

Material 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, **GoldenPower makes no warranty expressed or implied.**

Section 1 - Product and Company Identification

Product Name Manganese Dioxide Battery Mercury and Lead Free	Sizes: All	Date of preparation: Dec. 20, 2016
Company: Golden Power Corporation (HK) Ltd.	Telephone Numbers: (852) 3125 2288	
Address (Number, Street, City, State, and ZIP Code): Flat C, 20/F., Block 1, Tai Ping Industrial Centre, 57 Ting Kok Road, Tai Po, N.T., Hong Kong	Fax Numbers: (852) 3125 2000 / 3125 2001	

Section 2 - Hazards Identification

We would like to inform our customers that these batteries are exempt articles and are not subject to the 29 CFR 1910.1200 OSHA requirements, Canadian WHMIS requirements or GHS requirements.

Emergency Overview

- OSHA Hazards-not applicable
- Target Organs-not applicable
- GHS Classification-not applicable
- GHS Label Elements, including precautionary Statement-not applicable
- Pictogram-not applicable
- Signal words-not applicable
- Hazard statements-not applicable
- Precautionary statements-not applicable

Section 3 - Composition/Information on Ingredients

Chemical Name	Common Name and Synonyms	CAS #	Content (Wt %)
<i>Manganese Dioxide</i>	<i>MnO2</i>	<i>1313-13-9</i>	<i>20-30</i>
<i>Iron</i>	<i>Fe</i>	<i>7539-89-6</i>	<i>45-70</i>
<i>Zinc</i>	<i>Zn</i>	<i>7440-66-6</i>	<i>5-10</i>
<i>Potassium Hydroxide</i>	<i>KOH</i>	<i>1310-58-3</i>	<i>1-5</i>
<i>Water, paper, other</i>	-	-	<i>Balance</i>

*Source: OSHA 29 CFR 1910.1000 Table Z-1, 2 or 3 11-01-2012

Section 4 - First Aid Measures

THRESHOLD LIMIT VALUE (TLV) AND SOURCE: C5.0 (Mn, TWA)

EFFECTS OF OVEREXPOSURE: None (see section 2 and 4 for fire or rupture situations)

EMERGENCY FIRST AID PROCEDURES:

Skin and Eyes:

In the event that battery ruptures, flush exposed skin with flowing lukewarm water for a minimum of 15 minutes. Get immediate medical attention for eyes. Wash skin with soap and water.

Swallowing:

If you or your doctor suspects that a battery has been ingested-for assistance in the US call the NATIONAL BATTERY INGESTION HOTLINE any time at (202) 625-3333; in Canada call 416-813-5900.

Section 5- Fire Fighting Measures

FLASH POINT:	NA
LOWER (LEL):	NA
FLAMMABLE LIMITS IN AIR (%):	NA
UPPER (UEL):	NA
EXTINGUISHING MEDIA:	Carbon Dioxide, Dry Chemical or Foam Extinguisher.
AUTO-IGNITION:	NA

SPECIAL FIRE FIGHTING PROCEDURES: As with any fire, wear self-contained breathing apparatus to avoid inhalation of hazardous decomposition products (See section 2).

SPECIAL FIRE OR EXPLOSION HAZARDS: Like any sealed container, battery cells may rupture when exposed to excessive heat; this could result in the release of corrosive materials.

Section 6 - Accidental Release Measures

TO CONTAIN AND CLEAN UP LEAKS OR SPILLS: In the event of a battery rupture, prevent skin contact and collect all released material in a plastic lined metal container.

REPORTING PROCEDURE: Report all spills in accordance with Federal, State and Local reporting requirements.

NA=Not Applicable

Section 7 - Handling and Storage

Store batteries in a dry place. Storing unpackaged cells together could result in cell shorting and heat build-up. Do not recharge. Do not puncture or abuse.

Section 8 - Exposure Controls, Personal Protection

RESPIRATORY PROTECTION (SPECIFY TYPE):	NA
VENTILATION: Local Exhaust:	NA
Mechanical (General):	NA
Special:	NA
Other:	NA
PROTECTIVE GLOVES:	NA
EYE PROTECTION:	NA
OTHER PROTECTIVE CLOTHING:	NA

Section 9 - Physical/Chemical Characteristics

Boiling Point @ 760 mm Hg (°C):	NA	Percent Volatile by Volume (%):	NA
Vapor Pressure (mm Hg @ 25°C):	NA	Evaporation Rate (Butyl Acetate = 1):	NA
Vapor Density (Air = 1):	NA	Physical State:	NA
Density (grams/cc):	NA	Solubility in Water (% by Weight):	NA
pH:	NA	Appearance and Odor:	NA

Section 10 - Stability and Reactivity

STABLE OR UNSTABLE:	Stable
INCOMPATIBILITY (MATERIALS TO AVOID):	NA
HAZARDOUS DECOMPOSITION PRODUCTS:	When heated, battery may emit hazardous vapor of KOH/NaOH.
DECOMPOSITION TEMPERATURE (0°F):	NA
HAZARDOUS POLYMERIZATION:	Will Not Occur
CONDITIONS TO AVOID:	Avoid electrical shorting, puncturing or deforming

Section 11 - Toxicological Information

INGREDIENT NAME	CAS #	%	TLV**/TWA
Manganese Dioxide	1313-13-9	30-40	C5.0 (Mn, TWA)
Zinc	7440-66-6	10-15	5 mg/m ³ (as ZnO Fume)
Sodium Hydroxide and Potassium Hydroxide, 30-35% mixture	1310-73-2, 1310-58-3	10-15	Solution Not Listed
Metal shell, plastic, other	---	30-40	None Established

*Source: OSHA 29 CFR 1910.1000 Table Z-1, 2 or 3 11-01-2012

Section 12 - Ecological Information

Consumers should dispose of discharged batteries through waste disposal services or legitimate collection outlets. Those collecting batteries should follow state and federal regulations. Partially discharged damaged batteries can overheat and cause fires in the presence of other combustible materials.

Section 13 - Disposal Considerations

Always comply with Federal, state or local requirements. For additional information on disposal/reclaim options, visit:

<http://www.nema.org/Policy/Environmental-Stewardship/Documents/Companies%20Claiming%20to%20Recycle.MARCH2005.pdf>

Section 14 - Transportation Information

TRANSPORTATION-SHIPPING: These are considered dry-cell batteries and they are non-dangerous goods for transportation. These batteries must be packed in a way to prevent short circuits or generation of a dangerous quantity of heat.

USDOT – See Special Provision

130. IMO/Ocean – Not Listed.

ICAO/IATA – See Special Provision A123. This special provision also states to put the words “not restricted” and “special provision A123” on the air waybill when an air waybill is issued.

Section 15 - Regulatory Information

SARA 313: Notification is not required because these products are article(s) that do not release a covered toxic chemical under the normal conditions of storage, use, or handling.

Section 16. Other information

The date of preparation of the SDS or the last change to it

If you want further information, please contact Golden Power sales representative.

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