

Revision of the Ministerial Ordinance under the Electrical Appliances and Materials Safety Law  
("the Law")

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Product Safety Division,  
Commerce and Information Policy Bureau,  
Ministry of Economy, Trade and Industry

1. Objectives

Regarding the revision of the Cabinet Order under the Law that designates lithium-ion batteries as an "electrical appliance and material" in the Law has notified on 18 January 2008 (G/TBT/N/JPN/240). After the revision of the Cabinet Order, corresponding Ministerial Ordinance will be revised to prevent further accidents caused by lithium-ion batteries.

2. Contents of the revision

(1) The Ministerial Ordinance which stipulates "enforcement regulations"

- Notification of the operation

The revision requires manufactures and importers to notify their operation regarding their electrical appliances according to the newly established categories for lithium-ion batteries

The shape of the secondary cell

The kind of the electrolyte

The upper limit charge voltage of the secondary cell

The weight of the secondary battery

The number of the steps of the battery block

Use

- Voluntary inspection

Each and every article need to be inspected for the following items:

Appearance inspection

Measurement of the output voltage

- PSE Mark

Should be easy to see, on the surface

Should not be worn off easily

(2) The Ministerial Ordinance which stipulates "technical requirements"

Basically, JIS C 8712 "Safety Requirements for Portable Sealed Secondary Cells and Batteries for Use in Portable Applications" will be used for the technical requirements, but some part will adopt JIS C 8714 "Safety Tests for Portable Lithium-ion Secondary Cells and Batteries for Use in Portable Electric Applications" which needs stricter testing condition than JIS C 8712.

- Basic design

Insulation and wiring (JIS C 8712 2.1)

Venting (JIS C 8712 2.2)

Temperature/current management (JIS C 8712 2.3)

Terminal contacts (JIS C 8712 2.4)  
Assembly of cells into batteries (JIS C 8712 2.5)

- Intended use

Continuous low-late charging (JIS C 8712 4.2.1)  
Vibration (JIS C 8712 4.2.2)  
Molded case stress at high ambient temperature (JIS C 8712 4.2.3)  
Temperature cycling (JIS C 8712 4.2.4)

- Foreseeable misuse

External short circuit (JIS C 8714)  
    The testing should be conducted under 55 degrees Celsius for the secondary cell, 20 degrees Celsius for the secondary battery.  
Free fall (JIS C 8712 4.3.3)  
Mechanical shock (crash hazard) (JIS C8712 4.3.4)  
Thermal abuse (JIS C 8712 4.3.5)  
Crushing of cell (JIS C 8712 4.3.6)  
Low pressure (JIS C 8712 4.3.7)  
Overcharging (JIS C 8712 4.3.9)  
Forced discharge (JIS C 8712 4.3.10)  
Cell protection against a high charging rate (JIS C 8712 4.3.11)  
Internal short circuit (JIS C 8714 5.5)

(3) Transition period

Following inspections should be conducted under stricter charge condition required in JIS 8714 after November 20, 2011. However, if the lithium-ion secondary cells and batteries are used in portable electric applications, inspection types 5-7 below should be tested under stricter charge condition from November 20, 2008.

Drop Test which incorporates secondary battery  
Abnormal Charging Test for the secondary battery  
Stricter inspections as follows:

1. Continuous low-late charging (JIS C 8712 4.2.1)
2. Overcharging (JIS C 8712 4.3.9)
3. Forced discharge (JIS C 8712 4.3.10)
4. Cell protection against a high charging rate (JIS C 8712 4.3.11)
5. External short circuit (looking over JIS C 8712 4.3.2)
6. Thermal abuse (JIS C 8712 4.3.5)
7. Crushing of cell (JIS C 8712 4.3.6)

3. Schedule

Proposed date of adoption: March 31, 2008  
Proposed date of entry into force: After November 20, 2008