



## SAFETY DATA SHEET

The sheets are supplied as a service to you. For related information, visit: <http://www.rayovac.com/Consumer-Services/Technical-OEM/Material-Safety-Data-Sheets.aspx>

### 1. IDENTIFICATION

**PRODUCT NAME:** 9-Volt Lithium Battery

**SIZES:** 9 Volt

**EMERGENCY TELEPHONE NUMBER:** 800-424-9300 (24 hr, Chemtrec)

### 2. HAZARD IDENTIFICATION

We would like to inform our customers that these batteries are exempt articles and are not subject to the 29 CFR 1910.1200 OSHA requirements, Canadian WHMIS requirements or GHS requirements.

#### Emergency Overview

OSHA Hazards-not applicable  
Target Organs-not applicable  
GHS Classification-not applicable  
GHS Label Elements, including precautionary Statement-not applicable  
Pictogram-not applicable  
Signal words-not applicable  
Hazard statements-not applicable  
Precautionary statements-not applicable

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME	CAS #	%	TWA/TLV
Stainless Steel	--	40-50	--
Manganese Dioxide	1313-13-9	35-40	C5.0 as fume
1,3 Dioxolane	646-06-0	5-9	None Established
Lithium Hexafluoroarsenate (LiAsF <sub>6</sub> )	29935-35-1	1-4	No data available
Lithium (metal)	7439-93-2	1 - 4	None Established
Propylene Carbonate	108-32-7	8-10	None Established

*\*Source: OSHA 29 CFR 1910.1000 Table Z-1, 2 or 3 11-01-2012*

### 4. FIRST AID INFORMATION

**THRESHOLD LIMIT VALUE (TLV) AND SOURCE:** NA

**EFFECTS OF OVEREXPOSURE:** None. (In fire or rupture situation see section 2 and section 4)

## EMERGENCY FIRST AID PROCEDURES:

### ***Skin and Eyes:***

In the event that battery ruptures, flush exposed skin with copious quantities of flowing lukewarm water for a minimum of 15 minutes. Get immediate medical attention for eyes. Wash skin with soap and water.

***LITHIUM metal contact***-remove lithium particles from skin or eyes and flush with copious amounts of water. May cause burns- seek medical attention immediately.

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## **5. FIRE FIGHTING MEASURES**

FLASH POINT: NA

LOWER (LEL): NA

FLAMMABLE LIMITS IN AIR (%): NA

UPPER (UEL): NA

AUTO-IGNITION: NA

Extinguishing media: For consumers (small number of batteries)-use water to extinguish combustible materials and cool any batteries involved. Flood any combustible materials ejected from the fire with water.

For bulk shipments (large number of bulk of packaged batteries in a fire) use foam or Lithex™ to smother and cool the fire. Caution-once the suppressant is removed the batteries may re-ignite if exposed to moist air under normal ambient conditions.

For industrial situations place battery materials into Lithex™ to suppress fire potential and allow to slowly discharge to prevent fires. Keep away from combustible materials.

SPECIAL FIRE FIGHTING PROCEDURES: As with any fire, wear self-contained breathing apparatus and protective clothing to avoid contact or inhalation of hazardous decomposition products (See section 2). Significant amount of batteries involved in a fire may release flammable vapors intensifying the fire or creating flashback situations. If a battery is damaged and overheats, place in a safe non-combustible surface until cool, then containerize in a non-combustible container.

SPECIAL FIRE EXPLOSION HAZARDS: Like any sealed container, battery cells may rupture when exposed to excessive heat; this could result in the release of reactive, flammable or corrosive materials. Use cold water if water is used as an extinguishing medium. Lithium metal could be ejected from the fire

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## **6. ACCIDENTAL RELEASE MEASURES**

PROCEDURES TO CONTAIN AND CLEAN UP LEAKS OR SPILLS: In the event of a battery rupture, prevent skin contact. Allow any hot material to cool before containerizing. Open lithium will react with moisture-prevent introducing water or moisture to open battery contents (see fire section for batteries involved in a fire). Collect all cool battery material in a sealed plastic lined metal container. Spilled undamaged batteries require no special safety handling. Avoid short circuits.

