



Ascent Battery Supply, LLC  
1325 Walnut Ridge Drive  
Hartland, Wisconsin 53029

## Safety Data Sheet (SDS)

## Silver Oxide (Mercury Free) Batteries

The information and recommendations below are believed to be accurate at the date of document preparation. Ascent Battery Supply makes no warranty or merchantability or any other warranty, express or implied, with respect to this information and assumes no liability resulting from its use. This SDS provides guidelines for safe use and handling of product. It does not, and cannot, advise all possible situations. All specific uses of this product must be evaluated by the end user to determine if additional safety precautions should be taken.

### SECTION 1 - IDENTIFICATION

<b>Product Name</b>	Silver Oxide Battery	<b>Emergency Number</b>	CHEMTREC 1-800-424-9300
<b>Common Name(s)</b>	Silver Oxide	<b>International Emergency Number</b>	CHEMTREC +1 703-741-5970
<b>Synonyms</b>			
<b>DOT Description</b>	Dry Battery		
<b>Chemical Name</b>	Silver Oxide Primary Battery		
<b>Distributed By</b>	Ascent Battery Supply, LLC 1325 Walnut Ridge Drive Hartland, Wisconsin 53029		
<b>Address</b>			

### SECTION 2 – HAZARD(S)

These batteries are exempt items, not subject to OSHA or GHS requirements.

The chemical content of these batteries is contained in a sealed can. Risk of exposure occurs only if the battery is mechanically, thermally, or electrically abused.

Battery cells may rupture when exposed to excessive heat, which may result in the release of corrosive materials.

### SECTION 3 – COMPOSITION

Chemical Name	CAS No.	Wt. Percentage %
Silver Oxide (Ag <sub>2</sub> O)	20667-12-3	5 - 45%
Zinc (Zn)	7440-66-6	4 - 19%
Graphite (C)	7782-42-5	≤ 2%
Manganese Dioxide (MnO <sub>2</sub> )	1313-13-9	1 – 40%
Electrolyte Solution (NaOH, KOH)	1310-72-2; 1310-58-3	≤ 7%
Other/Housing	n/a	balance

### SECTION 4 – FIRST AID MEASURES

**First Aid is not required unless there is exposure to internal contents or the battery is swallowed.**

<b>Eyes and Skin</b>	<b>Skin:</b> Flush with copious quantities of flowing lukewarm water for a minimum of 15 minutes; wash with soap and water <b>Eyes:</b> Flush with copious quantities of flowing lukewarm water for a minimum of 15 minutes; get immediate medical attention.
<b>Inhalation</b>	Fumes may cause respiratory irritation. Remove to fresh air and consult medical attention as required.
<b>Ingestion</b>	Ingestion of battery chemicals can be harmful. Call The National Battery Ingestion Hotline (202-625-3333) 24 hours a day, for procedures treating ingestion of chemicals. Do not induce vomiting.

## SECTION 5 – FIRE-FIGHTING MEASURES

<b>Extinguisher Media</b>	Any class of extinguisher is effective.
<b>Special Fire Fighting Procedures</b>	Wear self-contained breathing apparatus to protective clothing to avoid inhalation of or contact with hazardous decomposition products.

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

In case of accidental rupture or release: prevent skin and eye contact and collect all released material in a plastic lined metal container. Leaking batteries should be handled with gloves. Clean contaminated surfaces with water or diluted acetic acid. Wear protective clothing. Use a self-contained breathing apparatus if in the presence of chemical vapor. See also: sections 4, 5, and 8.

## SECTION 7 – HANDLING AND STORAGE

1. Store in a dry place at room temperature (20°C/68°F): avoiding mechanical, thermal, and electrical abuse.
2. Do not store unpacked cells together: avoid cells shorting to one another.
3. Do not mix new and used batteries.
4. Do not disassemble.
5. Do not store with conductive objects or water.
6. Store away from flame or spark hazards.
7. Do not attempt to recharge a primary battery.
8. Keep away from children.

## SECTION 8 – EXPOSURE/PERSONAL PROTECTION

<b>Respiratory Protection</b>	None required under normal handling conditions
<b>Gloves</b>	Wear gloves if cell is ruptured, corroded, or leaking materials
<b>Safety Glasses</b>	Always wear safety glasses while working with battery cells

## SECTION 9 – PHYSICAL/CHEMICAL PROPERTIES

<b>Boiling Point</b>	N/A	<b>Melting Point</b>	N/A
<b>Vapor Pressure</b>	N/A	<b>Vapor Density</b>	N/A
<b>Specific Gravity</b>	N/A	<b>Evaporation Rate</b>	N/A
<b>Solubility in Water</b>	N/A	<b>Appearance and Odor</b>	Geometric, sealed round button, solid object, odorless

## SECTION 10 – STABILITY & REACTIVITY

<b>Reactivity in Water</b>	Do not put into water	<b>Auto-ignition Temperature</b>	N/A
<b>Flash Point</b>	N/A	<b>Flammable Limits in Air, by vol.</b>	N/A
<b>Percent Volatile By Volume</b>	N/A		
<b>Stable</b>	Avoid electrically shorting the cell. Under normal conditions this product is stable and will not decompose.		
<b>Incompatibility (materials to avoid)</b>	N/A		

## SECTION 11 – TOXICOLOGICAL INFORMATION

<b>Threshold Limit Value</b>	N/A
<b>Signs and Symptoms of Exposure</b>	None. (In fire or rupture situations, refer to sections 4, 5, & 8.)
<b>Medical Conditions Generally Caused by Exposure</b>	Chemicals may cause burns to skin, eyes, gastrointestinal tract and mucous membranes. Inhalation of electrolyte vapors may cause irritation of the upper respiratory tract and lungs.
<b>Routes of Entry</b>	Skin, Eyes, Ingestion (swallowing)

## SECTION 12 – ECOLOGICAL INFORMATION

**Hazardous Decomposition Products** N/A

**Hazardous Polymerization** Will not occur

Under normal use these batteries do not release internal ingredients into the environment. Damaged or abused batteries may release small amounts of silver, zinc, and manganese. Do not discard batteries into a fire. Dispose of properly or recycle.

## SECTION 13 - DISPOSAL

Dispose of batteries according to all Federal, State and local laws and regulations.

## SECTION 14 – TRANSPORT

These batteries must be packaged in a way that prevents the dangerous evolution of heat and protects the terminals from short circuit. When properly packaged and labeled, these dry batteries are not subject to dangerous goods regulation for the purpose of transportation and fall under special provision of the agencies listed in Section 15.

## SECTION 15 – REGULATORY INFORMATION

**IATA/ICAO** See Special Provision A123. Put the words “not restricted” and “special provision A123” on the air waybill when issued. Not considered to be ‘dangerous goods’ when packaged properly

**DOT** See 49 CFR172.102 Special Provision 130

**IMDG/Ocean** Provisions 295 and 304

## SECTION 16 - OTHER

<b>Document Control No:</b>	SDS20012 – Ascent SDS for Silver Oxide Batteries	<b>Revision:</b>	2	<b>Effective Date:</b>	10/05/2016
-----------------------------	--	------------------	---	------------------------	------------