

Nickel hydrogen storage battery (Technical information)

Manufacturer information

Alkaline Storage battery Division

Matsushita Battery Industrial Co., Ltd.

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Name of product: Recycled Ni-MH or Ni-MH after use

Substance definition ()= CAS No.

Positive active material: Nickel hydro oxide (12054-48-7)

Negative active material: hydrogen absorbed alloy

UN Class / UN number: Not applicable.

Hazardous and Toxicity Class:

Class name: Not applicable

Hazard: In case of battery short circuit, there is possibility of heat up of battery and/or leakage.

Toxicity: In case of burning of plastic parts there is possibility of generated gas, which has toxic for eyes, nose and throat.

First Aid Measures

In case of electrolyte leakage from the battery, necessary actions are described as follows.

1. Eye contact: Flush the eyes with plenty of clean water such as tap water more than 15 minutes without rubbing and Immediately taking a medical treatment.

If appropriate procedures are not taken, this may cause a loss of sight.

2. Skin contact: Wash the contact areas off immediately with plenty of clean water such as tap water using soap, otherwise It might cause sores on the skin.

3. Inhalation: Move the exposed person to fresh air area immediately.

And take a medical treatment immediately.

Fire Fighting Measures

1. Extinction medicine or the extinction device provided in the fire fighting law should be used. (Gas system, bubble system, and powder system)

2. When danger is forecast, the air respiratory organ should be used because corroded gas might be generated when fire is extinguished.

3. If necessary a large amount of water can use as a supplementary means because of effect for cooling. However, when the hydrogen absorbed alloy burns, a small amount of water occasionally increases the force of the fire oppositely. In that case, use not water but dry sand, etc.

4. A surrounding combustible is removed at once at a fire.

5. The battery is moved to a safe at once place for a fire in the surrounding.

Measures for electrolyte leakage

(When the electrolysis liquid leaks from the product)

1. Wiping it off with the dry towel.

2. The fire should not be brought close.

3. The protection glasses and rubber gloves are worn if necessary.

Handling and Storage

1. The terminal of the battery pack takes the packing form to be able to prevent external short circuit. However, when a used battery is soaked with water etc., and when they are charged less than 10% of electric capacity, it is not that keeping and attention severely.

2. It is specified that it is a nickel hydrogen storage battery on the surface of the packing goods.

3. They are packed by the material with enough strength to prevent destroying battery by vibrates, impact, fall and accumulation, etc. while

transporting them.

4. Batteries keep out of water and wet when kept and transported.
5. Batteries keep out of fire when kept and transported and is prevented in the high temperature atmosphere.

An example of the high temperature keeping: The high temperature storage like in the car should be prevented.

Exposure control (in case of electrolyte leakage from the battery)

Acceptable concentration: Not specified in Japanese industrial hygienic association and ACGIH

Facilities: Ventilation is noted as the limited part exhaust device of the keeping place is used

Protective clothing: The protection glasses, the mask for disaster prevention, and the protection gloves are used.

Physical and Chemical Properties

Externals: The nickel hydrogen storage battery is stored in the plastic resin case.

The number of shape and a built-in battery is various, and it is not possible to provide for the voltage value.

Toxicological information

A packing battery short external, the crushing transformation, and the high temperature exposure of 100 °C or more cause abnormal heat generation and the fire.

Ecological Information

When the electrolysis liquid leaks from the product

Acute toxicity: LD50 2g/Kg oral rat (Based on material safety data sheet of liquid potassium hydroxide)

Stimulation: The inflammation is caused the cornea when catching one's eye.

The exposure for a long time stimulates mucous membranes of the bronchial tube and eyes.

Transport Information

1. 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 condensation.
2. Transportation with the possibility of the collapse of cargo piles and the packing damage is avoided.

Others

This sheet is for reference only.

References:

1. Ni-Cd, Ni-MH Panasonic Catalogue and technical handbook.
2. MSDS of Nickel hydro oxide and potassium hydro oxide and sodium hydro oxide from supplier.

Battery Measurement Basic Data

1. Application Date: _____

2. Application factory date:

Company name: Matsushita Battery Industrial Co., Ltd.

Alkaline Storage Battery B.U.

Contact person: Toshihisa Hiroshima

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3. Battery data

Brand: (English) Panasonic

Model: _____ Voltage: 1.2V

Type: Manganese Battery Alkaline Battery Lithium Battery

Zinc Air Battery Ni-MH Battery NiCd Battery Others

Series: Primary Battery Secondary Battery

Outlook: Cylindrical Prismatic Button

4. Heavy metal quantity list:

Hg: less than 0.5ppm Measurement Method: Atomic Absorption Spectrometer

Cd: 0.5-3.0ppm Measurement Method: Atomic Absorption Spectrometer

Pb: less than 0.1% Measurement Method: Atomic Absorption Spectrometer

Measurement Laboratory

Alkaline Storage Battery B.U. Engineering group(Material Analysis Team)

Produced In Japan.