Products Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Lithium-Ion Rechargeable Battery
Model name: FP01101MCB01A
Manufacturer: Toshiba Corporation Kashiwazaki Operations
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2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Weight percentage,%
Complex oxide positive active material including lithium, manganese、and the other elements	15 – 25
Lithium Titanate	15 – 25
Electrolyte solvent (main components are cyclic and linear carbonates)	3 – 13
Electrolyte salt (lithium salt of fluoro –complex compound)	Li in electrolyte: 0.03 – 0.13 F in electrolyte: 0.7 – 1.7
Plastic (PC)	10 – 20

3. HAZARDS IDENTIFICATION

The chemical components of the battery are enclosed in the container to have no hazard as a battery. The battery is a lithium ion battery and its improper use may causes deformation, leakage of electrolytes (liquid in the battery), over heating, bursting, fire or generation of stimulus/corrosive gas. Be sure to observe the warning and instructions as these events result in injury and equipment failure.

4. FIRST AID MEASURES

No problem arises from the use under normal conditions. However, take the following measures when the internal cell material such as electrolyte leaks out from the battery.

- Inhalation: The inhalation of the electrolyte vapor may causes to evoke vomiturition and respiratory distress. Remove the patients to fresh air and seek immediate medical attention if they complain to feel sick.
- Skin contact: Wash it off with a plenty of water with soap. When the patients complain itching or present inflammation, seek immediate medical attention.
- Eye contact: Flush the eyes with running water at least for 15 minutes and seek medical attention.
- Ingestion: If ingested the internal cell materials, rinse mouth thoroughly with water. Then seek immediate medical attention.

5. FIRE-FIGHTING MEASURES

・Fire extinguisher: We recommend a powdery fire extinguisher and carbon dioxide as extinguishant. Pouring a large amount of water is effective for cooling the peripheral area to prevent the area from catching fire.

・Instructions on extinguishment: When extinguishing, wear respiratory protection gear to prevent from inhaling the toxic gas and carry out extinguishment from the windward.

6. ACCIDENTAL RELEASE MEASURES

Take the following measures when the internal cell materials of the battery such as electrolyte leak out.

・Precautions on human body: Wear protective gear to prevent from exposure and avoid inhale of vapor and attachment of the electrolyte to the skins.

・Removal: Retrieve the solid contents to vacant container. Wipe them off with dry cloth if they are scattered.

・Area of leakage: Prohibit the entry to the peripheral area by persons other than related personnel, take the measures mentioned above and ventilate the area sufficiently.

7. HANDLING AND STORAGE

(1) Handling precautions

DO NOT do the following:

Apply excessive force on battery terminals
Drop the battery
Solder the battery main part
Make the battery short circuited
Discharge the battery forcibly
Heat the battery
Throw the battery into fire
Disassemble the battery
Deform the battery by pressing
Insert the battery in reverse direction
Use with batteries of different specifications
Touch the leaked electrolyte from the battery
Attach the leaked electrolyte to the skin

(2) Storage precautions

Be sure to store the battery in the place where the battery could not be exposed to raindrop and so on, avoiding direct sun light, hot-temperature, high humidity, place of the use of fire.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory protection	Not required in a normal operating state
Ventilation	Not required in a normal operating state
Protective gloves	Not required in a normal operating state

Eye protection	Not required in a normal operating state
Other protective clothes and facilities	Not required in a normal operating state

9. PHYSICAL AND CHEMICAL PROPERTIES

NA

10. STABILITY AND REACTIVITY

Conditions to be avoided

When two or more batteries are used or stored without insulating terminals, the batteries may over heat, burst or fire due to short circuit. If they are over charged, heated or thrown into fire, it causes rapid outburst of electrolyte. When the batteries are disassembled, it may cause heating and ignition due to short circuit.

11. TOXICOLOGICAL INFORMATION

NA

12. ECOLOGICAL INFORMATION

NA

13. DISPOSAL CONSIDERATIONS

The disposal of lithium ion batteries shall be carried out in compliance with the relevant laws and regulations of the country where the batteries are disposed.

For example when disposing the lithium ion battery in Japan, the user company and the industrial waste treatment company shall enter into a contract on disposal of batteries and dispose the batteries in compliance with “the law on disposal and cleaning of industrial wastes”. The used batteries shall be disposed after taking the measure to avoid external short circuit such as insulating the both terminals by applying insulating tapes as there may be a case where some electric energy still remains in the used batteries.

14. TRANSPORTATION INFORMATION

Note: This information is based on the United Nations (UN) Recommendations. However, some regulations are varied depend on shipping mode and country/area. Please consult with the forwarder or airline / shipping company before the shipment of this battery.

Lithium-ion battery is categorized as the following classification of dangerous goods stipulated by UN Recommendations on the Transportation of Dangerous Goods, Model Regulations.

- UN number: UN3480
- Name: Lithium-ion batteries
- Wh Rating 556.6Wh
- Class: Class 9

The transportation of lithium ion batteries shall be carried out in compliance with the relevant country or

international laws and regulations.

15. REGULATORY INFORMATION

- Recommendations on the Transport of Dangerous Goods: Model Regulations
- Recommendations on the Transport of Dangerous Goods: Manual of tests and criteria
- IATA (International Air Transport Association) Dangerous Goods Regulations
- IMDG (International Maritime Dangerous Goods) Code

16. OTHER INFORMATION

The contents of this Product Safety Data Sheet are based on the materials and information obtained by Toshiba Corporation at the preparation of the document. The contents could be modified with new information without notice. Toshiba Corporation would not take responsibility for troubles or defects out of the specified use.

NA = Not Applicable