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SAFETY DATA SHEET (SDS)

SECTION 1: Product and Company Identification

Product Name	<u>Silver Oxide Battery (Mercury Free)</u>		
Model Name:	SR Battery (0%Hg) all types		
Brand:	SEIZAIKEN		
Nominal Voltage:	1.55 V		
Manufacturer	Seiko Instruments Inc. Micro-Energy Division		
Address:	45-1, Aza Matsubara, Kamiyashi, Aoba-ku, Sendai-shi, Miyagi, Japan		
Telephone:	+81-22-391-9331	Facsimile:	+81-22-391-9330
Seller	Seiko Instruments Inc. Electronic Components Sales Head Office		
Address:	8, Nakase 1-chome, Mihama-ku, Chiba-shi, Chiba, Japan		
Telephone:	+81-43-211-1735	Facsimile:	+81-43-211-8034
Emergency Contact	Seiko Instruments Inc. Quality Assurance Department		
Telephone:	+81-22-391-9331		

SECTION 2: Hazards Identification

GHS Classification	Not applicable
Effects to Human body	When swallowed, the battery can melt, and it might cause inflammation in stomach or intestine.
Possibility of Fire ignition	There is not a fire ignition by opening the battery can. Short might make fire ignition peripheral flammable materials.

SECTION 3: Composition/Information on Ingredients

Substance/Preparation Article

Important Note The battery should not be opened or burned, because the following ingredients listed below are contained in it. Its post-discharge or its combustion products could be harmful.

Main Materials or Main Ingredients

Part Name	Material Name	CAS No.	Content (wt%)
Anode	Zinc	7440-66-6	2 to 15
	Mercury	7439-97-6	Not used
Cathode	Silver Oxide	20667-12-3	15 to 40
	Manganese Dioxide	1313-13-9	1 to 15
Electrolyte	Sodium Hydroxide	1310-73-2	3 to 10
	or Potassium Hydroxide	1310-58-3	1 to 20

SECTION 4: First Aid Measures

If leaked liquid, alkaline, observe the following instructions:

Inhalation:	Fumes can cause respiratory irritation. Ensure the person has fresh air and consult a physician.
Skin:	Immediately wash the skin with plenty of water. If itchiness or irritation due to chemical burns persists, consult a physician.
Eyes:	Immediately wash the skin with plenty of water. If itchiness or irritation due to chemical burns persists, consult a physician.
Ingestion:	If a battery is swallowed, consult a physician immediately. If the contents come into contact with the mouth, immediately rinse with of water and consult a physician.

SECTION 5: Fire Fighting Measures

How to Extinguish Water, Any class of extinguisher is effective.

Keep away the battery from heat sources to avoid a fire. Please do not expose the battery to very high temperature to prevent an explosion and the generation of harmful gas.

SECTION 6: Accidental Release Measures

N/A (Not Applicable)

SECTION 7: Handling and Storage

Handling	<p>Do not heat, disassemble nor dispose of in fire.</p> <p>Do not reverse placement of (+) and (-).</p> <p>Do not short and charge.</p> <p>Do not solder directly to the battery.</p> <p>Do not use new and used batteries together. Do not use different types of batteries together.</p> <p>Do not use nor leave the batteries in direct sunlight nor in high-temperature areas.</p> <p>Avoid letting battery contact water.</p> <p>Make sure to insert batteries without having (+) and (-) come in contact with metal parts of equipment.</p> <p>Remove batteries from the equipment, if finished using. Do not leave batteries connecting with equipment after using.</p>
Storage	<p>Keep batteries out of children's reach.</p> <p>Keep batteries away from direct sunlight, high temperature and humidity.</p>

SECTION 8: Exposure Controls / Personal Protection

The capacitor is sealed with a metal can in order to avoid leakage of harmful gas or liquid. Follow the instructions in the SECTION 7.

Respiratory Protection:	N/A
Protective Gloves:	N/A
Eye Protection:	N/A
Skin or Body Protection:	N/A

SECTION 9: Physical and Chemical Properties

Shape	Button battery
Chemical System	Silver Oxide / Zinc
Rechargeable	YES / <input checked="" type="radio"/> NO

SECTION 10: Stability and Reactivity

Stability:	Stable
Condition to Avoid:	See section 7
Hazardous Mixture:	N/A
Hazardous Decomposition or Byproducts:	N/A

SECTION 11: Toxicological Information

The battery does not include mercury.

SECTION 12: Ecological Information

It is non-mercury battery. It has almost no influence on environment.

SECTION 13: Disposal Considerations

Please see EU Directive 2013/56/EU. These batteries must recycle. Dispose of the battery in accordance with the respective national, federal, state, and local regulations.

SECTION 14: Transport Information

Our silver oxide battery is not classified dangerous goods by International Air Transport Association (IATA), International Civil Aviation Organization (ICAO), U.S. Department of Transportation (DOT), International Maritime Organization(IMO).

It can be transported by air and sea usually.

Please pack it in a container which can prevent any damage by high humidity and high temperature. Please handle the battery so that it is not damaged while transporting.

Silver oxide battery is not classified as dangerous under the IATA Dangerous Goods Regulations 59th edition 2018, also our battery is comply with the special provision A123, because for effective packaging to prevent external short circuit.

SECTION 15: Regulatory Information

Directive 2006/66/EC and Directive 2013/56/EU

Directive 2011/65/EU and Commission Delegated Directive (EU) 2015/863: RoHS

SECTION 16: Other Information

SDS is not applied to products that are used in a sealed condition. So, we do not have the obligation to publish this document since the battery corresponds to the condition above. But, we offer this document for reference. The data and evaluation results written on this document was known at the time of preparation, but it is not something that is guaranteed.

End of Documents