



SAFETY DATA SHEET

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1. IDENTIFICATION

PRODUCT NAME: Lithium Ion Batteries

SIZES: All Rechargeable Sizes

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 #	%	TLV/TWA
Lithium Cobalt Nickel Dioxide	12031-55-1 12031-65-1	<25	None Established
Steel	--	15-30	None established
Lithiated Manganese Dioxide	12057-17-9	<25	5.0 mg/m3 (Mn)
Graphite	7782-42-5	3-5	15 mppcf
Copper	7440-50-8	5-15	0.1 mg/m3 (Fume)
Nickel	7440-02-0	2-5	1.0 mg/m3 (elemental)
Aluminum	7429-90-5	2-8	15 mg/m3 (Dust)
Lithium Hexafluorophosphate	21324-40-3	1-5	None established
Ethylene Carbonate	96-49-1	<15	None Established
Methyl Ethyl Carbonate	623-53-0	<15	None Established
Dimethyl Carbonate	616-38-6	<15	None Established
Diethyl Carbonate	105-58-8	<15	None Established
Methyl Acetate	79-20-9	<15	200 ppm
Plastic-ceramic	---	<20	None Established

*Source: OSHA 29 CFR 1910.1000 Table Z-1, 2 or 3 11-01-12

4. FIRST AID INFORMATION

THRESHOLD LIMIT VALUE (TLV) AND SOURCE: NA

EFFECTS OF OVEREXPOSURE: None in normal use

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 when eyes may have been exposed to contents.

5. FIRE FIGHTING MEASURES

FLASH POINT: NA

LOWER (LEL): NA

FLAMMABLE LIMITS IN AIR (%): NA

UPPER (UEL): NA

EXTINGUISHING MEDIA: Use foam, dry powder, Lithex (or water*) as appropriate.

AUTO-IGNITION: NA

SPECIAL FIRE FIGHTING PROCEDURES: As with any fire, wear self-contained breathing apparatus to avoid inhalation of hazardous decomposition products.

SPECIAL FIRE OR EXPLOSION HAZARDS: As a typical sealed battery they may rupture when exposed to excessive heat. Ruptured batteries may release flammable materials..

6. ACCIDENTAL RELEASE MEASURES

PROCEDURES TO CONTAIN AND CLEAN UP LEAKS OR SPILLS: In the event of a battery rupture, prevent skin contact and collect all released material in a plastic lined metal container.

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

WASTE DISPOSAL METHOD: Always comply with Federal, state or local requirements. Lithium Ion batteries are recyclable.

<http://www.nema.org/Policy/Environmental-Stewardship/Documents/Companies%20Claiming%20to%20Recycle.MARCH2005.pdf>

7. HANDLING AND STORAGE

Store in a dry place. Storing unpackaged cells together with other combustible materials could result in cell shorting and fire. Do not recharge. Do not puncture or abuse.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

<u>RESPIRATORY PROTECTION (SPECIFY TYPE):</u>	NA
<u>VENTILATION:</u>	
Local Exhaust:	NA
Mechanical (General):	NA
Special:	NA
Other:	NA
<u>PROTECTIVE GLOVES:</u>	NA
<u>EYE PROTECTION:</u>	NA
<u>OTHER PROTECTIVE CLOTHING:</u>	NA

9. PHYSICAL AND CHEMICAL PROPERTIES

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

10. STABILITY AND REACTIVITY

<u>STABLE OR UNSTABLE:</u>	Stable
<u>INCOMPATIBILITY (MATERIALS TO AVOID):</u>	NA
<u>HAZARDOUS DECOMPOSITION PRODUCTS:</u>	NA
<u>DECOMPOSITION TEMP.(0°F):</u>	NA
<u>HAZARDOUS POLYMERIZATION:</u>	Will Not Occur
<u>CONDITIONS TO AVOID:</u>	Avoid electrical shorting or rupturing the battery

11. TOXICOLOGICAL INFORMATION

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12. ECOLOGICAL INFORMATION

Consumers should recycle these batteries whenever recycling services are available. 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.

13. DISPOSAL CONSIDERATIONS

Always comply with Federal, state or local requirements. Hazardous waste generators should check with the USEPA or their state authorized agency for guidance.

<http://www.nema.org/Policy/Environmental-Stewardship/Documents/Companies%20Claiming%20to%20Recycle.MARCH2005.pdf>

14. TRANSPORTATION INFORMATION

TRANSPORTATION-SHIPPING: These are lithium Ion batteries, also known as secondary or rechargeable lithium. These Li Ion, unless exempted, are regulated as Class 9, see UN3480. Our Li Ion meet the general regulatory requirements for shipping Li Ion batteries and, when in our original packaging, meet the requirements listed in the Special Instructions or Packing Instructions noted below and may be classified as non-dangerous goods for transportation.

USDOT – See 49 CFR 173.185 and Special Provision 188.

IMO/Ocean – See Special Provisions 188 and 230.

ICAO/IATA – Effective January 1, 2013 these Rayovac Li Ion batteries can be shipped by air in accordance with International Air Transport Association (IATA) 54th edition. Since these Li Ion batteries are under 20WH they can ship as Section II or 1B pending count or gross weight limitations per package. See Packing Instructions: PI 965 (Batteries), PI 966 (Batteries, packed with equipment) and PI 967 (Batteries, contained in equipment) as applicable.

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 storage, use, or handling.

16. SDS INFORMATION

Environmental Health & Safety Information: 800-237-7000

EDITION DATE: 2-14-2013

APPROVED BY: Kevin 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.