

Product: Silver Zinc (SOZ)
Battery (wet or dry)
and cells

Applicable Product Numbers: GAP series batteries: 4157; 4184; 4325-3;
4325-9; 4347; 4425-3; 4438-3; 4438-15;
4569; 4632; 4639.

MAR series batteries: 4444; 4560; 4561;
4562, 4168.

LR6DC-2; 20427; 20444; 21088, 21210;
SZHR-50

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ARTICLE INFORMATION SHEET (AIS)

This Article Information Sheet (AIS) is provided as a courtesy in response to a customer request. A Safety Data Sheet (SDS) has not been prepared for these products because they are articles. This AIS provides relevant battery information to consumers, OEMs and other users requesting a GHS-compliant SDS. Articles, such as batteries, are exempt from GHS SDS classification criteria. The GHS criteria is not designed or intended to be used to classify the physical, health and environmental hazards of an article.

SECTION 1: COMPANY INFORMATION

Manufacturer:

EaglePicher Technologies, LLC
PO Box 47
Joplin, MO 64802
417-623-8000

www.eaglepicher.com

Emergency Telephone Number: Chemtrec 1-800-424-9300

Recommended Use: Power Source.

SECTION 2: ARTICLE INFORMATION

This product is exempt from hazard classification according to OSHA Hazard Communication Standard, 29 CFR 1910.1200 and the GHS system.

*The specific battery number will determine the exact ingredients and percentages. *The specific chemical identity and/or exact percentage (concentration) of composition for the electrodes has been withheld as a trade secret.*

Article Construction	
Electrodes	Silver*, zinc oxide*, copper*, mercuric oxide*
Electrolyte	Potassium hydroxide (wet/automatic batteries only)
Materials of construction – can	Stainless steel or Aluminum*
Squib*	Yes (model specific)
Gas generator*	Yes, (model specific)
Pyro switch*	Yes (model specific)

Some EaglePicher SOZ batteries also contain a squib, pyro switch and/or gas generator device* within the hermetically sealed battery. These are also classified as articles under OSHA's Hazard Communication standard, 29 CFR 1910.1200 and are exempt from the requirements for an SDS. For reference, the following chemicals may be found in squibs and gas generators manufactured by EaglePicher Technologies. *The specific chemical identity and/or exact percentage (concentration) of composition for the squibs, pyro switches and gas generators has been withheld as a trade secret.**

Chemical Name*	C.A.S. Number	Percentage
Lead Mononitroresorcinol	301-04-2 and 108-46-3	Trade Secret
Boron Calcium Chromate	7440-42-8 and 13765-19-0	Trade Secret
Boron Barium Nitrate	7440-42-8 and 10022-31-8	Trade Secret
Potassium Chlorate	3811-04-9	Trade Secret
Zirconium	7440-67-7	Trade Secret
Ferric Oxide	1309-37-1	Trade Secret
Lead Styphnate	15245-44-0	Trade Secret
Infusorial earth	61790-53-2	Trade Secret
Tetracene	89303-69-5	Trade Secret
Barium Styphnate	20236-55-9	Trade Secret
Nitrocellulose	9004-70-0	Trade Secret
Nitroglycerin	55-63-0	Trade Secret
Di-n-propyl adipate	106-19-4	Trade Secret
2-nitrodiphenylamine	119-75-5	Trade Secret
Lead β -resorcylate/monobasic cupric salicylate	20936-32-7 / 62320-506-2	Trade Secret
Candelilla wax	8006-44-8	Trade Secret
Diethyl phthalate	84-66-2	Trade Secret
2-nitrodiphenylamine	119-75-5	Trade Secret
Lead 2-ethylhexoate	301-08-6	Trade Secret
Lead salicylate	15748-73-9	Trade Secret
Cuprous oxide	1317-39-1	Trade Secret
Silicon	7440-21-3	Trade Secret
Lead dioxide	1309-60-0	Trade Secret
Potassium perchlorate	7778-74-7	Trade Secret

SECTION 3: HEALTH AND SAFETY

Normal conditions of Use	Exposure to contents inside the sealed battery will not occur unless the battery leaks, is exposed to high temperatures, or is mechanically abused.
First Aid – Eye Contact	If exposed to internal components of the battery, flush with running water for at least 15 minutes and then seek medical attention.
First Aid – Skin Contact	If exposed to internal components of the battery, flush with running water for at least 15 minutes and then seek medical attention.
First Aid – Inhalation	Contents of leaking battery may be burn skin and respiratory system. Move to fresh air and seek medical attention.
First Aid – Ingestion	Not an expected route of exposure.
Precautionary Statements	Battery can leak or explode if heated, disassembled, shorted, recharged, exposed to fire or high temperature or inserted incorrectly. Do not pierce or burn, even after use. Store in a well ventilated place. Keep cool. Store in original container.

SECTION 4: FIRE HAZARDS AND FIREFIGHTING MEASURES

Fire Hazard	Batteries may rupture or leak if involved in a fire. Internal activating mechanism may discharge if involved in fire. Keep at a safe distance.
Extinguishing Media	Use a class ABC dry chemical or CO ₂ extinguisher at a safe distance if safe to do so. Be aware that damaged battery cases can leak caustic electrolyte. Wear a NIOSH-approved SCBA to prevent exposure to products of combustion.

