

No EXPIRY

Document #: NiMH NA PSDS
Supersedes: GMEL# 2030.4; 2035.1



Product Safety Data Sheet (PSDS)

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SECTION I - PRODUCT IDENTIFICATION



This PSDS document is provided as service in response to requests for information on battery use, safety and regulatory compliance.

The battery products referenced in this PSDS document are consumer products. Under OSHA regulations, batteries are considered "articles" and not subject to the OSHA Hazard Communication Standard MSDS/SDS requirements for "hazardous chemicals" in the workplace. Additionally, batteries are considered "articles" under the Global Harmonized System and are exempt from GHS labeling and SDS classification criteria.

Representative Product Image/
Packaging

Identity: Nickel Metal Hydride (NiMH) Rechargeable Batteries

Description: Consumer Product

Duracell® Sub-Brands: Staycharged™

Duracell Designation	Size	Nominal Voltage
DC/DX 2400	AAA	1.2V
DC/DX 1500	AA	1.2V
DC/DX 1400	C	1.2V
DC 1300	D	1.2V
DC 1604	9V	9V

Consumer Relations: 1-800-551-2355 (9:00 AM – 5:00 PM EST)

SECTION II - HAZARDS IDENTIFICATION

CAUTION: Keep small batteries (i.e., AAA) away from children. If swallowed, consult a physician at once. **For information on treatment, call (202) 625-3333 collect, day or night.** Never mix NiMH batteries with NiCd or any other battery type. Keep batteries away from fire or explosion may occur. For proper insertion, please observe pole indications (+/-). Never use different battery types or systems at the same time. Do not carry batteries loose in your pocket or purse. Do not remove the battery label.

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SECTION III - COMPOSITION AND INGREDIENTS

The chemicals and metals in this product are contained in a hermetically sealed metal can, designed to withstand temperatures and pressures encountered during normal use. Exposure to the contents will not occur unless the battery leaks, is exposed to high temperatures or is mechanically, physically, or electrically abused. Under OSHA and WHMIS requirements, the following substances are considered hazardous for occupational exposure of direct contact with the substances. The following information is included in an PSDS intended to assess occupational exposure to individual chemical substances. It is not relevant to normal use of a finished consumer battery product.

Substance	CAS Number	Amount	Exposure Limit cited in the published literature*
Hydrogen Absorbing Alloy:		20-40%	
Alloy constituent: Nickel	7440-02-0		Y
Alloy constituent: Cobalt	7440-48-4		Y
Alloy constituent: Manganese	7439-96		Y
Alloy constituent: Aluminum	7429-90-5		Y
Oxide:		15-25%	
Oxide constituent: Nickel	7440-02-0		Y
Oxide constituent: Cobalt	7440-48-4		Y
Oxide constituent: Zinc	7440-66-6		Y
Nickel	7440-02-0	5-15%	Y
Iron	7439-89-6	20-40%	
Carbon Black	1333-86-4	0-1%	Y
Potassium Hydroxide (35%)	1310-58-3	0-15%	
Sodium Hydroxide	1310-73-2		
Lithium Hydroxide	1310-65-2		

*This information is provided for reference only. Exposure limits are not applicable to the use of a finished consumer battery product. TLV and PEL are exposure limits and are used by regulatory agencies to establish permissible exposure limits in workplaces where there is exposure to the individual substances. TLV is threshold limit value and is used by the American Conference of Governmental Industrial Hygienists (ACGIH) to express the maximum airborne concentration of a material to which most workers can be exposed during a normal daily and weekly work schedule without adverse effects. PEL is the permissible exposure limit and is used by the Occupational Health and Safety Administration (OSHA). Values for TLV and PEL are usually equivalent; each is the average concentration of a chemical in the air to which most people can be exposed and show no ill effect. A PEL or TLV value refers only to inhalation toxicity, not to skin or eye contact or to ingestion.

SECTION IV - FIRST AID INFORMATION

Damaged battery may release caustic concentrated potassium and sodium hydroxides.

