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PRODUCT SAFETY DATA SHEET

PRODUCT NAME: Eveready / Energizer Battery Type No.: Volts:

TRADE NAMES: ENERGIZER, ENERGIZER e2, INDUSTRIAL ZMA, HERCULES,

EVEREADY, WONDER

Approximate Weight:

CHEMICAL SYSTEM: Alkaline Manganese Dioxide-Zinc Designed for Recharge: No

SECTION 1 - MANUFACTURER INFORMATION

Energizer Battery Manufacturing, Inc. 25225 Detroit Rd. Westlake, OH 44145

Telephone Number for Information: 800-383-7323 (USA / CANADA)

Date Prepared: January 2015

SECTION 2 – HAZARDS IDENTIFICATION

Under normal conditions of use, the battery is hermetically sealed.

Ingestion: Swallowing a battery can be harmful. Contents of an open battery can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract.

Inhalation: Contents of an open battery can cause respiratory irritation.

Skin Contact: Contents of an open battery can cause skin irritation and/or chemical burns. **Eye Contact:** Contents of an open battery can cause severe irritation and chemical burns.

SECTION 3 - INGREDIENTS

IMPORTANT NOTE: The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful.

MATERIAL OR INGREDIENT	PEL (OSHA)	TLV (ACGIH)	%/wt.
Graphite (CAS# 7782-42-5)	15 mg/m ³ TWA (total dust) 5 mg/m ³ TWA (respirable fraction)	2 mg/m ³ TWA (respirable fraction)	2-6
Manganese Dioxide (CAS# 1313-13-9)	5 mg/m³ Ceiling (as Mn)	0.2 mg/m ³ TWA (as Mn)	30-45
Potassium Hydroxide (CAS# 1310-58-3)	None established	2 mg/m³ Ceiling	4-8
Zinc (CAS# 7440-66-6)	15 mg/m ³ TWA PNOR* (total dust) 5 mg/m ³ TWA PNOR* (respirable fraction)	10 mg/m³ TWA PNOC** (inhalable particulate) 3 mg/m³ TWA PNOC** (respirable particulate)	12-25
Non-Hazardous Components Steel (iron CAS# 7439-89-6)	None established	None established	18-22
Water, Paper, Plastic and Other	None established	None established	Balance

^{*} PNOR: Particulates not otherwise regulated

^{**}PNOC: Particulates not otherwise classified



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SECTION 4 – FIRST AID MEASURES

Ingestion: Do not induce vomiting or give food or drink. Seek medical attention immediately. CALL NATIONAL BATTERY INGESTION HOTLINE for advice and follow-up (202-625-3333) collect day or night.

Inhalation: Provide fresh air and seek medical attention.

Skin Contact: Remove contaminated clothing and wash skin with soap and water. If a chemical burn occurs or if irritation persists, seek medical attention.

Eye Contact: Immediately flush eyes thoroughly with water for at least 15 minutes, lifting upper and lower lids, until no evidence of the chemical remains. Seek medical attention.

SECTION 5 - FIRE FIGHTING MEASURES

In case of fire, it is permissible to use any class of extinguishing medium on these batteries or their packing material. Cool exterior of batteries if exposed to fire to prevent rupture.

Fire fighters should wear self-contained breathing apparatus.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

To cleanup leaking batteries:

Ventilation Requirements: Room ventilation may be required in areas where there are open or leaking batteries.

Eye Protection: Wear safety glasses with side shields if handling an open or leaking battery.

Gloves: Use neoprene or natural rubber gloves if handling an open or leaking battery.

Battery materials should be collected in a leak-proof container.

SECTION 7 - HANDLING AND STORAGE

Storage: Store in a cool, well ventilated area. Elevated temperatures can result in shortened battery life.

Mechanical Containment: If potting or sealing the battery in an airtight or watertight container is required, consult your Energizer Battery Manufacturing, Inc. representative for precautionary suggestions. Batteries normally evolve hydrogen which, when combined with oxygen from the air, can produce a combustible or explosive mixture unless vented. If such a mixture is present, short circuits, high temperature, or static sparks can cause an ignition.

Do not obstruct safety release vents on batteries. Encapsulation (potting) of batteries will not allow cell venting and can cause high pressure rupture.

Handling: Accidental short circuit for a few seconds will not seriously affect the battery. Prolonged short circuit will cause the battery to lose energy, and can cause the safety release vent to open. Sources of short circuits include jumbled batteries in bulk containers, metal jewelry, metal covered tables or metal belts used for assembly of batteries into devices.

