



Box 1794 · Appleton, WI 54912 · (920) 735-6242 · Fax (920) 735-6245 · asp-usa.com

MSDS

Material Safety Data Sheet

CR123A Batteries

Section 1 Product & Company Identification

Manufacturer Name	Armament Systems and Procedures, INC
Address	2511 East Capitol Drive, Appleton, WI 54911
Telephone No	(920) 735-6242
Date	19 June 2011
Model	CR123A
Chemical System	Primary Lithium Battery

Section 2 Composition/Information On Ingredients

<i>Compositions</i>	<i>Wt %</i>
MnO ₂	37.7
Graphite Powder	3.3
Li	2.8

Section 3 Hazards Identification

<i>Material</i>	<i>Appearance</i>	<i>Toxicity (Potential Health Effects)</i>
Li	Silvery white metal	Flammable and burn the skin. Direct exposure to areas of the body need to be treated immediately to prevent injury.

Section 4 First Aid Measures

<u>Eyes:</u>	Flush with water for at least 15 min. If irritation occurs and persists, contact a medical doctor.
<u>Skin:</u>	Remove contaminated clothing and thoroughly wash with soap and plenty of water. If irritation persists, contact a medical doctor.
<u>Inhalation:</u>	Remove to fresh air. If breathing difficulty or discomfort occurs and persists, see a medical doctor. If breathing has stopped, give artificial respiration and see a medical doctor IMMEDIATELY.

Section 5 Fire Fighting Measures

Flash Point	N/A
Extinguishing Media	Water, carbon dioxide or dry chemical
Basic Fire Fighting Procedures	Wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Unusual Fire and Explosion Hazards	THERE IS FLAMMABLE OR EXPLOSIVE MATERIAL USED IN THE BATTERY.

Section 6 Accidental Release Measures

<p>Procedure for Release and Spill: Sweep up and place in a suitable container. Dispose of waste according to all local, state and federal laws and regulations. Before clean up measures begin, review the entire MSDS with particular attention to potential health effects; and on recommended personal protective equipment.</p>
--

Section 7 Handling & Storage

<p>Handling: Avoid contact with eyes, skin or clothing, use with adequate ventilation. Wear safety glasses and rubber gloves. Wash thoroughly after handling. Store in a cool, dry place. This material is not hazardous under normal storage condition; however, Li should be kept away from H₂O. Keep container closed. LiClO₄ should be stored in tightly closed containers away from H₂O.</p>
--

Section 8 Exposure Controls/Personal Protection

Skin Protection:	Wear protective gloves are recommended. Wash hands and contaminated skin thoroughly after handling.
Eye/Face Protection:	No data.
Respiratory Protection:	No data.
Other equipment:	No data.

Section 9 Physical and Chemical Properties

Material	Density (g/cm ³)	Boiling Point (°C)	Solubility in Water	Odor	Appearance and Color
Mno2	5.026	---	Insoluble	Odorless	Black powder
Li	0.534	---	React desperately	Odorless	Silvery white metal

Section 10 Stability and Reactivity

Stability	Unstable	N/A	
	Stable	Stable	
Incompatibility (Materials to Avoid):	Li and LiClO ₄ should avoid H ₂ O		
Hazardous Decomposition Products:	None		
Hazardous Polymerization:	Will not occur		

Section 11 Toxicological Information

Toxicological Information:	No information available.
----------------------------	---------------------------

Section 12 Ecological Information

Chemical Fate Information:	No data available.
Environmental Effects:	No data available.

Section 13 Disposal Considerations

Ensure disposal of material in compliance with all local, state and federal laws and regulations.

Section 14 Transport Information

Lithium cells or lithium batteries can be transported in nonrestrictive material if they can meet with all the requirements below. If any one requirement cannot be met, they should be transported in dangerous material (UN 3090 or UN 3091).	
1	Lithium content requirement
1.1	For lithium metal or Lithium alloy cell, the lithium content cannot surpass 1.0g; for Lithium iron primary cells the lithium valent weight content cannot surpass 1.5g.
2	Meet with UN Test Requirement
2.1	All the cell and battery must be verified to meet with all the requirements in Part 3-38.3 item (UN38.3 tests) for "Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria."
3	EXEMPT from IATA DGR Requirement
3.1	The goods are not restricted to other additional requirements of Section II of Packing Instructions 968 of 52nd DGR Manual of IATA.
3.2	UN Manual of Tests and Criteria, Part III, Subsection 38.3
4	Package Requirement
4.1	The cell and battery must be packaged and specially and singly, and put into hard outer package to prevent short-circuit if they do not be assembled in finished equipments (such as mobile phone, camera, NBPC and so on).
4.2	Each package is capable of withstanding a 1.2m drop test in any orientation without damage to cells or batteries contained therein without shifting of the contents so as to allow battery to battery contact and without release of contents package does not exceed 2.5kg gross mass.
4.3	Every package weight cannot overpass 20KG if the batteries cannot be assembled in finished equipment.

Section 15 Regulatory Information

Regulatory information:	No data available.
-------------------------	--------------------

Section 16 Other Information

Precautions to be taken in handling and use.	DO NOT PUT IN A FIRE, SHORT CIRCUIT OR MUTILATE.
--	--