- Ingestion:** Do not induce vomiting. Seek medical attention immediately. **CALL NATIONAL BATTERY INGESTION HOTLINE at (202)-625-3333 collect, day or night.**
- Eye Contact:** Immediately flush eyes thoroughly with copious amounts of water for at least 15 minutes. Seek medical attention if irritation persists.
- Skin Contact:** Remove contaminated clothing and wash skin with soap and copious amounts of water. If irritation persists, seek medical attention.
- Inhalation:** Move to fresh air. If irritation persists, seek medical attention.

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SECTION V - FIRE FIGHTING INFORMATION

Hazardous Combustion Products: Thermal decomposition may produce hazardous fumes of nickel, cobalt, lithium, zinc, aluminum and manganese; hydrogen gas, caustic vapors of potassium and sodium hydroxide and other toxic by-products.

Extinguishing Media: Use any extinguishing media that is appropriate for the surrounding area.

Protection of Firefighters:

Specific Hazards Arising from the Material: Batteries may burst and release hazardous decomposition products when exposed to a fire situation.

Protective Equipment and Precautions for Firefighters: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing.

SECTION VI - ACCIDENTAL RELEASE MEASURES

Notify safety personnel of large spills. Caustic vapors may be released from leaking or ruptured batteries. Clean-up personnel should wear appropriate clothing to avoid eye and skin contact and inhalation of vapors and fumes. Ventilate area. Carefully collect batteries and place in an appropriate container for disposal.

SECTION VII - HANDLING AND STORAGE

Precautions To Be Taken in Handling: Avoid mechanical or electrical abuse. DO NOT short circuit or install incorrectly. Batteries may rupture or vent if disassembled, crushed, recharged or exposed to high temperatures. Install batteries in accordance with equipment instructions.

Precautions To Be Taken in Storage: Store batteries in a dry place at normal room temperature. Avoid direct sunlight, high temperature and high humidity. Avoid contact with conductive materials, water, seawater, strong oxidizers and strong acids.

SECTION VIII - EXPOSURE CONTROLS / PERSONAL PROTECTION

NOT APPLICABLE - Finished consumer product

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

Appearance (color, physical form, shape): Finished consumer product - cylindrical battery with Duracell® label

Volatile Organic Compound (VOC): Not applicable - Product not regulated for VOC Content at State or Federal level

SECTION X - STABILITY AND REACTIVITY

Finished consumer product - stable under normal conditions of use. Contents are incompatible with strong oxidizing agents. Do not heat, crush, disassemble, short circuit or recharge. Hazardous polymerization will not occur.

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SECTION XI - TOXICOLOGICAL INFORMATION

This battery product is a finished consumer product. It is classified as an "article" and exempt under the federal OSHA Hazard Communication standard. The chemicals in this product are contained in a sealed can and exposure does not occur during normal handling and use. The following information is included in an MSDS intended to assess occupational exposure to individual chemical substances. It is not relevant to normal use of a finished consumer battery product.

Chronic Effects: Chronic exposure to nickel and cobalt may cause respiratory and skin sensitization. Disposal process that result in nickel or cobalt exposure may be hazardous.

Target Organs: If can is damaged, the target organs are the skin, eyes and respiratory system.

Carcinogenicity: Nickel metal is classified by IARC as "Possibly Carcinogenic to Humans" (Group 2B) and by NTP as "Reasonably Anticipated to be a Carcinogen". Soluble nickel compounds are classified by IARC as "Carcinogenic to Humans" (Group 1), by NTP as "Known to be a Human Carcinogen" and by ACGIH as "Not Classifiable as a Human Carcinogen" (A4). Insoluble nickel compounds are classified by IARC as "Carcinogenic to Humans" (Group 1), by NTP as "Known to be a Human Carcinogen" and by ACGIH as "Confirmed Human Carcinogen" (A1). Cobalt and cobalt compounds are classified by IARC as "Possibly Carcinogenic to Humans" (Group 2B). None of the other components of this product are listed as carcinogens by ACGIH, IARC, NTP or OSHA.

SECTION XII - ECOLOGICAL INFORMATION

No eco-toxicity data are available. This product is not expected to present an environmental hazard.

