Product Information Sheet

Panasonic Batteries

Panasonic Industrial Company A Division of Panasonic Corporation of North America 1701 Golf Road Suite 3-1100 Rolling Meadows, IL 60008

Toll Free: 877-726-2228 Fax: 847-468-5750

Internet: na.industrial.panasonic.com/products/batteries

e-mail: oembatteries@us.panasonic.com

Product: Nickel Cadmium Batteries

(Ni-Cd)

Applicable models/sizes: All

Revision: January 1, 2016

The batteries referenced herein are exempt articles and are <u>not</u> 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 Cadmium battery:

| Component | Material | Formula | CAS# |
|--------------------|---------------------|---------------------|------------|
| Positive Electrode | Nickel Hydroxide | Ni(OH) ₂ | 12054-48-7 |
| Negative Electrode | Cadmium | Cd | 7440-43-9 |
| Electrolyte | Potassium Hydroxide | КОН | 1310-58-3 |
| | Sodium Hydroxide | NaOH | 1310-73-2 |
| | Lithium Hydroxide | LiOH | 1310-65-2 |

Disposal



All Panasonic Nickel Cadmium batteries are classified by the federal government as a hazardous waste. The waste code is D006, Cadmium. 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 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.

006-16 Page 1 of 2

Transportation

Nickel-Cadmium 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), 57th edition and U.S. Department of Transportation (DOT) regulations, 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 A123 in the ICAO Technical Instructions and IATA Dangerous Goods Regulations and Special Provision 130 of the DOT. These regulations require these batteries to be packed in such a way to prevent short circuits or generation of a dangerous quantity of heat. In addition, the ICAO and IATA regulations require the words "Not Restricted" and "Special Provision A123" be provided on the air waybill, when an air waybill is issued. By ocean the International Maritime Organization (IMO), 2014, 37-14 Amendment, does not regulate these batteries.

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 will only 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

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.