

4 First aid measures (in case of electrolyte leakage from the battery)

- Eye contact by electrolyte : Do not rub eyes. Wash immediately with large amount of clean water such as tap water 15 minutes or more then receive the ophthalmologist's treatment promptly. Take medical treatment, if appropriate procedures are not taken, this may cause eye irritation.
- Skin contact by electrolyte : Wash the affected area under tepid running water using a mild soap. If appropriate procedures are not taken, this may cause sores on the skin. Get medical attention if irritation develops or persists.
- Ingestion of electrolyte : Wash in the mouth immediately with large amount of clean water and make the sufferer drink a lot of water.
Arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.
- Inhalation of electrolyte fume : Remove to fresh air immediately. Take a medical treatment

5 Firefighting measures

- Extinguishing Media : Dry chemical, carbon dioxide, great deal of water.
- Specific Fire-Fighting Methods : Be sure on the windward to extinguish the fire, since vapor from burning batteries may make eyes, nose and throat irritate, Wear the respiratory protection equipment in some cases.

6 Accidental release measures (in case of electrolyte leakage from the battery)

- Health Considerations and Protective Equipment
Wear proper protective equipment.
- Environmental Precautions
Prevent spills form entering sewers, watercourses.
- Spill Clean-Up Procedures
Collect material to minimize dust generation ; use wet mop, damp sponge.
Place collected material into a suitable container for disposal.

7 Handling and storage

Handling

- When packing the batteries, do not allow battery terminals to contact each other, or contact with other metals. Be sure to pack batteries by providing partitions in the packaging box, or in a separate plastic bag so that the single batteries are not mixed together.
- Use strong material for packaging boxes so that they will not be damaged by vibration, impact, dropping and stacking during their transportation.
- Do not short-circuit, recharge, deform, throw into fire or disassemble.
- Do not mix different type of batteries.
- Do not solder directly onto batteries.
- Insert the battery correctly in electrical equipment.

Storage

- Do not let water penetrate into packaging boxes during their storage and transportation.
- Do not store the battery in places of the high temperature or under direct sunlight.
- Please also avoid the places of high humidity. Be sure not to expose the battery to condensation, rain or frozen condition

8. Exposure controls and personal protection

- Acceptable concentration : Not specified about Zinc Carbon Battery.
Facilities : Nothing in particular.

Protective Equipment (in case of electrolyte leakage from the battery)

- Respiratory Protection : For most condition no respiratory protection.
Hand Protection : Safety gloves.
Eye Protection : Safety glasses must be worn when handling this product.
Skin and Body Protection : To prevent any contact, wear impervious clothing such as boots or whole body suits as appropriate.

9. Physical and chemical properties

- Appearance : Cylindrical shape (R20, R14, R6, R03)
Prismatic shape (6F22)
Nominal Voltage : 1.5 V (R20, R14, R6, R03)
9 V (6F22)

10. Stability and reactivity

Since batteries utilize a chemical reaction they are actually considered a chemical product. As such, battery performance will deteriorate over time even if stored for a long period of time without being used. In addition, the various usage conditions such as discharge, ambient temperature, etc. are not maintained within the specified ranges the life expectancy of the battery may be shortened or the device in which the battery is used may be damaged by electrolyte leakage.

11. Toxicological information

Battery is not harmful as its ingredients are in a hermetically sealed state.

12. Ecological information

In case of the worn out battery was disposed in land, the battery case may be corroded, and leak electrolyte. However, there is no environmental impact information.
Mercury (Hg), Cadmium (Cd) and Lead (Pb) are not used in cell.

13. Disposal considerations

When the battery is worn out, dispose of it under the ordinance of each local government.

14. Transport information

Handling

During the transportation of a large amount of batteries by ship, trailer or railway, do not leave them in the places of high temperatures and do not allow them to be exposed to condensation.

During the transportation do not allow packages to be dropped or damaged.

UN Number and UN Class

Not applicable

Not Dangerous Goods. For air transportation, the words "Not Restricted, as per Special Provision A123" must be included in the description of the substance on the Air Waybill, when an Air Waybill is issued.

15. Regulatory information

- EU Battery Directive (2006/66/EC, 2013/56/EU)
- Regulation (EC) No. 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)
- Act on Preventing Environmental Pollution of Mercury (Japan)

16. Other information

This PSDS is provided to customers as reference information in order to handle batteries safely. It is necessary for the customer to take appropriate measures depending on the actual situation such as the individual handling, based on this information.

References

- IATA Dangerous Goods Regulations 60th Edition (IATA DGR)
- IMO International Maritime Dangerous Goods Code 2016 and 2018 Edition (IMDG Code)

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