

**SAFETY DATA SHEET (SDS)**

**SECTION 1: Product and Company Identification**

**Product Name** XH Capacitor  
 Model Name: XH311HU (with Tab)  
 Maximum Use Voltage: 3.3 V  
 Capacitance: 0.035 F

**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.  
 Micro-Energy Division Sales Department  
 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 capacitor can melt, and it might cause inflammation in stomach or intestine.

Possibility of Fire ignition When exposed to fire or extreme heat, it may catch fire, generate heat, leakage or it may burst.

**SECTION 3: Composition/Information on Ingredients**

**Substance/Preparation** Article

**Important Note** The capacitor 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.

**Materials or Ingredients**

Part Name	Material Name	CAS No.
Anode	Activated carbon	7440-44-0/based material
Cathode	Activated carbon	7440-44-0/based material
Solute	Tetra alkyl ammonium salt	-
Solvent	Hetero-oxide	-
Cases	Nickel plated stainless steel	-
(Tab)	Nickel plated stainless steel	-
(Solder)	100% of Tin	7440-31-5

[XH Capacitor]

#### SECTION 4: First Aid Measures

None unless exposed to internal materials. If contents leak, 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 rinse the eye with plenty of water.
Ingestion:	If a capacitor 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** Use fire extinguisher or Sand

Keep away the capacitors from heat sources to avoid a fire. Please do not expose the capacitor 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

<b>Handling</b>	<p>Do not charge by higher current or higher voltage than specified.</p> <p>Do not reverse placement of (+) and (-). Do not discharge by force.</p> <p>Do not solder directly to the capacitor.</p> <p>Do not heat, disassemble nor dispose of in fire.</p> <p>In case of leakage or strange smell, keep away from fire to prevent ignition of any leaked electrolyte.</p> <p>Do not use nor leave the capacitors in direct sunlight nor in high-temperature areas.</p> <p>Do not use new and used capacitors together. Do not use different types of capacitors together.</p> <p>If you connect two or more capacitors in series or parallel, please consult us in advance.</p>
<b>Storage</b>	<p>Keep capacitors out of children's reach.</p> <p>Keep capacitors away form 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

<b>Shape</b>	Button Capacitor
<b>Chemical System</b>	Activated carbon/ Activated carbon
<b>Rechargeable</b>	<input checked="" type="radio"/> YES / NO

[XH Capacitor]

**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**

N/A

**SECTION 12: Ecological Information**

N/A

**SECTION 13: Disposal Considerations**

Dispose of the capacitor in accordance with the respective national, federal, state, and local regulations.

**SECTION 14: Transport Information**

Energy storage capacity of this capacitor is 0.3Wh, therefore, it is not covered by UN3499 of UN Recommendations on the Transport of Dangerous Goods by Special Provision A186.

**SECTION 15: Regulatory Information**

N/A

**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 capacitor 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