

## SAFETY DATA SHEET FOR PRODUCT

## 1. Product and Company Identification

Product Name : US18650 G5/G6G/G8G/GH1  
 Company Name : Sony Energy Devices Corporation  
 Address : 1-1 Shimosugishita, Takakura, Hiwada-machi,  
 Koriyama-shi, Fukushima, 963-0531 Japan  
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## 2. Composition / Information on Ingredients

Substance or preparation : Preparation

Chemical/General name	CAS number	
Lithium transition metal oxide	12190-79-3	
	12057-17-9	
	182442-95-1	
Iron	7439-89-6	
Aluminum	7429-90-5	
Graphite	7782-42-5	
Copper	7440-50-8	
Organic solvent	N/A	Non-aqueous liquid

## 3. Hazards Identification

Class Name : Not applicable for regulated class

Hazard : It may cause heat generation or electrolyte leakage if battery terminals are short-circuited with other metals. Electrolyte is flammable. In case of electrolyte leakage, move the battery from fire immediately.

Toxicity : Vapor generated from burning batteries, may make eyes, skin and throat irritate.

## 4. First Aid Measures

The product contains organic electrolyte. In case of electrolyte leakage from the battery, actions described below are required.

Eye contact : Flush eyes with plenty of clean water for at least 15 minutes immediately, without rubbing, and take a medical treatment. If appropriate procedures are not taken, this may cause an eye irritation.

Skin contact : Wash the contact areas off immediately with plenty of water and soap. If appropriate procedures are not taken, this may cause sores on the skin.

Inhalation : Remove to fresh air immediately, and take a medical treatment.

**5. Fire Fighting Measures**

- Use specified extinguishers (powder, foam, carbon dioxide) and extinguishing system under the Fire Defense Law.
- Since corrosive gas may be produced at the time of fire extinguishing, use an air inhalator when danger is predicted.
- Use a large amount of water as a supportive measure in order to get cooling effect if needed (Indoor/outdoor fire hydrant).
- Carry away flammable materials immediately.
- Move batteries to a safer place immediately.

**6. Accidental Release Measures**

- Wipe off with dry cloth
- Keep away from fire
- Wear safety goggles, safety gloves to avoid secondary hazards.

**7. Handling and Storage**

- Storage** : Store within the recommended limit of -20 to 45deg.C (-4 to 113deg.F), well-ventilated area. Do not expose to high temperature (60C / 140F). Avoid direct sunlight and water.
- Handling** : Do not disassemble, remodel, or solder. Do not short + and - terminals with a metal. Do not damage, crush or incinerate. Use specified charger only.
- Disposal** : Dispose in accordance with applicable federal, state and local regulations.

**8. Exposure Controls/Personal protection (In case of electrolyte leakage from the battery)**

- Acceptable concentration** : Not specified in ACGIH.
- Facilities** : Provide appropriate ventilation such as local ventilation system in the storage.
- Protective clothing** : Gas mask for organic gases, safety goggle, safety gloves.

**9. Physical and chemical properties**

- Appearance (Form)** : Cylindrical cell
- Color** : Metallic color (without tube)

**Nominal Voltage & Capacity**

Product Name	Nominal Voltage [V]	Nominal Capacity [Ah]
US18650G5	3.6	2.2
US18650G6G	3.6	2.2
US18650G8G	3.6	2.6
US18650GH1	3.75	2.8

## 10. Stability and Reactivity

External short-circuit, deformation by crush, high temperature (over 100C/212F) exposure of a battery cause generation of heat and ignition.

## 11. Toxicological Information

Acute toxicity: No information as a battery

Local effects : No information as a battery

## 12. Ecological Information

When exhausted battery is buried in the ground, corrosion may be caused on the outer plastic case of battery and electrolyte may be oozed. There is no information on environmental influence.

## 13. Disposal considerations

When battery is disposed, isolate positive (+) and negative (-) terminals of the battery to avoid those terminals from touching each other. Batteries may be short-circuited when piled up or mixed with the other batteries in disorder. Dispose in accordance with applicable federal, state and local regulations.

## 14. Transport information

- In case of transportation, avoid high temperature and dew condensation.
- During the transportation, avoid falling, dropping, wet and damage.
- Lithium ion batteries are not subject to dangerous goods regulation for the purpose of transportation by the U.S. Department Of Transportation (DOT), the International Civil Aviation Organization (ICAO), the International Air Transport Association (IATA) or the International Maritime Dangerous Goods regulations (IMDG). For lithium ion batteries, the Watt-hour rating is no more than 20Wh/cell and 100Wh/battery pack can be treated as "non-dangerous goods" by the United Nations Recommendations on the Transport of Dangerous Goods/Special Provision 188, provided that the products are prevented from being short-circuited with each other and are packaged in an appropriate condition which satisfies Packing Group II performance level.
- The shipment complies with "Packing Instruction 965 Section II" under IATA and so the cargo can be exempted from Dangerous Goods Regulations.

Each cell or battery is of the type proven to meet the requirements of each test in "UN Manual of Tests and Criteria Part III, subsection 38.3".

Each package must be capable of withstanding a 1.2m drop test in any orientation without:

- damage to cells or batteries contained therein;
- shifting of the contents so as to allow battery to battery (or cell to cell) contact;
- release of contents.

**15. Regulatory information**

- IATA Dangerous Goods Regulations 52nd Edition

**16. Other Information**

The information contained in this safety data sheet is provided for your information only. The information and recommendations set forth herein are made in good faith and are believed to be accurate as of the date of preparation. However, Sony Energy Devices Corporation **MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THIS INFORMATION AND DISCLAIMS ALL LIABILITY FROM RELIANCE ON IT.**