CIS062 **Battery Pack Assembly, Optimair MM2K PAPR**

CONTENT INFORMATION SHEET

1. Chemical Product and Company Identification

LABEL IDENTIFIER: Nickel-Metal Hydride Battery (NiMH), Optimair MM2K PAPR

PRODUCT IDENTIFIER: P/N 10022696 Battery Pack Assembly
P/N 10023481 Battery Pack Assembly, Packaged.

COMPANY IDENTIFICATION: MINE SAFETY APPLIANCES COMPANY
1100 Cranberry Woods Drive
Cranberry Township, PA 16066
CUSTOMER SERVICE: 1-800-MSA-2222 (8:30 a.m. – 5:00 p.m., USA local time)

2. Content Information

CONTENT: Product Information Sheet for Nickel-Metal Hydride Batteries (NiMH) used in Optimair MM2K PAPR Battery Pack Assembly is attached (2 Pages).

Panasonic Batteries. Product Information Sheet (PIS) Revision: January 1, 2013

3. Disclaimer

This document is not to be considered a Material Safety Data Sheet as define by 29 CFR 1910.1200.

The information provided herein is considered proprietary in nature and is provided only as information that may be necessary for final disposal procedures. It may not be used or disclosed in any other manner.

The information provided herein has been compiled from sources believed to be reliable. However, Mine Safety Appliances Company makes no warranty as to the accuracy, completeness or sufficiency of the information and in no event will Mine Safety Appliances Company be responsible for loss or damage of any nature whatsoever resulting from use of this information.

APPROVED BY:

ZANE N. FRUND, Ph.D., MANAGER,
MATERIAL SCIENCE & CHEMICAL RESEARCH

Product Information Sheet

Panasonic Batteries
Panasonic Industrial Company
A Division of Panasonic Corporation of North America
5201 Tollview Drive
Rolling Meadows, IL 60008
Toll Free: 877-726-2228
Fax: 847-468-5750
Internet: www.panasonic.com/industrial/batteries-oem
e-mail: oembatteries@us.panasonic.com

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

Applicable models/sizes: All

Revision: January 1, 2013

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)2	12054-48-7
Negative Electrode	Metal Hydride Alloy	AB_5 Type (See Note)	AB_5 Type (See Note)
Electrolyte	Potassium Hydroxide Sodium Hydroxide	KOH NaOH	1310-58-3 1310-73-2

NOTE: Components of AB_5 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: $MH + NiOOH \Leftrightarrow M + Ni(OH)_2$

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 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), 2013-2014 edition, International Air Transport Association (IATA), 54th 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 A123 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 A123” 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 possible 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