If soldering or welding to the battery is required, consult your Energizer Battery Manufacturing, Inc. representative for proper precautions to prevent seal damage or short circuit.

Charging: This battery is manufactured in a charged state. It is not designed for recharging. Recharging can cause battery leakage or, in some cases, high pressure rupture. Inadvertent charging can occur if a battery is installed backwards.

Labeling: If the Eveready / Energizer Battery label or package warnings are not visible, it is important to provide a package and/or device label stating:

WARNING: do not install backwards, charge, put in fire, or mix with other battery types. May explode or leak causing injury. **Replace all batteries at the same time.**

Where accidental ingestion of small batteries is possible, the label should include:

Keep away from small children. If swallowed, promptly see doctor; have doctor phone (202) 625-3333 collect.



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SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation Requirements: Not necessary under normal conditions.

Respiratory Protection: Not necessary under normal conditions.

Eye Protection: Not necessary under normal conditions.

Gloves: Not necessary under normal conditions.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point @ 760 mm Hg (°C)	Not applicable for an Article
Vapor Pressure (mm Hg @ 25°C)	Not applicable for an Article
Vapor Density (Air = 1)	Not applicable for an Article
Density (g/cm³)	2.0 – 3.0
Percent Volatile by Volume (%)	Not applicable for an Article
Evaporation Rate (Butyl Acetate = 1)	Not applicable for an Article
Physical State	Solid
Solubility in Water (% by weight)	Not applicable for an Article
pH	Not applicable for an Article
Appearance and Odor	Solid object / no odor

SECTION 10 – STABILITY AND REACTIVITY

Alkaline batteries do not meet any of the criteria established in 40 CFR 261.2 for reactivity.

SECTION 11 - TOXICOLOGICAL INFORMATION

Alkaline batteries are not hazardous waste. Under normal conditions of use, alkaline batteries are non-toxic.

SECTION 12 – ECOLOGICAL INFORMATION

Issues such as ecotoxicity, persistence and bioaccumulation are not applicable for articles.

SECTION 13 – DISPOSAL CONSIDERATIONS

Dispose of in accordance with all applicable federal, state and local regulations. Appropriate disposal technologies include incineration and land filling.



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SECTION 14 – TRANSPORT INFORMATION

In general, all batteries in all forms of transportation (ground, air, or ocean) must be packaged in a safe and responsible manner. Regulatory concerns from all agencies for safe packaging require that batteries be packaged in a manner that prevents short circuits and be contained in "strong outer packaging" that prevents spillage of contents. All original packaging for Energizer alkaline batteries has been designed to be compliant with these regulatory concerns.

Alkaline batteries (sometimes referred to as "Dry cell" batteries) are not listed as dangerous goods under the ADR European Agreement Concerning the International Carriage of Dangerous Goods by Road, the IMDG International Maritime Dangerous Goods Code, UN Dangerous Good Regulations, IATA Dangerous Goods Regulations, ICAO Technical Instructions and the U.S. hazardous materials regulations (49 CFR). These batteries are not subject to the dangerous goods regulations provided they meet the requirements contained in the following special provisions.

Regulatory Body	Special Provisions
ADR	Not regulated
IMDG	Not regulated
UN	Not regulated
US DOT	49 CFR 172.102 Provision 130
IATA	A123
ICAO	Not regulated

All Energizer alkaline batteries are packed in such a way to prevent short circuits or the generation dangerous quantities of heat and meet the special provisions listed above. In addition, the IATA Dangerous Goods Regulations and ICAO Technical Instructions require the words "not restricted" and the Special Provision number A123 be provided on the air waybill, when an air waybill is issued.

SECTION 15 - REGULATORY INFORMATION

Batteries marketed by Energizer Battery Manufacturing, Inc. are not classified as dangerous goods by the US Department of Transportation or the major international regulatory bodies and are therefore not regulated.

SARA/TITLE III - As an article, this battery and its contents are not subject to the requirements of the Emergency Planning and Community Right-To-Know Act.

SECTION 16 - OTHER INFORMATION

None.

Energizer has prepared copyrighted Product Safety Datasheets to provide information on the different Eveready/Energizer battery systems. As defined in OSHA Hazard Communication Standard, Section 1910.1200 (c), Eveready/Energizer batteries are manufactured articles, which do not result in exposure to a hazardous chemical under normal conditions of use. The information and recommendations set forth herein are made in good faith, for information only, and are believed to be accurate as of the date of preparation. However, ENERGIZER BATTERY MANUFACTURING, INC., MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS INFORMATION AND DISCLAIMS ALL LIABILITY FROM REFERENCE ON IT.





