

Product: Lithium Sulfur Dioxide Battery Applicable Product MAP series: 9440, 9441
 Date: 1/1/2023 Numbers:
 Revision: E Document Number: EHS-AIS-1016

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 this product(s) 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
 1215 W. C St.
 Joplin, MO 64802

Phone: 604-543-4350
 www.eaglepicher.com
 Emergency Telephone Number: Chemtrec 1-800-424-9300

SECTION 2: ARTICLE INFORMATION

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

Description	Lithium sulfur dioxide battery
Recommended Use	Portable power source
Applicable Product Numbers	MAP series: 9440, 9441
Article Construction	
Electrodes	Lithium metal, CAS 7439-93-2; Aluminum, CAS 7429-90-5; Carbon, CAS 1333-86-4; Nickel, CAS 7440-02-0
Electrolyte	Lithium bromide, CAS 7550-35-8; Sulfur dioxide, CAS 7446-09-5; Acetonitrile, CAS 75-05-8
Can	Mild steel
Mercury-free Battery	Yes

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 or electrically abused.
First Aid – Eye Contact (electrolyte)	Immediately flush eyes with running water for at least 15 minutes and then seek medical attention.
First Aid – Skin Contact	Remove contaminated clothes and shoes immediately. Wash the contact region with soap and plenty of water and then seek medical attention.
First Aid – Inhalation	Contents of an opened cell may cause respiratory tract and mucous membrane irritation. If breathing is difficult seek medical attention.
First Aid – Ingestion	Wash mouth out thoroughly with water and give plenty of water to drink. Seek immediate medical attention.
Precautionary Statements	Battery can leak or explode if heated, disassembled, mechanically shocked, electrically 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.
Extinguishing Media	Suitable extinguishing media includes large amounts of water for cooling effect if fire expansion has not progressed to the point that the lithium metal is exposed or Lith-X class D extinguisher for small amounts of batteries involved in fire. Do not use CO2 or Halon-type extinguishers, sand, dry powder or soda ash. Use only Class D extinguishers on raw lithium metal.
Special Procedures	Firefighters should wear SCBA and full protective clothing. Standard ABC extinguishers are ineffective and small amounts of water, such as the volumes contained in portable extinguishers, should never be used. Hydrogen gas is formed whenever hot lithium metal comes into contact with water.

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
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	heat or solder. Do not expose to strong oxidizers or acids. Install batteries in accordance with equipment instructions.
Storage	Store batteries in a dry place at normal room temperature. Refrigeration does not make them last longer. Do not place near heating equipment or direct sunlight.
Spills/Accidental Release	Evacuate people from the immediate area until fumes dissipate. In case of electrolyte leakage from a cell or battery, do not inhale vapors or touch liquid with bare hands. Internal cell materials, such as electrolyte leaked from the battery, should only be cleaned up by authorized persons with appropriate protective equipment. Use absorbent materials (vermiculite, lime powder, sand) to absorb any exuded material. Seal leaking battery and contaminated absorbent material tight in plastic bag and dispose of as hazardous waste in accordance with federal, state and local regulations. Remove leaked solid materials to an appropriate container for disposal. Do not flush materials down drains.

SECTION 6: DISPOSAL CONSIDERATIONS

Collection and Proper Disposal	Do not incinerate or expose battery to temperatures in excess of 85° C. Dispose of used (or excess) batteries in compliance with federal, state/provincial and local regulations. Do not accumulate large quantities of used batteries for disposal as accumulations could cause batteries to short-circuit. 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 dispose of batteries with household trash.
California Universal Waste Rule (Cal. Code Regs. Title 22, Div. 4.5, Ch. 23)	California prohibits disposal of batteries as trash (including household trash).

SECTION 7: TRANSPORTATION INFORMATION

Regulatory Status	EaglePicher Technologies, LLC 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 batteries is regulated by ICAO, IATA, IMO, ADR and US DOT.
Total Lithium Content	See below for each product number:

	Part No.	Total Lithium Content (grams)	Total cell/battery weight
	MAP-9440	44.0	8.0 lbs. max
	MAP-9441	34.4	9.0 lbs. max

DOT (US)	UN Number	Proper Shipping Name	Hazard Class
	UN3090	Lithium metal batteries	9
	UN3091	Lithium metal batteries packed with or contained in equipment	9

USA DOT Special Provisions: 49 CFR 172.102(c) SP 181, 422, A54, A101 (one or more may apply).

