

# Programmable Control Products

Part No: 44A724534-001

GFK-0638A  
May 1993

## Lithium Battery Material Safety Data Sheet

### MATERIAL SAFETY DATA SHEET

Material Safety Data Sheet May be used to comply with OSHA's Hazard Communication Standard. 29 CFR 1910.1200. Standard must be consulted for specific requirements.	<b>U.S. Department of Labor</b> Occupational Safety and Health Administration (Non-Mandatory Form) Form Approved OMB No. 1218-0072
<b>IDENTITY</b> (As Used on Label and List) Lithium Battery BR-2/3A	Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

### Section I

Manufacturer's Name Matsushita Micro Battery Ind. Co. Ltd.	Emergency Telephone Number Not Applicable
Address (Number, Street, City, State, and ZIP Code) One Matsushita-cho Moriguchi, Osaka	Telephone Number for Information 201-348-7499 T. Kuwamura
570 JAPAN	Date Prepared 7-15-87
Telephone # 06-991-1141 (Japan)	Signature of Preparer (optional)

### Section II – Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity: Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Lithium Metal = < 0.5 Grams Lithium				
Weight of lithium per cell = 0.44g				
(Approx. percent of total weight = 3.3 wt. %)				

### Section III – Physical/Chemical Characteristics

Boiling Point	N/A	Specific Gravity (H <sub>2</sub> O = 1)	
Vapor Pressure (mm Hg.)	N/A	Melting Point	180 °C
Vapor Density (AIR = 1)	N/A	Evaporation Rate (Butyl Acetate = 1)	N/A
Solubility in Water	N/A	Operating Temperature Range: -40° to +85° C/ -40° to +185° F	
Appearance and Odor	N/A	Storage Temperature Range: -40° to +85° C/ -40° to +185° F	

### Section IV – Fire and Explosion Hazard Data

Flash Point (Method Used)	N/A	Flammable Limits	N/A	LEL	N/A	UEL	N/A
Extinguishing Media	Dry chemical or dry sand						
Special Fire Fighting Procedures	N/A						

### Unusual Fire and Explosion Hazards

Fire and explosion is present only when battery is abused.

THIS IS A REPRODUCTION OF THE MATERIAL SAFETY DATA SHEET PROVIDED BY THE BATTERY VENDOR.

GFK-0638A

**Section V – Reactivity Data**

Stability	Unstable		Conditions to Avoid	N/A
	Stable			

Incompatibility (Materials to Avoid) N/A

Hazardous Decomposition or Byproducts N/A

Hazardous Polymenzation	May Occur		Conditions to Avoid	N/A
	Will Not Occur			

**Section VI – Health Hazard Data**

Route(s) of Entry:	Inhalation?	Skin?	Ingestion?
--------------------	-------------	-------	------------

Health Hazards (Acute and Chronic) N/A

Carcinogenicity:	NTP? N/A	IARC Monographs?	OSHA Regulated?
------------------	-------------	------------------	-----------------

Signs and Symptoms of Exposure N/A

Medical Conditions Generally Aggravated by Exposure N/A

Emergency and First Aid Procedure

**Eyes/Skin** Wash out the eyes/skin with water promptly. **Inhalation:** Rest, expose person to fresh air, use oxygen if available. **Ingestion:** Not toxic per tests with laboratory animals (rats). **Note to Physician:** Not toxic to the body, however it is best to wash out the solution with water promptly in an emergency.

**Section VII – Precautions for Safe Handling and Use**

Steps to Be Taken in Case Material is Released or Spilled

If the battery is accidently broken and organic electrolyte (gama-butyrolactone and LiBF4 as a solute) leaks out, wipe it up with a cloth, and dispose of it in a plastic bag and put into a steel can. No outgasses during normal operation or at normal temperature because we use: Solvent: gama-butyrolactone, 204°C boiling point, not toxic. Solute: LiBF4, neutral acid, not toxic.

Waste Disposal Method

It is recommended to discharge the battery to the end, to use up the metal lithium inside the battery, and to bury the discharged battery in soil.

Precautions to Be Taken in Handling and Storing

**Unusual Fire and Explosion Hazard:** In the abnormal case, example: Charge to higher than 5 volts at high amperage, the top may pop up.

**Section VIII – Control Measures**

Respiratory Protection (Specify Type)				N/A
Ventilation	Local Exhaust	N/A	Special	N/A
	Mechanical (General)	N/A	Other	N/A
Protective Gloves	N/A		Eye Protection	N/A
Other Protective Clothing or Equipment	N/A			
Work/Hygienic Practices	N/A			