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	MA	TERIAL S	AFI	STY DA	ATA	SHEET	Ľ			
NAME:	DURACELL AL	KALINE BATT	TERIE	ES						
CAS NO:	Not applicable				Effectiv	ve Date: 05/	/30/2001	Rev:	5	
A. — IDI	ENTIFICATION									
	Composition* (1% or gre	eater)	<u>%</u>	Formula:		Mixture				
Manganes	se Dioxide (1313-13-9)		35-40	Molecular W	/eight:	NA				
Zinc (744)	`	,	10-15	Synonyms:						
`	Hydroxide (35%) (13	10-58-3)	5-10	MN1300 (D); MN1400 (C); MN1500 (AA) MN24						
	lack (1333-86-4) or Gi	,	1-5			MN908 (Lante				
(778	2-42-5) or synthetic (7	7440-44-0)	0- 1			4 (9V); MN910 3-124, 130, 200				
Zinc Oxid	le (1314-13-2)		0 1		(Flatpac	ck); 7K67 (Flat				
					of these	cells.				
B. — Ph	IYSICAL DATA									
27.4	Boiling Point	27.4		ng Point	•	27.4	Freezin	•		
NA	_ °F <u>NA</u> °	c NA	- °F	NA	_°C	NA	_ °F	<u>NA</u>	_ °C	
Sp	ecific Gravity (H ₂ O=1)	Va	apor De	nsity (air=1)		Vapor Pre	ssure @		°F	
	NA		N	NA .		1	NA	_ mm Hg		
	Evaporation			ion in Air		Aut		emperature		
(Ether =1)	(by volume	' ',			°F °C				
		NA			NA					
		Solubilit	y in Water							
NA		N	NA	<u> </u>		pH	<u>NA</u>			
Appearance	/Color Conner ton h	attery. Content	s dark	in color						
Flash Point	and	accery. Concent	5 dark	111 60101.						
Test Metho										
	Limits in Air volume)	Lower	N	NA %		Llanar	N	4 %		
	•	Lower _	1	NA /0		Upper	N	A /0		
C. — RE	ACTIVITY									
Stabi	lity X Stable	Unstal	ble	Polymer	ization	may	occur	X will n	ot occu	
Conditions to Avoid					Conditions	to Avoid				
Do not heat, crush, disassemble, short circuit or				Not applie	cable					
recharge.										
Comtant.	Incompatible Mat		4.	Hazardous Decomposition Products Thermal degradation may produce hazardous fumes						
Contents incompatible with strong oxidizing agen			ents.		_	• •				
					_	anese; hydr roxide and			-	
				of potassium hydroxide and other toxic by-products.						

Footnotes

NA=Not Available

Please note: Some Duracell alkaline batteries contain the Duracell Power CheckTM battery energy gauge which is a small conductive strip located underneath the PVC battery label that indicates the amount of charge in the battery. It is composed of minute quantities of conductive materials. Due to the small quantity of materials and their solid form, a health or environmental risk is unlikely.

D. — HEALTH HAZARD DATA

Occupational Exposure Limits (PELs, TLVs, etc.)

8-Hour TWAs: Manganese Dioxide (as Mn) - 5 mg/m³ (Ceiling) (OSHA); 0.2 mg/m³ (ACGIH/Duracell)

Potassium Hydroxide - 2 mg/m³ (Ceiling) (ACGIH)

Graphite (all kinds except fibrous)-2 mg/ m³ (ACGIH); (synthetic)-15 mg/m³ (total, OSHA);

5 mg/m³ (respirable, OSHA)

Carbon Black - 3.5 mg/m³ (ACGIH/OSHA)

Zinc Oxide (dust) - 10 mg/m³ (ACGIH), 15 mg/m³ (total, OSHA);

5 mg/m³ (respirable, OSHA)

These levels are not anticipated under normal consumer use conditions.

Warning Signals

Not applicable

Routes/Effects of Exposure

These chemicals and metals are contained in a sealed can. For consumer use, adequate hazard warnings are included on both the package and on the battery. Potential for exposure should not exist unless the battery leaks, is exposed to high temperatures or is mechanically, physically, or electrically abused. Contains concentrated (35%) potassium hydroxide, which is caustic. Anticipated potential leakage of potassium hydroxide is 2 to 20 ml, depending on battery size. A similar amount of zinc/zinc oxide may also leak.

