material	Silver Oxide	20667-12-3	15 to 40
	Manganese Dioxide	1313-13-9	0 to 10
	Graphite	7782-42-5	0.1 to 5
Negative material	Zinc	7440-66-6	2 to 15
	Mercury	7439-97-6	Not used
Electrolyte solution	Potassium Hydroxide	1310-58-3	0 to 5
	Sodium Hydroxide	1310-73-2	0 to 3

Section 3 - Hazards Identification

Improper handling of the battery could lead to distortion, leakage*, overheating, or explosion and cause human injury or equipment trouble. Especially touch with liquid leaked out of battery could cause injury like a loss of eyesight. . Please strictly observe safety instructions.

(* Leakage is defined as an unintended escape of liquid from a battery.)

Section 4 - First Aid Measures

None unless internal materials exposure. If contents are leaked out, observe following instructions

Inhalation	Explosion may make fumes of alkaline solution and the fumes could cause respiratory irritation. Rinse by plenty of water and consult a physician.
Skin	Immediately flush skin with plenty of water. If itch or irritation by chemical burn persists, consult a physician.
Eyes	Immediately flush eye with plenty of water for at least 15 minutes. Consult a physician immediately
Ingestion	If swallowing a battery, consult a physician immediately. If contents come into mouth, immediately rinse by plenty of water and consult a physician.

Section 5 - Fire Fighting Measures

Extinguishing Media	Any class of extinguisher is effective.
Fire fighting procedure	The batteries could be exploded by heat of fire and alkaline solution could disperse. Use self-contained breathing apparatus and full gear not to inhale or not to come into eyes or skin with harmful alkaline mist.

Section 6 - Accidental Release Measures

NA

Section 7 - Handling and Storage

1) Handling

Never swallow. Never touch the liquid leaked out of battery. Never short-circuit the battery. Never charge. Never expose to open flame. Never heat. Never disassemble or deform.

2) Storage

Never store the battery in hot and high humid place. Never let the battery contact with water.

Section 8 - Exposure Controls, Personal Protection

Respiratory Protection		NA
Ventilation	Local Exhaust	NA
	Mechanical	NA
	Special	NA
	Other	NA
Eye Protection		NA

Protective Gloves	NA
Other protective clothing	NA

Section 9 - Physical/Chemical Characteristics

NA

Section 10 - Stability and Reactivity

Stability	Stable
Incompatibility	NA
Hazardous polymerization	NA
Condition to avoid	See section 7.
Hazardous Decomposition or Byproducts	NA

Section 11 - Toxicological Information

NA

Section 12 - Ecological Information

NA

Section 13 - Disposal condition

The battery may be regulated by national or local regulation. Please follow the instructions of proper regulation. As electric capacity is left in a discarded battery and it comes into contact with other metals, it could lead to distortion, leakage, overheating, or explosion, so make sure to cover the (+) and (-) terminals with friction tape or some other insulator before disposal.

Section 14 - Transportation Information

I hereby certify that the above captioned goods are non-dangerous and non-hazardous materials for air transport in any nature. The consignment is fully described by Proper Shipping Name and packed (short-circuit prevented), marked and in proper condition for carriage by air. I further hereby certify that the consignment is not classified as dangerous under the current edition of the IATA DANGEROUS GOODS REGULATIONS (edition 55th), with complying to the provision A123, and all applicable carrier and governmental regulations.

Section 15 - Regulatory Information

NA

Section 16 - Other Information

If you want further information, please contact Maxell sales representative.