SECTION XIII - DISPOSAL CONSIDERATIONS

Dispose of in compliance with federal, state/provincial and local regulations. Do not incinerate. Nickel metal hydride rechargeable batteries are recyclable through the Rechargeable Battery Recycling Corporation's (RBRC) Charge Up to Recycle! Program. For more information, call 1-800-8-BATTERY (1-800-822-8379) or visit the RBRC web site at www.rbrc.org

SECTION XIV - TRANSPORT INFORMATION

Duracell NiMH batteries are required to be packaged in a manner that prevents the generation of a dangerous amount of heat and prevents short circuits. Product shipped in its original unopened Duracell packaging is compliant with the packaging special provisions. NiMH batteries are not defined as dangerous goods under IATA, ICAO, and DOT. For air and ground transportation these batteries are not subject to dangerous goods regulations. **NiMH batteries are defined as dangerous goods under IMDG code for sea transportation.**

International Maritime Dangerous Goods (IMDG) Code: UN-3496, SP-117 & SP-963

Ground Transport (US DOT): 49 CFR 172.102 Special Provision 130

Air Transport (IATA)/ICAO: Special Provision A123, UN 3028 Provisions 295 - 304

Marine/Water Transport (IMDG): NiMH battery Sea Transportation regulation (UN3496; Class 9) will be effective as of January 1, 2012. **SP 963: Exemptions From Dangerous Goods** 1. Button Cells 2. Batteries Packed with or Contained in Equipment 3. Products Weighing Less than 100 kg in the Container.

For Transportation Emergencies, call:

**CHEMTREC Emergency Response Hotline
1-800-424-9300 (US & Canada)**

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SECTION XV - REGULATORY INFORMATION

United States:

OSHA: The finished NiMH battery product is considered an article and not covered by the OSHA Hazard Communication Standard, 29 CFR 1910.1200

CPSCIA 2008: Batteries are exempt. See CPSC Exemption Letter posted on P&G web site.

EPA Mercury Containing and Rechargeable Battery Management Act of 1996: Compliant

EPA TSCA: All intentionally-added components of this product are listed on the US TSCA Inventory.

EPA SARA 313/302/304/311/312 chemicals: Manganese compounds 1-5%; Nickel 55-70%, Cobalt 5-10%

California: This product has been evaluated and does not require warning labeling under California Proposition 65.

State Right-to-Know and CERCLA: The following ingredients present in the finished product are listed on state right-to-know lists or state worker exposure lists and is provided as reference only:

Ingredient	CAS #	Level	CERCLA RQ	State				
				IL	MA	NJ	PA	RI
Manganese Dioxide	1313-13-9	1-5%	None	Y	Y	N	Y	Y
Nickel	7440-02-0	55-70	100 lb	Y	Y	Y	Y	Y
Cobalt	7440-48-4	5-10	None	Y	Y	Y	Y	N
Potassium Hydroxide	1310-58-3	1-5	1000 lb	Y	Y	Y	Y	Y
Aluminum	7429-90-5	1-5	None	Y	Y	Y	Y	Y
Sodium Hydroxide	1310-73-2	1-5%	1000 lb	Y	Y	Y	Y	Y

Canada:

All ingredients are CEPA approved for import to Canada by Procter & Gamble. This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and this MSDS contains all information required by the Controlled Products Regulations.

SECTION XVI - OTHER INFORMATION

P&G Hazard Rating:	Health: 0	4=EXTREME
	Flammability: 0	3=HIGH
	Reactivity: 0	2=MODERATE
		1=SLIGHT
		0=NOT SIGNIFICANT

Hazard Ratings are supplied for use only in connection with occupational safety and health.

DISCLAIMER: This PSDS is intended to provide a brief summary of our knowledge and guidance regarding the use of this material. The information contained here has been compiled from sources considered by Procter & Gamble to be dependable and is accurate to the best of the Company's knowledge. It is not meant to be an all-inclusive document on worldwide hazard communication regulations.

This information is offered in good faith. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage or release to the environment. Procter & Gamble assumes no responsibility for injury to the recipient or third persons or for any damage to any property resulting from misuse of the product.