1. Inhalation Respiratory (and eye) irritation may occur if fumes are released due to heat or an abundance of

leaking batteries.

2. Ingestion Not anticipated due to size of batteries; choking may occur with the smaller AAA and AAAA

batteries. Irritation, including caustic burns/injury, may occur following exposure to a leaking

battery.

3. Skin a. Contact

Irritation, including caustic burns/injury, may occur following exposure to a leaking battery.

b. <u>Absorption</u>Not anticipated

4. Eye Contact Irritation, including caustic burns/injury, may occur following exposure to a leaking battery.

5. Other Not applicable

E. — ENVIRONMENTAL IMPACT

1. Applicable Regulations - All ingredients listed in TSCA inventory.

2. DOT Hazard Class - Not applicable3. DOT Shipping Name - Not applicable

Please note: These batteries are not regulated by U. S. DOT or international agencies as hazardous materials or dangerous goods when shipped. Duracell uses

the article name 'Alkaline Batteries - Non-hazardous' on all domestic and

international bills of lading.

Environmental Effects

These batteries pass the U. S. EPA's Toxicity Characteristic Leaching Procedure and therefore, may be disposed of with normal waste.

F. — EXPOSURE CONTROL METHODS	
Engineering Controls	
General ventilation under normal use conditions.	
Eye Protection	
None under normal use conditions. Wear safety glasses when handling leaking batteries.	
Skin Protection	
None under normal use conditions. Use neoprene, rubber or latex gloves when handling lea	aking batteries
The under normal use conditions. One neoptene, ruever of laten groves when handling re-	annig outterres.
Respiratory Protection	
None under normal use conditions.	
Other	
Keep batteries away from small children.	
G. — WORK PRACTICES	
Handling and Storage	
Store at room temperature. Avoid mechanical or electrical abuse. DO NOT short or instal	l incorrectly.
Batteries may explode, pyrolize or vent if disassembled, crushed, recharged or exposed to h	-
Install batteries in accordance with equipment instructions. Do not mix battery systems, su	•
zinc carbon, in the same equipment. Replace all batteries in equipment at the same time.	
batteries loose in pocket or bag. Do not remove battery tester or battery label.	•
Normal Clean Up	
Not applicable	
Wasta Dispacel Methods	_
Waste Disposal Methods Individual consumers may dispose of spent (used) batteries with household trash. Duracell	does not
recommend that spent batteries be accumulated (quantities of five gallons or more should be	
secure landfill), in accordance with appropriate federal, state and local regulations. Do not	-
secure randimi, in accordance with appropriate rederal, state and local regulations. Do not	memerate, since

batteries may explode at excessive temperatures.

GMEL# 2002

H. — EMERGENCY PROCEDURES

Steps to be taken if material is released to the environment or spilled in the work area

Notify safety personnel of large spills. Caustic potassium hydroxide may be released from leaking or ruptured batteries. Avoid eye or skin contact and inhalation of vapors. Increase ventilation. Clean-up personnel should wear appropriate protective gear.

Fire and Explosion Hazard

Batteries may burst and release hazardous decomposition products when exposed to a fire situation. See Sec. C.

Extinguishing Media
As appropriate for surrounding

area.

Firefighting Procedures

Use self-contained breathing apparatus and full protective gear.

I. — FIRST AID AND MEDICAL EMERGENCY PROCEDURES

Eyes

Not anticipated. If battery is leaking and material contacts eyes, flush with copious amounts of clear, tepid water for 30 minutes. Contact physician at once.

Skin

Not anticipated. If battery is leaking, irrigate exposed skin with copious amounts of clear, tepid water for at least 15 minutes. If irritation, injury or pain persists, consult a physician.

Inhalation

Not anticipated. If battery is leaking, contents may be irritating to respiratory passages. Remove to fresh air. Contact physician if irritation persists.

Ingestion

Not anticipated. Rinse the mouth and surrounding area with clear, tepid water for at least 15 minutes. Consult a physician immediately for treatment and to rule out involvement of the esophagus and other tissues.

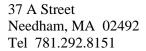
Notes to Physician

- 1) The primary acutely toxic ingredient is concentrated (35%) potassium hydroxide.
- 2) Anticipated potential leakage of potassium hydroxide is 2-20 ml, depending on battery size.
- 3) This MSDS does not include or address the small button cell batteries, which can be ingested.

Replaces #1898, #1360, consolidation of information for similar products.

The information contained in the Material Safety Data Sheet is based on data considered to be accurate, however, no warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof.

