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RAYOVAC CORPORATION

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RAYOVAC

MATERIAL SAFETY DATA SHEET

1. We would like to inform our customers that these batteries are exempt articles and are not subject to the 29CFR 1910.1200 OSHA requirement, and the sheets are supplied as a service to you.
2. Independent certified laboratory analysis through TCLP testing have indicated these Rayovac battery types to have no hazardous waste characteristics, and can be landfilled if all other Federal, State and local regulations (per 40 CFR, Part 261.24) are complied with.

**IDENTIFICATION**

**PRODUCT NAME:** Zinc-Chloride Battery (an article of commerce) - No Mercury, No Cadmium Formula (formerly Zinc-Carbon Battery)

**SIZES:** All sizes - Including Round Cells, 9-Volt and Lantern (Multi-Cell) Batteries

**EMERGENCY TELEPHONE NUMBER:** (608) 275-4856 or (608) 275-4783

**DATE:** 01/01/93

**APPROVED BY:** Marshal Beason Jr

**HAZARDOUS INGREDIENTS**

INGREDIENT NAME	%	TLV AND SOURCE (UNITS)
1. Manganese Dioxide	28 - 32	5.0 mg/M <sup>3</sup>
2. Zinc	16 - 20	124.0 mg/M <sup>3</sup>
3. Carbon	7 - 13	3.5 mg/M <sup>3</sup>
4. Zinc Chloride	6 - 10	1.0 mg/M <sup>3</sup> (fumes)
5. Lead	< 0.2	0.15 mg/M <sup>3</sup>
6. Cadmium	< 0.0005	0.05 mg/M <sup>3</sup>
7. Mercury	< 0.0001 (background trace)	0.05 mg/M <sup>3</sup>

\* ACGIH Threshold Limit Values for Chemical Substances, 1989-1990

\*\* Irving Sax, 1989

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**PHYSICAL DATA**

BOILING POINT @ 760 MM HG (C°):	NA
VAPOR PRESSURE (MM HG AT 25°C)	NA
VAPOR DENSITY (AIR = 1):	NA
DENSITY (GRAMS/CC):	NA
PERCENT VOLATILE BY VOLUME (%):	NA
EVAPORATION RATE (BUTYL ACETATE = 1):	NA
PHYSICAL STATE	NA
SOLUBILITY IN WATER (% BY WEIGHT):	NA
pH:	NA
APPEARANCE AND ODOR:	NA

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**FIRE AND EXPLOSION HAZARD DATA****FLASH POINT (METHOD USED):** NA**FLAMMABLE LIMITS IN AIR (%):** NA**LOWER (LEL):** NA**UPPER (UEL):** NA**EXTINGUISHING MEDIA:**

In bulk storage areas, use foam or dry powder. Water may cause electrical shorts.

**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 AND EXPLOSION HAZARDS:**

Like any sealed container, battery cells may rupture when exposed to excessive heat; this could result in the release of corrosive materials.

**HEALTH HAZARD DATA****THRESHOLD LIMIT VALUE (TLV) AND SOURCE:** NA**EFFECTS OF OVEREXPOSURE:** None, unless battery ruptures (see below).**EMERGENCY FIRST AID PROCEDURES:****Skin and Eyes:**

1. In the event that battery ruptures, flush with copious quantities of water. Get immediate medical attention for eyes. Wash skin with soap and water.

**REACTIVITY DATA****STABLE OR UNSTABLE:**

Stable

**INCOMPATIBILITY (MATERIALS TO AVOID):**

NA

**HAZARDOUS DECOMPOSITION PRODUCTS:**

Oxides or fumes of Mn, Zn, Pb and Sn

**DECOMPOSITION TEMPERATURE (0°F):**

NA

**HAZARDOUS POLYMERIZATION:**

May occur \_\_\_\_\_ May not occur \_\_\_\_\_

**CONDITIONS TO AVOID:**

Avoid electrical shorting.

**SPILL OR LEAK PROCEDURES****PROCEDURES TO CONTAIN AND CLEAN UP LEAKS OR SPILLS:**

In the event of battery rupture, collect all released material in a plastic bag for waste disposal.

**REPORTING PROCEDURE:**

Report all spills in accordance with State and Local regulations. Individual cells do not contain reportable quantities of any substance on SARA or CERCLA lists. Exempt unless over 1,000,000 pounds of batteries are known to have been somehow opened to the environment.

**WASTE DISPOSAL METHOD:**

When shredded per Toxicity Characteristic Leachate Procedure parameters and tested per SW 846, 3rd Edition, Test Methods for Evaluating Solid Waste, independent certified laboratory analyses have indicated these Rayovac battery types to have no hazardous waste characteristics (per 40 CFR, Part 261.24) and can be landfilled if all other Federal, state and Local regulations are complied with.

**8. PROTECTION INFORMATION****RESPIRATORY PROTECTION (SPECIFY TYPE):**

As in any fire situation, use self-contained breathing apparatus (SCBA).

<b><u>VENTILATION:</u></b>	Local Exhaust:	NA
	Mechanical (General):	NA
	Special:	NA
	Other:	NA

**PROTECTIVE GLOVES:** NA

**EYE PROTECTION:** NA

**OTHER PROTECTIVE CLOTHING:** NA

**9. SPECIAL PRECAUTIONS****HANDLING AND STORAGE**

Store in a dry place. Storing unpackaged cells together could result in cell shorting and heat build-up.

**TRANSPORTATION SHIPPING:**

Do not pack, store, or ship used batteries in tightly sealed containers. The slow evolution of hydrogen gas from used batteries may produce container over-pressure or explosive conditions.

**10. SAFETY DATA SHEET (SDS)**

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.

NOTE: NA = Not Available (or Not Applicable)