

Products Information Data Sheet

These products are hermetically sealed state in a vessel, and are exempted from Safety Data Sheet regulations. However, this manual provides you with referential information to safety use the products.

Section 1 - Products and Company Identification

Products name	:	Coin-type Manganese Dioxide Lithium Batteries (Primary Battery)
Products sizes	:	CR1216, CR1220, CR1616, CR1620, CR1632, CR2016, CR2025, CR2032, CR2430, CR2450, CR2477
Company	:	TOSHIBA LIFESTYLE PRODUCTS & SERVICES CORPORATION
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Section 2 - Hazards Identification

GHS Classification	:	Not applicable
Toxicity	:	Vapor generated from burning cell/battery, it may irritate eyes, skin and throat.
Hazard	:	Electrolyte and lithium metal are inflammable, There is a risk of explosion or ignition if cells/batteries are disposed in fire or heated. When stacking or jumbling cells/batteries may cause heat generation, ignition and explosion by external short circuits.

Section 3 - Composition/ Information on Ingredients

Ingredients	CAS#	PRTR	Weight/Content
Lithium metal (Li)	7439-93-2	Not regulated	Shown at *1
Propylene carbonate (C ₄ H ₆ O ₃)	108-32-7	Not regulated	5~10wt%
Manganese dioxide (MnO ₂)	1313-13-9	1-412	20~40wt%
Graphite (C)	7782-42-5	Not regulated	1.5~5.0wt%
Acetylene black (C)	1333-86-4	Not regulated	
Dimethoxy ethane (C ₄ H ₁₀ O ₂)	110-71-4	Not regulated	3~5wt%
Lithium perchlorate (LiClO ₄)	7791-03-9	Not regulated	0.5~1.5wt%

*1 : Lithium metal weight (g) as standard

CR1216	0.009	CR2025	0.042
CR1220	0.013	CR2032	0.060
CR1616	0.012	CR2430	0.075
CR1620	0.023	CR2450	0.165
CR1632	0.033	CR2477	0.265
CR2016	0.021		

Section 4 - First Aid Measures (In case of electrolyte leakage from the cell/battery)

Inhalation of electrolyte fume	:	If a person inhaled steam, move to the place where air is fresh immediately. If you feel unwell, immediately seek medical attention.
Skin contact by electrolyte	:	If the content adheres to skin, immediately wash it with a large amount of clean water and soap promptly. If you have pain, immediately seek medical attention.

- Eyes contact by electrolyte : If the content enters eyes, rinse eyes with a large amount of clean water for more than 15 minutes, and immediately seek medical attention.
- Ingestion of electrolyte : If a cell/battery is swallowed, immediately seek medical attention.

Section 5 - Fire Fighting Measures

- Fire extinguishers : CO₂, dry chemical
- Specific firefighting method : In the initial state of a fire, move cells/batteries from near the fire source, to a safe location. At that time, work at a windward location, as far as possible, and be sure to wear the protective equipment. (fireproof gloves, protective mask, protective eyewear, protective clothing)
- Protection of firefighting personnel : Be wear protective equipment (fireproof gloves, protective mask, protective eyewear, protective clothing) for the keeping safe. (If possible, use atmosphere-supplying respirator)

Section 6 - Accidental Removing Measures

The cell/battery hermetically contains constituents in a vessel, so contents normally may not leak out. However, if the contents leaks because of a mechanical or electrical stress, you should avoid a fire, wear protective equipment and collect the solids in an empty vessel. If it scatters, wipe it off with a dry cloth. If the lithium metal leaks, it reacts with the moisture in the air to generate heat and may ignite, so treat it immediately. At that time, be sure to put on a protective-breathing mask. (If possible, use atmosphere-supplying respirator)

Section 7 - Handling and Storage

- Handling : If the cell/battery leaks or has a strange odor, dispose of it properly. Do not solder a cell/battery body. Do not contact cell/battery terminals between each other, or with another conductor. Do not throws into fire, disassemble, heat, dent, deform, charge nor drop a battery. Do not dip a cell/battery in water or seawater.
- Storage : Store cells/batteries without direct sunlight, high temperature, high humidity, rain, dew, etc., and select a storage location with a temperature as low as possible (preferable temperature 10-25°C and relative humidity 70% or less). In addition, keep cells away from dangerous matter such as combustible or ignitable materials. Absolutely never place a cell/battery in contact with a combustible or conductive substance. Prepare appropriate firefighting equipment.
- Note : See handling and storing precautions described in the product catalog, specification, etc.

Section 8 - Exposure Controls/Personal Protection

- Protection of respiratory organs : Not required in a normal operating state
- Protection of eyes : Not required in a normal operating state
- Other protective tools etc. : Not required in a normal operating state

(In case of electrolyte leakage from the cell/battery)

Protection of respiratory organs	:	Protective mask (For organic gas)
Protection of eyes	:	Protective eyewear
Other protective tools etc.	:	Protective gloves

Section 9 - Physical and Chemical Properties

Shape	:	Cylindrical. Contents are sealed in a stiff stainless steel vessel.
PH	:	Not applicable because a cell/battery is not soluble with water.
Boiling point/boiling range	:	No information
Melting point	:	No information
Decomposition temperature	:	No information
Flash point	:	No information

Section 10 - Stability and Reactivity

If a number of cells/batteries are jumbled without insulating terminals, they may short and possibly electrolyte leakage, generate heat, rupture and ignite. If the cell/battery is charged, the electrolytic solution or the like may suddenly spurt out due to the generation of gas from the inside of the cell/battery. There is also the possibility of rupture and ignite. If the cell/battery is heated or thrown into a fire, it may splash the electrolyte, rupture and ignite. If the cell/battery is disassembled, it may short and possibly electrolyte leakage, generate heat, rupture and ignite.

