

# Product Information Sheet

## Panasonic Batteries

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**Product:** Nickel Metal Hydride Batteries (Ni-Mh)

**Applicable models/sizes:** All

**Revision:** January 1, 2016

**The batteries referenced herein are exempt articles and are not subject to the OSHA Hazard Communication Standard requirement. This sheet is provided as a service to our customers.**

## MSDS

Material Safety Data Sheets (MSDS) are a sub-requirement of the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR Subpart 1910.1200. This Hazard Communication Standard does not apply to various subcategories including anything defined by OSHA as an "article". OSHA has defined "article" as a manufactured item other than a fluid or particle; (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g. minute or trace amounts of a hazardous chemical, and does not pose a physical hazard or health risk to employees.

*Because all of our batteries are defined as "articles", they are exempt from the requirements of the Hazard Communication Standard; hence a MSDS is not required.*

## The following components are found in a Panasonic Nickel-Metal Hydride battery:

Component	Material	Formula	CAS #
Positive Electrode	Nickel II Hydroxide	Ni(OH) <sub>2</sub>	12054-48-7
Negative Electrode	Metal Hydride Alloy	AB <sub>5</sub> Type (See Note)	AB <sub>5</sub> Type (See Note)
Electrolyte	Potassium Hydroxide	KOH	1310-58-3
	Sodium Hydroxide	NaOH	1310-73-2
	Lithium Hydroxide	LiOH	1310-65-2

NOTE: Components of AB<sub>5</sub> alloy include: Lanthanum (La) – CAS# 7439-91-0, Cerium (Ce) – CAS#7440-45-1, Neodymium (Nd) – CAS#7440-00-8, Praseodymium (Pr) – CAS#7440-10-0)

The overall reaction is:  $MH + NiOOH \rightleftharpoons M + Ni(OH)_2$

## Disposal



All Panasonic Nickel Metal Hydride batteries are classified by the federal government as a non-hazardous waste and are safe for disposal in the normal municipal waste stream. Exception: California, which requires these batteries to be disposed of in accordance with the California Universal Waste Rules. These batteries, however, do contain recyclable materials. Panasonic is a Licensee of the Call2Recycle Battery Recycling Program. If you build our cells into a battery pack, please call 1-800-8-BATTERY or go to the Call2Recycle website at [www.call2recycle.org](http://www.call2recycle.org) for additional information on how your branded product can also participate in the program.

**Notice:** The information and recommendations set forth are made in good faith and are believed to be accurate at the date of preparation. Panasonic Industrial Company makes no warranty expressed or implied.

## **Transportation**

Nickel Metal Hydride batteries (sometimes referred to as “Dry cell” batteries) are not listed as dangerous goods under the International Civil Aviation Organization (ICAO), 2015-2016 edition, International Air Transport Association (IATA), 57<sup>th</sup> edition, U.S. Department of Transportation. (DOT), 49 CFR. These batteries are not subject to the dangerous goods regulations provided they meet the requirements contained in the following Special Provisions. Special Provision A199 in the IATA Dangerous Goods Regulations and ICAO Technical Instructions and Special Provision 130 in 49 CFR 172.102 of the U.S. hazardous materials regulations require these batteries to be packed in such a way to prevent short circuits or generating a dangerous quantity of heat. In addition, the IATA Dangerous Goods Regulations and ICAO Technical Instructions require the words “Not Restricted” and “Special Provision A199” to be provided on the air waybill, when an air waybill is issued. Effective January 1, 2012 the International Maritime Organization (IMO) regulates shipments by ocean, in excess of 100 Kg, as a Class 9 dangerous good under UN 3496 and Special Provision 117 and 963.

## **First Aid**

If you get electrolyte in your eyes, flush with water for 15 minutes without rubbing and immediately contact a physician. If you get electrolyte on your skin wash the area immediately with soap and water. If irritation continues, contact a physician. If a battery is ingested, call the National Capital Poison Center (NCPC) at 202-625-333 (Collect) or your local poison center immediately

## **General Recommendations**

CAUTION: May explode or leak if short-circuited, inserted improperly, mixed with different battery types or disposed of in fire. Do not open battery.

## **Fire Safety**

In case of fire, use a smothering agent such as dry sand, dry ground dolomite or soda ash. If you use water, use enough to smother the fire. Using an insufficient amount of water could possibly make the fire worse. Cooling the exterior of the batteries will help prevent rupturing. Burning of these batteries will generate toxic fumes. Fire fighters should use self-contained breathing apparatus

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