REPORTING PROCEDURE: Report all spills in accordance with Federal, State and Local reporting requirements.

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## 7. HANDLING AND STORAGE

Store batteries in a dry place. Storing unpackaged cells together could result in cell shorting and heat build-up. Do not recharge. Do not puncture or abuse. Do not use new and old batteries in the same device at the same time as this could cause cell reversal resulting in overheating or rupture.

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## 8. EXPOSURE CONTROL/PERSONAL PROTECTION

RESPIRATORY PROTECTION (SPECIFY TYPE): NA

VENTILATION: Local Exhaust: NA  
Mechanical (General): NA  
Special: NA  
Other: NA

PROTECTIVE GLOVES: NA

EYE PROTECTION: NA

OTHER PROTECTIVE CLOTHING: NA

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point @ 760 mm Hg (°C):	NA	Evaporation Rate (Butyl Acetate = 1):	NA
Vapor Pressure (mm Hg @ 25°C):	NA	Physical State:	NA
Vapor Density (Air = 1):	NA	Solubility in Water (% by Weight):	NA
Density (grams/cc):	NA	pH:	NA
Percent Volatile by Volume (%):	NA	Appearance and Odor:	geometric solid object

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## 10. STABILITY AND REACTIVITY

STABLE OR UNSTABLE: Stable

INCOMPATIBILITY (MATERIALS TO AVOID): NA

HAZARDOUS DECOMPOSITION PRODUCTS: None under normal use

REACTIVITY: None normally-lithium from severely damaged batteries could react with water or moisture.

HAZARDOUS POLYMERIZATION: Will Not Occu

CONDITIONS TO AVOID: Avoid electrical shorting-DO NOT recharge.

## 11. TOXICOLOGICAL INFORMATION

INGREDIENT NAME	CAS #	%	TWA/TLV
Stainless Steel	--	40-50	--
Manganese Dioxide	1313-13-9	35-40	5.0 (Mn Ceiling)
1,3 Dioxolane	646-06-0	5-9	None Established
Lithium Hexafluoroarsenate (LiAsF <sub>6</sub> )	29935-35-1	1-4	No data available
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## 12. ECOLOGICAL INFORMATION

Consumers should dispose of discharged batteries through waste disposal services or legitimate collection outlets. Those collecting batteries should follow state and federal regulations.

Partially discharged damaged batteries can overheat and cause fires in the presence of other combustible materials.

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## 13. DISPOSAL CONSIDERATIONS

Comply with all Federal, state and local regulations. <http://www.nema.org/Policy/Environmental-Stewardship/Documents/Companies%20Claiming%20to%20Recycle.MARCH2005.pdf>

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## 14. TRANSPORTATION INFORMATION

TRANSPORTATION-SHIPPING: These are lithium batteries, also known as primary or non-rechargeable lithium. These Lithium 9V batteries are regulated as Class 9, see UN3090. Our Lithium 9V meet the general regulatory requirements for shipping Lithium batteries and, when in our original packaging, meet the requirements listed in the Special Instructions or Packing Instructions noted below. USDOT – See 49 CFR 173.185 and Special Provision 188. Also note: these batteries are forbidden on passenger aircraft to/from or within the US and must be labeled accordingly even for ground or ocean transport.

IMO/Ocean – See Special Provisions 188 and 230.

ICAO/IATA – Effective January 1, 2013 these Rayovac Lithium 9V cells can be shipped by air in accordance with International Air Transport Association (IATA) 54th edition, Section 1B, since these batteries have more than 0.3 g but less than 1 g of Lithium per battery. See Packing Instructions: PI 968 (Batteries), PI 969 (Batteries, packed with equipment) and PI 970 (Batteries, contained in equipment) as applicable.

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## 15. REGULATORY INFORMATION

SARA 313-Notification is not required because these products are article(s) that do not release a covered toxic chemical under the normal conditions of processing or use.

## 16. SDS INFORMATION

Environmental Health & Safety Information: 1-800-237-7000

EDITION DATE: 02-14-2013

APPROVED BY: Kevin J. Domack

NOTICE: The information and recommendations set forth are made in good faith and are believed to be accurate at the date of preparation. Rayovac Corporation makes no warranty expressed or implied.