Section 11 - Toxicological Information

There is no toxicity because chemical substances are hermetically sealed in a metal vessel.

Section 12 - Ecological Information

No information as the cells/batteries.

Section 13 - Disposal Considerations

Disposal of the substance should be done according to the laws and regulations.

Although used cells/batteries can be discarded basically as "Non burnable rubbish" some local governments sort and collect them at their own discretion. Therefore, observe instructions of the government you belong to, to dispose of the substance.

Keep the following discarding precautions :

- Even a used cell/battery sometimes stores electric energy. Therefore, to prevent the cell/battery from short-circuit, isolate cells/batteries from each other by a method such as taping +, - terminals of cells/batteries, or using the individual housing case of a cell/battery.
 - Packing cells/batteries so that they are not shorted, and prevent the package from being wetted.
 - If cells/batteries must be discarded in a country other than Japan, observe the instructions of the country and local government.
 - The user, a business entity, must contract with a firm of disposing of industrial waste, and appropriately discard the substance.
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Section 14 - Transportation Information

Handling :

When transporting cells/batteries, avoid high temperatures, high humidity and condensation. Pack the cell/battery so that it does not short-circuit, and fix it so that the load does not collapse.

Cell/Batteries should be stored at room temperature (45 ° C or less: 10-25 ° C recommended) with low temperature changes and a relative humidity of 70% or less. Handle the container with care and do not subject it to shocks that could leave dents in the cell/battery.

UN Number and UN Class :

- Proper Shipping Name/Description : LITHIUM METAL BATTERIES
- UN Number : UN3090
(When cell/batteries contained in equipment and packed with equipment, it is UN3091)
- Class or Div.(Sub Risk) : Class9 (Miscellaneous Dangerous Goods)
- Packing Group : —

(Exemption)

Even though the cells/batteries are classified as lithium metal batteries (UN3090 or UN3091), they are not subject to some requirements of Dangerous Goods Regulations because they meet the following :

- For cell/battery, the lithium content is not more than 0.3g.
- Each cell/battery is of type proven to meet the requirements of each test in the UN Manual of Tests and Criteria, Part III, sub-section 38.3.
- Each cell/battery is manufactured in ISO9001 certified factory.

<Aircraft Transportation>

Lithium metal cells and batteries are prohibited from being transported by passenger aircraft.

The prohibition on the carriage on passenger aircraft only applies to lithium metal cells and batteries when shipped by themselves (PI968 Section IA, IB and II). The prohibition does not apply to lithium metal cells and batteries packed with equipment (PI969) or contained in equipment (PI970).

<Ocean Transportation>

It is possible to transport lithium metal cells and batteries as Non-Dangerous Good by vessel if satisfied with SP188 of IMO-IMG Code.

Note :

Prior confirmation is required as some countries, regions and shipping companies may have their own regulations.

It is required that the shipper is responsible for confirming the laws and regulations related to transportation. When the customer is transported as a shipper after delivery from us, it is necessary for the customer to check the latest laws and regulations by yourself. In addition, if you violate the law, you will be subject to punishment, so be careful. The above information is provided as reference information regarding transportation and is not guaranteed.

Section 15 - Regulatory Information

The laws and ordinances about the cell/battery shall obey the latest laws and ordinances.

- Recommendations on the Transportation of Dangerous Goods, Model Regulations 22nd (UN)
- Recommendations on the Transportation of Dangerous Goods, Manual of Tests and Criteria (UN)
- Dangerous Goods Regulations, 64th Edition (IATA)
- Technical Instructions for the Safety Transport of Dangerous Goods by Air, 2021-2022 Edition (ICAO)
- International Maritime Dangerous Goods (IMDG) Code, 2020 Edition (IMO)
- EU Battery Directive (2006/66/EC, 2013/56/EU) (Europe)
- Regulation (EC)No.1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) (Europe)
- Ship Safety Law, Regulations for the Carriage and Storage of Dangerous Goods in Ship (Japan)
- Best management practices for Perchlorate Materials (State of California Regulations)
- Act on Preventing Environmental Pollution of Mercury (Japan)

Regulations on the handling of perchlorate (California law)

In California only, the following notation is required for The Coin-type Manganese Dioxide Lithium Batteries and equipment packaging, and the instruction manual that includes the Coin-type Manganese Dioxide Lithium Batteries.

CR Coin Lithium Battery contains Perchlorate Material –special handling may apply.

See <https://dtsc.ca.gov/perchlorate/>

Section 16 - Other Information

The cells/batteries fall in the category of “Article” defined by EPA (U.S. Environment Protection Agency), and chemical substances used in a cell/battery satisfy the application exemption conditions as part of “Article,” so the cells/batteries are not regulated by TSCA.

Please take appropriate measures according to individual conditions, uses, and usages before using. In addition, the contents of this description were created based on the materials and information available to us at the time of creation, and may be revised to new information.

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