Chapter 5
Standards and Regulations

INDEX

QS9000 / ISO9001 / ISO14001 Approval

Three factories in Osaka, Japan and abroad of the Lithium & Micro Battery Division has acquired certification under ISO9000 series, the international standard for quality assurance, for its cylindrical-type lithium batteries and coin type lithium batteries.
In addition, We have acquired certification under QS-9000, the quality standard for the automobile manufacturing industry, for its cylindrical-type lithium batteries, coin-type lithium batteries made in Japan and lithium batteries made in Indonesia.

QS-9000

The QS-9000 standard was established by the "Big Three" U.S. automakers (Daimler-Chrysler, Ford and GM) on the basis of ISO9001 international standard governing quality assurance but with additional requirements of their own.
A company which has been certified under this standard can supply highly reliable products by incorporating into its quality system proven "predictive management" techniques which are substantiated by numerical data from a customer satisfaction survey, failure mode and effects analysis (FMEA), process capability analysis, measurement systems analysis, etc. which are required under the standard.

ISO 9001
Acquired Oct, 1996

(Moriguchi factory, Osaka)

QS 9000
Acquired Aug, 1999

(Moriguchi factory, Osaka)

The Lithium & Micro Battery Division (Moriguchi, Osaka) has acquired an environment management system on the basis of ISO 14001 international standard governing quality assurance for designing and producing lithium batteries.

ISO 14001
Acquired Jul, 1998

Transporting Lithium Batteries

Overview of Lithium Batteries

Based on a United Nations recommendation, transportation of lithium batteries is regulated by the International Civil Aviation Organization(ICAO), the International Air Transport Association(IATA), the International Maritime Organization(IMO) and the US Department of Transportation(DOT).
Packaging and transportation are formally regulated according to the amount of lithium contained in lithium batteries. Transportation of lithium batteries must conform to these regulations. If batteries meet the special provision A45, they can be transported by air without being subject to these Regulations.

Note: Special Provision A45

Lithium cells and batteries offered for transport are not subject to other provisions of these Regulations if they meet the following:

(a)For a lithium metal or lithium alloy cell, the lithium content is not more than 1 g, and for a lithium-ion cell, the equivalent lithium content is not more than 1.5 g;

(b)For a lithium metal or lithium alloy battery the aggregate lithium content is not more than 2 g, and for a lithium-ion battery, the aggregate equivalent lithium content is not more than 8 g;

(c)Each cell or battery is of the type proved to meet the requirement of each test in the *Manual of Tests and Criteria,* Part Ⅲ, sub-section 38.3;

(d)Cells and batteries are separated so as to prevent short circuits and are packed in strong packagings, except when installed in equipment; and

(e)Except when installed in equipment, each package containing more than 24 lithium cells or 12 lithium batteries shall in addition meet the following requirements:

(1)Each package shall be marked indicating that it contains lithium batteries and that special procedures should be followed in the event that the package is damaged;

(2)Each shipment shall be accompanied with a document indicating that packages contain lithium batter ies and that special procedures should be followed in the event a package is damaged;

(3)Each package is capable of withstanding a 1.2 m drop test in any orientation without damage to cells or batteries contained therein, without shifting of the contents so as to allow battery to battery (or cell to cell) contact and without release of contents; and

(4)Except in the case of lithium batteries packed with equipment, packages may not exceed 30 kg gross mass.

As used above and elsewhere in these Regulations, " lithium content" means the mass of lithium in the anode of a lithium metal or lithium alloy cell, except in the case of a lithium-ion cell the "equivalent lithium content" in grams is calculated to be 0.3 times the rated capacity in ampere-hours.".

Reference: *IATA Dangerous Goods Regulations 44th Edition*

Security Export Control

"Security export control" entails observing the legislation provided to maintain international peace and safety by preventing the proliferation of weapons of mass destructions (nuclear weapons, chemical warfare weapons, biological weapons and missiles) and the excessive buildup of conventional weapons. COCOM, the committee that imposed controls on exports to the Communist bloc, was disbanded on March 31, 1994. However, the items, etc. which were restricted by COCOM are still the target of the restrictions but they are now also subject to some amendments which were made in September 1996.
Lithium batteries are on the list of items subject to the Export and Trade Control Regulation (Item 7 in annex Table 1) but all the products mentioned in this catalog are exempt from these regulations.
The above notwithstanding, these batteries may be subject to the regulations depending on their ultimate destination, application and other conditions.
When a non-exemption/exemption certificate is required for exportation, etc. or if you have any queries, contact a Panasonic sales representative.