

# Product Information Sheet

## Panasonic Batteries

Panasonic Industrial Devices Sales Company of America  
A Division 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](http://na.industrial.panasonic.com/products/batteries)  
e-mail: [oembatteries@us.panasonic.com](mailto:oembatteries@us.panasonic.com)

**Product:** Poly- carbonmonofluoride (BR Type) Lithium Batteries  
**Applicable models/sizes:** Only our BR-C type cylindrical battery.  
**Revision:** January 1, 2018

**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.**

## SDS

Safety Data Sheets (SDS) 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 SDS is not required.*

**The following components are found in a Panasonic Poly-carbonmonofluoride (BR) Lithium battery:**

Cylindrical Cell Components	Material	Formula
Positive Electrode	Poly-carbonmonofluoride	(CF) <sub>n</sub>
Negative Electrode	Lithium	Li
Electrolyte	γ-Butyrolactone -Solvent	C <sub>4</sub> H <sub>6</sub> O <sub>2</sub>
	1,2 Dimethoxyethane-Solvent	C <sub>4</sub> H <sub>10</sub> O <sub>2</sub>
	Lithium Tetrafluoroborate-Salt	LiBF <sub>4</sub>

## DISPOSAL

Lithium batteries are neither specifically listed nor exempted from the Federal Environmental Protection Agency (EPA) hazardous waste regulations as promulgated by the Resource Conservation and Recovery Act (RCRA). The only metal of possible concern in a lithium battery is lithium that is not a listed or characteristic toxic hazardous waste. Waste lithium batteries can be considered a reactive hazardous waste if there is a significant amount of unreacted, or unconsumed lithium remaining in the spent battery. The key to disposing of a lithium battery as a non-hazardous waste is to guarantee that it is fully or mostly discharged. Once it is discharged it can be disposed of as non-hazardous waste.

You can dispose of a fully charged or partially discharged lithium battery as a hazardous waste after they are first neutralized through an approved secondary treatment. The need for a secondary treatment prior to disposal is a requirement of the U.S. Land Ban Restrictions of the Hazardous and Solid Waste Amendments of 1984. A secondary treatment center can only receive these batteries as manifested hazardous waste. The waste code for charged lithium batteries is D003, reactive. Disposal of large quantities of undischarged lithium batteries should be performed by permitted, professional disposal firms knowledgeable in Federal, State and local hazardous materials and hazardous waste transportation and disposal requirements. As always, households are exempt from the RCRA hazardous waste guidelines. Check your local area for any recycling options.

**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**

Panasonic BR-C lithium batteries are not subject to the requirements of the Department of Transportation (DOT) Subchapter C, Hazardous Materials Regulations if shipped by ground in compliance with 49 CFR 173.185(c). The DOT regulates our BR-C battery as a “medium” sized battery. One of the requirements of is that the package of these batteries must be labeled: **“LITHIUM BATTERIES - FORBIDDEN FOR TRANSPORT ABOARD AIRCRAFT AND VESSEL.”**

According to ICAO, 2017-2018 edition, IATA, 59th edition and IMO regulations, 2016 edition, 38<sup>th</sup> Amendment, the Panasonic BR-C battery must be shipped as a fully regulated Class 9 dangerous good. These regulatory agencies do not recognize the concept of a DOT “medium” sized battery.

All Panasonic lithium cells are tested and comply with the UN Model Regulations, Manual of Test and Criteria, Part III, subsection 38.3.

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, 6<sup>th</sup> revised edition.

If you plan on transporting any untested prototype battery packs contact your Panasonic Sales Representative for regulatory information. Check with your air carrier before shipping. Many air carriers have additional requirements.

## **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:** Risk of fire, explosion and burns. Do not recharge, crush, heat above 212°F (100°C) or incinerate.

## **Fire Safety**

In case of fire, you can use a Class “D” fire extinguisher or other smothering agent such as Lith-X, copper powder or dry sand. If you use water, use enough to smother the fire. Cooling the exterior of the batteries will help prevent rupturing. Fire fighters should use self-contained breathing apparatus. Detailed information on fighting a lithium metal battery fire can be found in Guide 138 (Substances – Water – Reactive) of the US DOT Emergency Response Guide.