



## SAFETY DATA SHEET

The sheets are supplied as a service to you. For related information, visit: <http://www.rayovac.com/Consumer-Services/Technical-OEM/Material-Safety-Data-Sheets.aspx>

### 1. IDENTIFICATION

**PRODUCT NAME:** Silver Oxide Batteries-Mercury Free

**SIZES:** All

**EMERGENCY TELEPHONE NUMBER:** 800-424-9300 (24 hr, Chemtrec)

### 2. HAZARD 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

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME	CAS #	%	TWA/TLV
Silver Oxide	20667-12-3	5-35	.01 mg/m <sup>3</sup> (TWA)
Steel	7439-89-6	37 – 41	--
Zinc	7440-66-6	30 – 40	5.0 mg/m <sup>3</sup> (ZnO as Fume)
Potassium Hydroxide	1310-58-3	1 – 3	Not Listed (for solution)
Graphite	7782-42-5	<0.25	15 mppcf (TWA)
Manganese Dioxide	1313-13-9	<2.5	C5.0 mg/ m <sup>3</sup> (Mn, TWA)
Water, paper, plastic, other	---	Balance	---

Source: OSHA 29 CFR 1910.1000 Table Z - 1, 2 or 3 2-14-13

### 4. FIRST AID INFORMATION

**THRESHOLD LIMIT VALUE (TLV) AND SOURCE:** NA

**EFFECTS OF OVEREXPOSURE:** None. (In fire or rupture situation see section 2 and section 4)

EMERGENCY FIRST AID PROCEDURES:

***Skin and Eyes:***

In the event that battery ruptures, flush exposed skin with copious quantities of 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.***

For more information, visit: <http://www.nema.org/Policy/Environmental-Stewardship/Documents/batteryingest.pdf>

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**5. FIRE FIGHTING MEASURES**

<u>FLASH POINT:</u>	NA
<u>LOWER (LEL):</u>	NA
<u>FLAMMABLE LIMITS IN AIR (%):</u>	NA
<u>UPPER (UEL):</u>	NA
<u>EXTINGUISHING MEDIA:</u>	Use water, foam or dry powder, as appropriate.
<u>AUTO-IGNITION:</u>	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 EXPLOSION HAZARDS: Like any sealed container, battery cells may rupture when exposed to excessive heat; this could result in the release of flammable or corrosive materials.

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**6. ACCIDENTAL RELEASE MEASURES**

PROCEDURES 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.

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**7. HANDLING AND STORAGE**

Store in a dry place. Storing unpackaged cells together could result in cell shorting and heat build-up.

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**8. EXPOSURE CONTROL/PERSONAL PROTECTION**

<u>RESPIRATORY PROTECTION (SPECIFY TYPE):</u>	NA	
<u>VENTILATION:</u>	Local Exhaust:	NA
	Mechanical (General):	NA
	Special:	NA
	Other:	NA

PROTECTIVE GLOVES: NA  
EYE PROTECTION: NA  
OTHER PROTECTIVE CLOTHING: NA

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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:	geometric solid object

## 10. STABILITY AND REACTIVITY

STABLE OR UNSTABLE: Stable  
INCOMPATIBILITY (MATERIALS TO AVOID): NA  
HAZARDOUS DECOMPOSITION PRODUCTS: NA  
DECOMPOSITION TEMPERATURE (0°F): NA  
HAZARDOUS POLYMERIZATION: Will not occur  
CONDITIONS TO AVOID: Avoid electrical shorting.

## 11. TOXICOLOGICAL INFORMATION

INGREDIENT NAME	CAS #	%	TWA/TLV
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\*Source: OSHA 29 CFR 1910.1000 Table Z - 1, 2 or 3 02-14-2013

## 12. ECOLOGICAL INFORMATION

Silver oxide button/coin cells may release small amounts of silver to the environment if damaged, abused or disposed of improperly. Children, elderly and pets may swallow the batteries if stored improperly or disposed of improperly. Store discharged batteries out of the reach of children and pets. Do not store near adult medications of similar size and shape. If required, provide the discharged batteries to an approved collection site for recycling.

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### 13. DISPOSAL CONSIDERATIONS

Always comply with Federal, State and local requirements. Contact your battery distributor for details regarding recycling options or visit:

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

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### 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

IMDG/Ocean – Not listed

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

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### 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 processing or use.

<http://www.nema.org/Policy/Environmental-Stewardship/Mercury/Pages/default.aspx>

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### 16. SDS INFORMATION

Environmental Health & Safety Information: 1-800-237-7000

EDITION DATE: 2-14-2013

APPROVED BY: Kevin J. Domack

NOTICE: The information and recommendations set forth are made in good faith and are believed to be accurate at the date of preparation. Rayovac Corporation makes no warranty expressed or implied.