SECTION 5: HANDLING AND STORAGE

Handling	Avoid mechanical and electrical abuse. Do not short circuit or install incorrectly. Batteries may rupture or vent if disassembled, crushed, recharged or exposed to high temperatures. Do not directly heat or solder. Install batteries in accordance with equipment instructions.
Storage	Store batteries in a dry place at normal room temperature. Do not place near heating equipment or direct sunlight for a long time. Leave terminal caps on until ready to install.
Spills of Large Quantities of loose batteries	Notify spill response personnel of large spills. Irritating and flammable vapors may be released from leaking or ruptured batteries. Clean-up personnel should wear appropriate personal protective equipment to avoid eye and skin contact and inhalation of vapors or fumes. Increase ventilation. Carefully collect batteries and place in appropriate container for disposal. Remove any spilled liquid with absorbent material and contain for disposal.

SECTION 6: DISPOSAL CONSIDERATIONS

Collection and Proper Disposal	Dispose of batteries in compliance with federal, state/provincial and local regulations. Do not incinerate. In countries, such as Canada and the EU, where there are regulations for the collection and recycling of batteries, consumers should dispose of their used batteries into the collection network at municipal depots and retailers. They should not be disposed of with household trash.
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SECTION 7: TRANSPORTATION INFORMATION

Regulatory Status	EaglePicher Technologies, LLC silver zinc batteries are delivered in accordance with current DOT and/or IATA/ICAO regulations. Persons who prepare or offer batteries for transport are required by regulation to be trained to the extent of their responsibility. The information in this section is provided for informational purposes only. The transportation of silver zinc batteries is regulated by ICAO, IATA, IMO, ADR and US DOT.
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DOT (US) - Not regulated as a Dangerous Good or Hazardous Material.

<u>UN Number</u>	<u>Proper Shipping Name</u>	<u>Hazard Class</u>
Not required per 49 CFR 173.159a		

Mark battery and packaging with “Non-Spillable Battery”

Air Transport (IATA/ICAO) Packing Instructions (63rd edition):

Not regulated as a Dangerous Good if packaging meets the requirements of PI 872.
SPA67 – Mark Air Waybill with “Not Restricted” and “SPA67” in the description of the substance.

SECTION 8: REGULATORY DEFINITIONS AND REQUIREMENTS - ARTICLES

USA OSHA	29 CFR 1910.1200(b)(6)(v)
USA TSCA	40 CFR 704.3; 710.2(3)(c); and 19 CFR 12.1209(a)
EU REACH	Title 1 - Chapter 2 - Article 3(3)
GHS	Section 1.3.2.1

Globally Harmonized System (GHS)	GHS SDS requirements and classification criteria do not apply to articles or products (such as batteries) that have a fixed shape, which are not intended to release a chemical. The article exemption is found in Section 1.3.2.1.1 of the GHS and reads: <i>The GHS applies to pure substances and their dilute solutions and to mixtures. "Articles" as defined by the Hazard Communication Standard (29 CFR 1900.1200) of the OSHA of the USA, or by similar definition, are outside the scope of the system."</i>
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<p>Joint Article Management Promotion Consortium JAMP</p>	<p>An international standard that came into effect in March 2012 concerning declaration for electrical and electronic products. IEC 6274 replaces the defunct Joint Industry Guide – Material Declaration for Electro-technical Products (JIG-101-Ed 4.1 (May 21, 2012))</p>
<p>IEC 62474 Ed. 1.0 B:2012 Material Declaration for Products of and for the Electro-technical Industry</p>	<p>An international standard that came into effect in March 2012 concerning declaration for electrical and electronic products. IEC 6274 replaces the defunct Joint Industry Guide – Material Declaration for Electro-technical Products (JIG-101-Ed 4.1 (May 21, 2012))</p>
<p>IEC 62474 Database – Publically available online (http://std.iec.ch/iec62474). Maintained by TC11: Environmental Standardization for electrical and electronic products and systems.</p>	<p>The general principle for a substance to be included in the database as a declarable substance is: 1) existing national laws or regulations in an IEC member country that are relevant to Electro-technical products and that prohibit or restrict substances, or that have a labeling, communication, reporting or notification requirement, and 2) applying IEC 62474 criteria results in identification of declarable substance.</p>
<p>ANSI Z 400.1/Z19.1 (2010)</p>	<p>2.1 Scope: Applies to preparation of SDS for hazardous chemicals used under occupational conditions. Does not address how the standard may be applied to articles. It presents basic information on how to develop and write a SDS. Additional information is provided to help comply with state and federal environmental and safety laws and regulations. Elements of the standard may be acceptable for International use.</p>

DISCLAIMER: This AIS is intended to provide a brief summary of our knowledge and guidance regarding the use of this article. The information contained here has been compiled from sources considered by EaglePicher Technologies, LLC to be dependable and is accurate to the best of the Company’s knowledge. It is not meant to be an all-inclusive document on worldwide hazard communication regulations. This information is offered in good faith. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage or release to the environment. EaglePicher Technologies, LLC assumes no responsibility for injury to the recipient or third persons or for any damage to any property resulting from misuse of the product.