Air Transport (IATA/ICAO) Packing Instructions (64th edition):

- P.I. 968 – Lithium metal batteries (shipped alone)
- P.I. 969 – Lithium metal batteries packed with equipment
- P.I. 970 – Lithium metal batteries contained in equipment

Marine/Water Transport (IMDG 2022 Edition) Special Provision: SP188, PI903

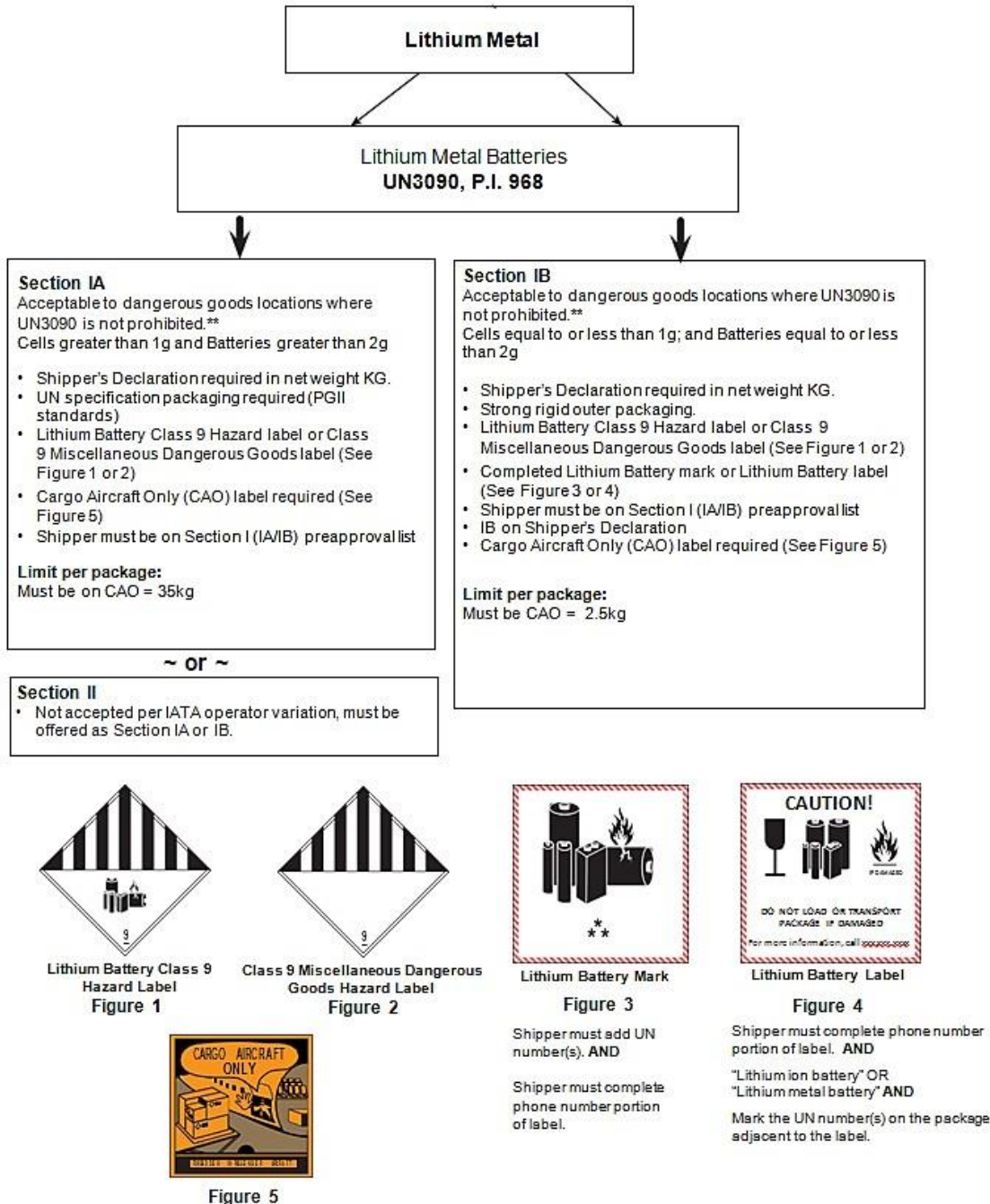
ADR.RID Special Provision: 188

Lithium batteries are regarded as dangerous goods based on the above stated regulations when delivered via air, sea, road and train.

- A) Each cell or battery is of a type proven to meet the requirements of each test in the UN Manual Of Tests and Criteria, Part III, subsection 38-3
- B) Cells and batteries are separated so as to prevent short circuits and are packaged in strong packages, except when installed in equipment.
- C) The package and shipping documents are marked indicating that it contains lithium Batteries and proper labels attached.

Emergency Transportation Hotline: CHEMTREC 24-Hour Emergency Response Hotline

Within the United States call +703-527-3887
Outside the United States, call +1 703-527-3887 (Collect)



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 12.1209a]
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>
Joint Article Management Promotion Consortium JAMP	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))
IEC 62474 Ed. 1.0 B:2012 Material Declaration for Products of and for the Electro-technical Industry	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))
IEC 62474 Database – Publically available online (http://std.iec.ch/iec62474). Maintained by TC11: Environmental Standardization for electrical and electronic products and systems.	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.
ANSI Z 400.1/Z19.1 (2010)	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.

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.