

Product: Li-ion battery

Applicable Product Numbers: MAR-9610,
EN-1011452

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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 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
417-623-8000

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 iron phosphate battery
Recommended Use	Power source
Applicable Product Numbers	MAR-9610, EN-1011452
Article Construction	
Electrolyte salts	Lithium hexafluorophosphate, CAS 21324-40-3 Lithium bis-trifluoromethanesulfonimide, CAS 90076-65-5
Electrolyte solvents	Ethylene carbonate, CAS 96-49-1 Propylene carbonate, CAS 108-32-7 Diethyl carbonate, CAS 105-58-8 Dimethyl carbonate, CAS 616-38-6 Ethyl methyl carbonate, CAS 623-53-0 1, 3-Propanesultone, CAS 1120-71-4 Ethyl propionate, CAS 105-37-3

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, wash the immediate area with running water and soap for at least 15 minutes. If irritation persists, seek medical attention.
First Aid – Inhalation	Contents of leaking battery may be irritating to respiratory passages. Move to fresh air and seek medical attention if irritation persists.
First Aid – Ingestion	Do not induce vomiting. Seek immediate medical attention. Call the National Battery Ingestion Hotline (202) 625-3333 collect, day or night.
Precautionary Statements	Battery can leak or explode if disassembled, shorted, inserted improperly, mixed with different battery types, recharged, exposed to fire or high temperature. 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	Lithium-ion batteries contain flammable liquid electrolyte that may vent, ignite and produce sparks when subjected to high temperatures (> 150 °C (302 °F)), when damaged or abused (e.g., mechanical damage or electrical overcharge). Burning cells can ignite other batteries in close proximity. Batteries may rupture or leak if involved in a fire.
Extinguishing Media	Small Fires - Dry chemical, CO ₂ , water spray or regular foam. Large Fires- Water spray, fog or regular foam. Move containers from fire area if you can do it without risk. Cooling the exterior of the batteries may help prevent rupturing. Burning of these batteries will generate toxic fumes. Fire fighters should use self-contained breathing apparatus.
Specific Hazards arising from the Chemical:	The interaction of water or water vapor and exposed lithium hexafluorophosphate (LiPF ₆) may result in the generation of hydrogen and hydrogen fluoride (HF) gas. Contact with battery electrolyte may be irritating to skin, eyes and mucous membranes. Fire will produce irritating, corrosive and/or toxic gases. Fumes may cause dizziness or suffocation
Protective Equipment and precautions for firefighters:	Wear positive pressure self-contained breathing apparatus(SCBA). Structural firefighters' protective clothing will only provide limited protection. Fight fire from a safe distance.

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 non-condensing environment between -40 and 50 degrees Celsius. Colder storage temperatures (below 20 degrees Celsius) will extend battery service life, but extended exposure to condensation may negatively impact performance. Do not store near heating equipment or in direct sunlight. Do not store above 50 degrees Celsius.

SECTION 6: DISPOSAL CONSIDERATIONS

Collection and Proper Disposal	Battery recycling is encouraged. In the United States, batteries can be recycled under the Universal Waste rules of RCRA. If a battery or cell is leaking/broken open, consult hazardous waste regulations under RCRA. Also, consult state and local regulations for further disposal requirements.
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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 lithium batteries for transport are required by regulation to be trained to the extent of their responsibility. The information in this section is provided for <u>informational purposes only</u> . The transportation of lithium batteries is regulated by ICAO, IATA, IMO, ADR and US DOT.
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Each of the listed batteries in Section 2 has either passed the UN Manual of Tests and Criteria Part III Subsection 38.3 or they belong to prototype and low production, for which the UN38.3 tests are not required by the regulations listed above.

DOT (US)	UN Number	Shipping Name	Hazard Class
	UN3480	Lithium ion batteries	9
	UN3481	Lithium ion batteries contained in equipment	9
	UN3481	Lithium ion batteries packed with equipment	9

USA DOT Special Provisions: 49 CFR 172.102(c) SP 181, 422, A54, A100 (one or more may apply).

Air Transport (IATA/ICAO) Packing Instructions: PI 965 – Lithium ion batteries

Marine/Water Transport – IMDG Special Provision: SP188, PI903

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 – Publicly 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.