MSDS-5 (2/00) GMEL# 2002





risk is unlikely.

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MATERIAL SAFETY DATA SHEET

	WIATE	MAL S				311171	L I		
NAME:	DURACELL ULTRA	ALKALIN	NE BA	TTERIES					
CAS NO:	Not applicable				Effectiv	e Date:	3/4/2001	Rev:	3
A. — IDE	NTIFICATION								
			0.4	Formula:	1	Mixture			
Manganese Γ	Dioxide (1313-13-9)		<u>%</u> 35-40	Molecular W		NA			
Zinc (7440-6			10-15	Synonyms:			ganese Dio	vide	
`	ydroxide (35%) (1310-58-3)		5-10	Synonyms: Alkaline Manganese Dioxide Cell: MX1300 (D); MX1400 (C); MX1604 (9V);					
•	ural (7782-42-5) or synthetic (7440-44-0)	1-5				MX2400 (AA		(- ,),
Zinc Oxide (1	1314-13-2)		<1		MX250	0 (AAAA	A)		
See 'Footnote	es' below								
	YSICAL DATA								
J	Boiling Point		Meltin	g Point			Freezin	a Point	
NA	°F NA °C	NA	°F	NA	°C	NA		NA	°C
Spe	cific Gravity (H ₂ O=1)	Va	por Dei	nsity (air=1)		Vapor	Pressure @		- °F
	NA		N	ΙA			NA	mm Hg	
	Evaporation		Saturat	ion in Air			Autoignition 7	Emperature	
(Ether =1)	(by volume	e@	°l	F)		°F		°C
NA		N	JA		NA				
	% Volatiles	S	Solubility	y in Water					
NA			NA			pH <u>NA</u>			
Appearance/0	Color Copper top batte	ry. Contents	s dark	in color					
Flash Point a Test Method	nd National Scalab	iy. Coment	, dans	III C 0101.					
Flammable L									
(% by vo	olume)	Lower _	1	<u>VA</u> %		Upp	per N	<u>A</u> %	
C. — RE	ACTIVITY								
Stabilit	ty X stable	Unstab	ole	Polymeri	zation	n	nay occur	X will no	t occur
	Conditions to Avoid					Conditio	ons to Avoid		
Do not hear	t, crush, disassemble, sho	rt circuit or		Not applic	able				
recharge.									
	Incompatible Materials	•					omposition Pro		
Contents in	ncompatible with strong o	xidizing age	nts.		_	-	produce ha		
			of zinc and manganese; hydrogen gas; caustic vapor of potassium hydroxide and other toxic by-produc					-	
				_	-		na omer tox	ac by-prod	ucts.
* IF MULT	IPLE INGREDIENTS, INC	CLUDE CAS	NUN	IBERS FOR	REACH		NA=NO	ΓAVAILAE	BLE
<u>Footnotes</u>			-						

Please note: Some Duracell alkaline batteries contain the Duracell Power CheckTM battery energy gauge which is a small conductive strip located underneath the PVC battery label that indicates the amount of charge in the battery. It is composed of minute quantities of conductive materials. Due to the small quantity of materials and their solid form, a health or environmental

GMEL#

1881

D. — HEALTH HAZARD DATA

Occupational Exposure Limits PEL's, TLV's, etc.)

8-Hour TWAs: Manganese Dioxide (as Mn) - 5 mg/m³ (Ceiling) (OSHA); 0.2 mg/m³ (ACGIH/Duracell)

Potassium Hydroxide - 2 mg/m³ (Ceiling) (ACGIH)

Graphite (all kinds except fibrous)-2 mg/ m³ (ACGIH); (synthetic)-15 mg/m³ (total, OSHA);

5 mg/m³ (respirable, OSHA)

Zinc Oxide (dust) -10 mg/m³ (ACGIH),15 mg/m³ (total, OSHA); 5 mg/m³ (respirable, OSHA)

These levels are not anticipated under normal consumer use conditions.

Warning Signals

Not applicable

Routes/Effects of Exposure

These chemicals and metals are contained in a sealed can. For consumer use, adequate hazard warnings are included on both the package and on the battery. Potential for exposure should not exist unless the battery leaks, is exposed to high temperatures or is mechanically, physically, or electrically abused. Contains concentrated (35%) potassium hydroxide, which is caustic. Anticipated potential leakage of potassium hydroxide is 1 to 3 ml, depending on battery size. A similar amount of zinc/zinc oxide may also leak.

