



CIS096

Lithium Ion Battery Pack (Li-ion)

CONTENT INFORMATION SHEET

1. Chemical Product and Company Identification

LABEL IDENTIFIER: Lithium Ion Battery Pack (Li-ion), Optimair TL, Extended

PRODUCT IDENTIFIER: P/N 10076109 Battery Pack, Extended, PAPR, OptimAir® TL

COMPANY IDENTIFICATION: MINE SAFETY APPLIANCES COMPANY
P.O. Box 439
Pittsburgh, PA 15230
CUSTOMER SERVICE: 1-800-MSA-2222 (8:30 a.m. – 5:00 p.m., USA local time)

2. Content Information

CONTENT: A Product Information Sheet, a Product Declaration and a Product Description for Lithium Batteries (Li-ion) used in the Optimair TL PAPR Battery Pack, Extended are attached. MSA Battery Pack P/N 10076109 uses eight Panasonic CGR18650CF cells.

Panasonic Batteries Product Information Sheet (PIS), Revision F, Dated 06/07/06
Panasonic Batteries Product Declaration, Dated April 2, 2007
Panasonic Batteries Product Description

3. Disclaimer

This product is considered an article as defined in 29 CFR 1910.1200 (c). Articles are exempt from the Hazard Communication Standard; therefore, no Material Safety Data Sheet (MSDS) is required for this product. This document is not an MSDS as defined by 29 CFR 1910.1200.

The environment and/or manner in which the product is used may impact its contents. Accordingly, it is each waste generator's responsibility to recycle or dispose of materials in compliance with local, state, and federal laws and regulations.

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, CHEMICAL
RESEARCH AND ANALYTICAL SERVICES

Panasonic

Matsushita Battery Industrial Co., Ltd.
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Phone : +81-6-6994-4089
<http://www.panasonic.co.jp/oembatteries/>

Product Declaration

April 2, 2007

This is to certify that

Matsushita Battery Industrial Co., Ltd. does not add Mercury (Hg)
as raw materials in the manufacturing processes of Lithium ion
batteries.

BRAND: No brand

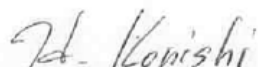
PART NUMBER: CGR18650CF

DESCRIPTION/SPECIFICATION:

Lithium Ion Cylindrical Cell

Nominal Voltage: 3.6V

Standard Capacity: 2,250mAh (typ.)



By Hajime Konishi
Title: Group Manager
Portable Rechargeable Battery Business Unit
Matsushita Battery Industrial Co., Ltd.

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Product Description

PART NUMBER: CGR18650CF

BRAND: No brand

DESCRIPTION/SPECIFICATION:

Lithium Ion Cylindrical cell

Nominal Voltage:3.6V

Standard Capacity: 2,250mAh (typ.)

Size: Diameter Max18.6mm X Height Max 65.2mm

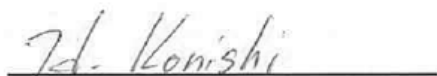
CHEMICAL CONTENT/REACTION:

Positive pole: $\text{Li}(\text{Ni}_a\text{Mn}_b\text{Co}_c)\text{O}_2 \rightleftharpoons \text{Li}_{1-x}(\text{Ni}_a\text{Mn}_b\text{Co}_c)\text{O}_2 + x\text{Li}^+ + xe^-$

Negative pole: $\text{C} + x\text{Li}^+ + xe^- \rightleftharpoons \text{CLi}_x$

Complete reaction: $\text{C} + \text{Li}(\text{Ni}_a\text{Mn}_b\text{Co}_c)\text{O}_2 \rightleftharpoons \text{CLi}_x + \text{Li}_{1-x}(\text{Ni}_a\text{Mn}_b\text{Co}_c)\text{O}_2$

COUNTRY OF ORIGIN (COO) : Japan



By Hajime Konishi
Title: Group Manager
Portable Rechargeable Battery Business Unit
Matsushita Battery Industrial Co., Ltd.

Product Information Sheet

Panasonic Batteries

Panasonic Industrial Company
A Division of Panasonic Corporation of North America
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Secaucus, NJ 07094
Toll Free: 877-726-2228
Fax: 847-468-5750
e-mail: pembatteries@us.panasonic.com
Internet: www.panasonic.com/batteries

Product: Lithium-ion Batteries
(Li-ion)

Applicable models/sizes: All

Revision: F; **Dated** 06/07/06

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.



DISPOSAL

All Panasonic Lithium Ion batteries are classified by the federal government as non-hazardous waste and are safe for disposal in the normal municipal waste stream. These batteries, however, do contain recyclable materials and are accepted for recycling by the Rechargeable Battery Recycling Corporation's (RBRC) Battery Recycling Program. Please call 1-800-8-BATTERY for information on recycling your used Lithium Ion battery or go to the RBRC website at www.rbrc.org for additional information.

TRANSPORTATION

All Panasonic lithium (primary and rechargeable) batteries are not subject to the requirements of the Department of Transportation (DOT) Subchapter C, Hazardous Materials Regulations because each of our batteries meet the exceptions under 173.185 (b). These regulations will remain in effect until October 1, 2004 when the new regulations are expected to become effective.

All Panasonic lithium batteries are exempt from the DOT Hazardous Materials Subchapter as long as they are separated to prevent short circuits and packed in strong packing for conditions normally encountered in transportation.

Effective January 1, 2003, all Panasonic lithium batteries are regulated as a Hazardous Material by the International Civil Aviation Organization (ICAO) and the International Air Transport Association (IATA) if you transport more than 24 cells or 12 batteries in a single package. These must be transported in accordance with the requirements of Special Provision "A45".

Effective January 1, 2004, all Panasonic lithium batteries will be regulated as a Hazardous Material by the International Maritime Organization (IMO) if you transport more than 24 cell or 12 batteries in a single package. These will have to be transported in accordance with the requirements of Special Provisions 188 and 230.

If you build any of our lithium cells into a battery pack, you must also assure that they are tested in accordance with the UN Model Regulations, Manual of Test and Criteria. Part III, subsection 38.3. If you plan on transporting any untested prototype battery packs contact your Panasonic Sales Representative for regulatory information.

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.
