

**Common Name:** DURACELL PROCELL PROFESSIONAL ALKALINE BATTERIES  
**Manufacturer:** GILLETTE  
**MSDS Revision Date:** 11/6/2003

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GILLETTE ENVIRONMENT HEALTH AND SAFETY  
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NEEDHAM, MA 02492

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MATERIAL SAFETY DATA SHEET

NAME: DURACELL PROCELL PROFESSIONAL ALKALINE BATTERIES

CAS NO: NOT APPLICABLE

EFFECTIVE DATE: 11/06/2003

REV: 3

## A. - IDENTIFICATION

	%
MANGANESE DIOXIDE (1313-13-9)	35-40
ZINC (7440-66-6)	10-25
POTASSIUM HYDROXIDE (35%) (1310-58-3)	5-10
GRAPHITE, NATURAL (7782-42-5) OR SYNTHETIC (7440-44-0)	1-5

FORMULA: MIXTURE

MOLECULAR WEIGHT: NA

SYNONYMS:

PROCELL ALKALINE MANGANESE DIOXIDE BATTERIES:

PC1300 (D); PC1400 (C); PC1500 (AA); PC2400 (AAA); PC903 (LANTERN); PC908 (6V); PC915 (6V); PC918 (6V); PC1604 (9V); PC9100 (N); PC7K67 (J) AND BATTERIES COMPRISED OF THESE CELLS.

## B. - PHYSICAL DATA

BOILING POINT:

NA DEG. F

NA DEG. C

MELTING POINT:

NA DEG. F

NA DEG. C

FREEZING POINT:

NA DEG. F

NA DEG. C

SPECIFIC GRAVITY (H2O=1): NA

VAPOR DENSITY (AIR=1): NA

VAPOR PRESSURE @ DEG. F: NA MMHg

EVAPORATION (ETHER = 1): NA

SATURATION IN AIR (BY VOLUME @ DEG. F): NA

AUTOIGNITION TEMPERATURE DEG. F DEG. C: NA

% VOLATILES: NA

SOLUBILITY IN WATER: NA

pH: NA

APPEARANCE/COLOR: CYLINDRICAL BATTERIES. CONTENTS DARK IN COLOR.

FLASH POINT AND TEST METHOD(S): NA

FLAMMABLE LIMITS IN AIR (% BY VOLUME):

LOWER: NA %

UPPER: NA %

## C. - REACTIVITY

STABILITY:

(X) STABLE

( ) UNSTABLE

CONDITIONS TO AVOID:

DO NOT HEAT, CRUSH, DISASSEMBLE, SHORT CIRCUIT OR RECHARGE.

INCOMPATIBLE MATERIALS: CONTENTS INCOMPATIBLE WITH STRONG OXIDIZING AGENTS.

POLYMERIZATION:

- ( ) MAY OCCUR  
(X) WILL NOT OCCUR

CONDITIONS TO AVOID: NOT APPLICABLE

HAZARDOUS DECOMPOSITION PRODUCTS:

THERMAL DEGRADATION MAY PRODUCE HAZARDOUS FUMES OF ZINC AND MANGANESE;  
HYDROGEN GAS; CAUSTIC VAPORS OF POTASSIUM HYDROXIDE AND OTHER TOXIC  
BY-PRODUCTS.

## D. - HEALTH HAZARD DATA

OCCUPATIONAL EXPOSURE LIMITS PEL'S, TLV'S, ETC.)

8-HOUR TWAS:

MANGANESE DIOXIDE (AS Mn):  
5.0 MG/M3 (CEILING) (OSHA)  
0.2 MG/M3 (ACGIH/GILLETTE)

POTASSIUM HYDROXIDE: 2 MG/M3 (CEILING) (ACGIH)

GRAPHITE (ALL KINDS EXCEPT FIBROUS):  
2 MG/M (ACGIH; (SYNTHETIC)  
15 MG/M (TOTAL, OSHA)  
5 MG/M (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 (APPROX. 35%) POTASSIUM  
HYDROXIDE, WHICH IS CAUSTIC. ANTICIPATED POTENTIAL LEAKAGE VOLUME OF  
POTASSIUM HYDROXIDE IS 2 TO 20 ML, DEPENDING ON SIZE. A SIMILAR AMOUNT OF  
ZINC 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 INTERNAL 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-NITRILE GLOVES WHEN HANDLING LEAKING BATTERIES.

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 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.

NORMAL CLEAN UP: NOT APPLICABLE

### 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 DISPOSED OF IN A SECURE LANDFILL), IN ACCORDANCE WITH APPROPRIATE FEDERAL, STATE AND LOCAL REGULATIONS. DO NOT INCINERATE, SINCE BATTERIES MAY EXPLODE AT EXCESSIVE TEMPERATURES.

## **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 AMOUNT 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 POTASSIUM HYDROXIDE (APPROXIMATELY 35%).

2) ANTICIPATED POTENTIAL LEAKAGE VOLUME OF POTASSIUM HYDROXIDE IS 2-20 ML, DEPENDING ON SIZE.

3) THIS MSDS DOES NOT INCLUDE OR ADDRESS THE SMALL BUTTON OR CELL BATTERIES WHICH CAN BE INGESTED.

ADDITIONAL INFORMATION:

REPLACES 2013.2

THIS MSDS COVERS DISCONTINUED PRODUCT NO. PC926

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.

\* IF MULTIPLE INGREDIENTS, INCLUDE CAS NUMBERS FOR EACH

NA=NOT AVAILABLE

FOOTNOTES: NOT APPLICABLE

MSDS-5 (2/00)

GMEL#: 2000.3