1. Inhalation Respiratory (and eye) irritation may occur if fumes are released due to heat or an abundance of

leaking batteries.

2. Ingestion Not anticipated due to size of batteries; choking may occur with the smaller AAA battery.

Irritation, including caustic burns/injury, may occur following exposure to a leaking battery.

3. Skin a. Contact

Irritation, including caustic burns/injury, may occur following exposure to a leaking battery.

b. Absorption

Not anticipated.

4. Eye Contact Irritation, including caustic burns/injury, may occur following exposure to a leaking battery.

5. Other Not applicable

E. — ENVIRONMENTAL IMPACT

1. Applicable Regulations All ingredients listed in TSCA inventory.

2. DOT Hazard Class - Not applicable

3. DOT Shipping Name - Not applicable

Please note: These batteries are not regulated by U. S. DOT or international agencies as hazardous materials or dangerous goods when shipped. Duracell uses the article name 'Alkaline Batteries - Non-hazardous' on all domestic and international bills of

lading.

Environmental Effects

These batteries pass the U. S. EPA's Toxicity Characteristic Leaching Procedure and therefore, may be disposed of with normal waste.

GMEL#

F. — EXPOSURE CONTROL METHODS
Engineering Controls
General ventilation under normal use conditions.
Eye Protection
None under normal use conditions. Wear safety glasses when handling leaking batteries.
Skin Protection
None under normal use conditions. Use neoprene, rubber or latex gloves when handling leaking batteries.
Respiratory Protection
None under normal use conditions.
Other
Keep batteries away from small children.
recep batteries away from smair emitten.
C WORK BRACTICES
G. — WORK PRACTICES
Handling and Storage Store at room temperature. Avoid mechanical or electrical abuse. DO NOT short or install incorrectly.
Batteries may explode, pyrolize or vent if disassembled, crushed, recharged or exposed to high temperatures.
Install batteries in accordance with equipment instructions. Do not mix battery systems, such as alkaline and
zinc carbon, in the same equipment. Replace all batteries in equipment at the same time. Do not carry
batteries loose in pocket or bag. Do not remove battery tester or battery label.
butteries 10050 in pocket of oug. Do not remove outlery tester of outlery labor.
Normal Clean Up Not applicable
Not applicable
Wasta Disposal Mathods
Waste Disposal Methods Individual consumers may dispose of spent (used) batteries with household trash. Duracell does not
Individual consumers may dispose of spent (used) batteries with household trash. Duracell does not
Individual consumers may dispose of spent (used) batteries with household trash. Duracell does not recommend that spent batteries be accumulated (quantities of five gallons or more should be disposed of in a
Individual consumers may dispose of spent (used) batteries with household trash. Duracell does not

GMEL# 1881

H. — EMERGENCY PROCEDURES

Steps to be taken if material is released to the environment or spilled in the work area

Notify safety personnel of large spills. Caustic potassium hydroxide may be released from leaking or ruptured batteries. Avoid eye or skin contact and inhalation of vapors. Increase ventilation. Clean-up personnel should wear appropriate protective gear.

Fire and Explosion Hazard

Batteries may burst and release hazardous decomposition products when exposed to a fire situation. See Sec. C.

Extinguishing Media
As appropriate for surrounding area.

Firefighting Procedures

Use self-contained breathing apparatus and full protective gear.

I. — FIRST AID AND MEDICAL EMERGENCY PROCEDURES

Eyes

Not anticipated. If battery is leaking and material contacts eyes, flush with copious amounts of clear, tepid water for 30 minutes. Contact physician at once.

Skin

Not anticipated. If battery is leaking, irrigate exposed skin with copious amounts of clear, tepid water for at least 15 minutes. If irritation, injury or pain persists, consult a physician.

Inhalation

Not anticipated. If battery is leaking, contents may be irritating to respiratory passages. Remove to fresh air. Contact physician if irritation persists.

Ingestion

Not anticipated. Rinse the mouth and surrounding area with clear, tepid water for at least 15 minutes. Consult a physician immediately for treatment and to rule out involvement of the esophagus and other tissues.

Notes to Physician

- 1) The primary acutely toxic ingredient is concentrated (35%) potassium hydroxide.
- 2) Anticipated potential leakage of potassium hydroxide is 1-3 ml, depending on battery size.
- 3) This MSDS does not include or address the small button cell batteries, which can be ingested.

Replaces #1878, change of MSDS date only.

The information contained in the Material Safety Data Sheet is based on data considered to be accurate, however, no warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof.

MSDS-4 (8/95) GMEL# 1881