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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 29 CFR 1910.1200 OSHA requirement, or to the Canadian WHMIS requirements and the sheets are supplied as a service to you. For other MSDSs and related information, contact: http://www.rayovac.com {click on "OEM" twice}
2. THESE BATTERIES ARE SUITABLE FOR DISPOSAL IN ORDINARY LANDFILLS (SEE SECTION 7).

1. IDENTIFICATION

PRODUCT NAME: ALKALINE BATTERIES (an article of commerce) - No Mercury Formula

SIZES: All Sizes

EMERGENCY TELEPHONE NUMBER: (608) 275-4859 or 1-800-255-3924

EDITION DATE: 01/01/93

REVISION/REVIEW DATE: 04/07/98 APPROVED BY: Timothy J. Anderson

2. INGREDIENTS

INGREDIENT NAME	CAS #	%	*TLV & SOURCE (UNITS)
Manganese Dioxide	1313-13-9	32 - 38	0.2 mg/M^3
Steel (Iron)	7439-89-6	19 - 23	No TLV established
Zinc	7440-66-6	11 - 16	10.0 mg/M^3 as Zinc Oxide
Water	7732-18-5	9 - 13	
Potassium Hydroxide	1310-58-3	5 - 9	Ceiling Limit 2.00 mg/M^3
Carbon	7440-44-0	3 - 5	3.50 mg/M^3
Barium Sulfate	7727-43-7	<5	10.0 mg/M^3

ACGIH Threshold Limit Values for Chemical Substances, 1996.

3. PHYSICAL DATA

	BOILING POINT @ 760 MM HG (°C):	NA
	VAPOR PRESSURE (MM HG @ 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:	Encased cylindrical or rectangular shape.

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4. FIRE & EXPLOSION HAZARD DATA

FLASH POINT: 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 product.

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

5. 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:
In the event that battery ruptures, flush with copious quantities of water. Get immediate medical attention for eyes. Wash skin with soap and water.

Swallowing:
Ingestion of a battery can be harmful. Do not induce vomiting (nor give food or drink). Seek medical attention immediately. Call The National Battery Ingestion Hotline (202-625-3333) - COLLECT, day or night - for advice and follow-up.

6. REACTIVITY DATA

STABLE OR UNSTABLE: Stable

INCOMPATIBILITY (MATERIALS TO AVOID): NA

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides or fumes of Manganese, Zinc, Potassium and Barium

DECOMPOSITION TEMPERATURE (0°F): NA

HAZARDOUS POLYMERIZATION: *May Occur:* ____ *Will Not Occur:* X

CONDITIONS TO AVOID: Avoid electrical shorting.

7. SPILL OR LEAK PROCEDURES

PROCEDURES TO CONTAIN AND CLEAN UP LEAKS OR SPILLS: Batteries are a dry solid and can be handled easily with shovels or similar equipment. When accumulating large quantities of undischarged batteries for disposal, pack in a non-conductive, insulating material. In the event of battery rupture, collect all released material in a plastic bag for waste disposal. Make sure batteries are cool before putting into a plastic bag. (NOTE: Batteries may become heated from improper storage or improper placement in a charger.)

REPORTING PROCEDURE: Report all spills in accordance with State and Local regulations.

WASTE DISPOSAL METHOD: When shredded per Toxicity Characteristic Leachate Procedure (TCLP) 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. TCLP data is available upon request. Call 608(275-4859).

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8. PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE): As in any fire situation, use self-contained breathing apparatus (SCBA).

VENTILATION:	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. DO NOT RECHARGE.

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. These battery types are not considered to be a "hazardous material" per U.S. DOT (Dept. of Transportation Regulations) or a "dangerous goods" per IATA (International Air Transport Association Regulations).

10. 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.

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.

NOTE: NA = Not Applicable