

# Product Information Sheet

**The following components are found in a Panasonic Manganese Dioxide (CR) Lithium battery:**

Cylindrical Cell Components	Material	Formula
Positive Electrode	Manganese Dioxide	MnO <sub>2</sub>
Negative Electrode	Lithium	Li
Electrolyte	Propylene Carbonate-Solvent	C <sub>4</sub> H <sub>6</sub> O <sub>3</sub>
	1, 2 Dimethoxyethane-Solvent	C <sub>4</sub> H <sub>10</sub> O <sub>2</sub>
	Lithium Triflate-Salt	LiCF <sub>3</sub> SO <sub>3</sub>
Coin Cell Components	Material	Formula
Positive Electrode	Manganese Dioxide	MnO <sub>2</sub>
Negative Electrode	Lithium	Li
Electrolyte	Propylene Carbonate-Solvent	C <sub>4</sub> H <sub>6</sub> O <sub>3</sub>
	1, 2 Dimethoxyethane-Solvent	C <sub>4</sub> H <sub>10</sub> O <sub>2</sub>
	Lithium Perchlorate-Salt	LiClO <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. **In either case, button cell batteries contain so little lithium that they never qualify as a reactive hazardous waste. These batteries are safe for disposal in the normal municipal waste stream.**

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.

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**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.

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