Safety Data Sheets (SDSs)

Client	NINGBO FEILU BATTERY CO.,LTD
Add. of Client	No.172, Xidian South Road, Xidian Town, Ninghai County, Ningbo , Zhejiang , China
Description	Zinc Manganese Dry Battery
Model /Type	R6(AA), R03(AAA), R14(C), R20(D), 6F22(9V), 4R25, 3R12, R1, R2
Manufacturer	NINGBO FEILU BATTERY CO.,LTD
Add. of Manufacturer	No.172, Xidian South Road, Xidian Town, Ninghai County, Ningbo , Zhejiang , China
Nominal Voltage	1.5V
Date of Receipt	2021-03-17
Laboratory	Dongguan ZRLK Testing Technology Co., Ltd.
Address	Building D, No.2, Jinyuyuan Mansion, No.18, Industrial West Road, Songshan Lake High-tech Industrial Development Zone, Dongguan, Guangdong, China
Approved Signatory	Maggie.Gao
Inspected by	Ailis.Ma
Censored by	Lahm Peng

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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product name: Zinc Manganese Dry Battery

Model: R6(AA), R03(AAA), R14(C), R20(D), 6F22(9V), 4R25, 3R12, R1, R2

Other means of identification

Synonyms:none

Recommended use of the chemical and restrictions on use

Recommended Use:Used in portabl electronic equipments;

Uses advidsed against:

a) Do not dismantle, open or shred Zinc Manganese Dry Battery.

b) Do not expose Zinc Manganese Dry Battery to heat or fire. Avoid storage in direct sunlight.

c) Do not short-circuit a Zinc Manganese Dry Battery. Do not store Zinc Manganese Dry Battery haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects.

d) Do not remove a Zinc Manganese Dry Battery from its original packaging until required for use.

e) Do not subject Zinc Manganese Dry Battery to mechanical shock.

f) In the event of a Zinc Manganese Dry Battery leaking, do not allow the liquid to come in contact with the skin or eyes. If contact has been made, wash the affected area with copious amounts of water and seek medical advice.

g) Observe the plus (+) and minus (–) marks on the Zinc Manganese Dry Battery and equipment and ensure correct use.

h) Battery usage by children should be supervised.

i) Seek medical advice immediately if an Zinc Manganese Dry Battery has been swallowed.

j) Keep batteries clean and dry.

k) When possible, remove the battery from the equipment when not in use.

l) Dispose of properly.

Details of the supplier of the safety data sheet:

Supplier Name: NINGBO FEILU BATTERY CO.,LTD

Address: No.172, Xidian South Road, Xidian Town, Ninghai County, Ningbo , Zhejiang , China

Telephone number of the supplier: 0086-0574-65303799

E-mail address: 1293176900@qq.com

Code postal: 315000

Emergency telephone number

Company Emergency Phone Number: 0086-0574-65303799

2. HAZARDS IDENTIFICATION

Classification

Acute toxicity - Dermal	Category 3
Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 1

GHS Label elements, including precautionary statements

Danger

Hazard statements

Toxic in contact with skin

Causes serious eye irritation

Suspected of causing cancer

Causes damage to organs through prolonged or repeated exposure



Precautionary statements-Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/protective clothing/eye protection/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not breathe dust/fume/gas/mist/vapors/spray

Do not eat, drink or smoke when using this product

Precautionary Statements - Response

If exposed or concerned: Get medical advice/attention

Specific treatment (see supplemental first aid instructions on this label)

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention

Skin

IF ON SKIN: Wash with plenty of water and soap

Call a POISON CENTER or doctor if you feel unwell

Take off immediately all contaminated clothing and wash it before reuse

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other information

harmful if swallowed. Very toxic to aquatic life with long lasting effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterixation: Mixtures

Description:

Product: Consisting of the following components.

Common Chemical Name	Concentration (%)	CAS Number
Manganese dioxide	38	1313-13-9
Potassium hydroxide	4	1310-58-3
Graphite	5	7782-42-5
Iron	31.7	7439-89-6
Zinc	9.8	7440-66-6
Zinc oxide	1	1314-13-2
Carbon	5	7440-44-0
Copper	5	7440-50-8
Carbonate, methyl ethyl	0.5	623-53-0

Note: CAS number is Chemical Abstract Service Registry Number.

N/A=Not apply.

4. FIRST-AID MEASURES

First aid measures

Eye Contact Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.

Skin Contact Remove contaminated clothing and shoes. Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

Inhalation Move to fresh air. If symptoms persist, call a physician.

Ingestion Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed

Swallowing Do not induce vomiting. Get medical attention.

Most Important Symptoms/Effects No information available.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

CO2, dry chemical powder, water spray.

Unsuitable Extinguishing Media:No information available.

Specific Hazards Arising from the Chemical

Formation of toxic gases is possible during heating or in case of fire.

In case of fire, the following can be released:

Carbon monoxide(CO)

Carbon dioxide

Other irritating and toxic gases.

Hazardous Combustion Products

Carbon oxides.

Explosion Data

Sensitivity to Mechanical Impact No

Sensitivity to Static Discharge No

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. For example: Wear self-contained respiratory protective device. Wear suitable protective clothing and eye/face protection.

Special hazards arising from the substance or mixture:

The leaking electrolyte may corrosive. Under the conditions of short-circuited, overcharged, overdischarged, punctured, crushed, put into the fire and exposed on the temperature higher than that specified by manufacture(100℃), the battery may burn or explode.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Avoid contact with eyes.

Refer to section 8 for personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.

Evacuate personnel to safe areas.

Environmental precautions

Environmental Precautions Refer to protective measures listed in Sections 7 and 8.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning up Use personal protective equipment. Dam up. Cover liquid spill with sand, earth or other Non combustible absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Wear personal protective equipment.
Wash thoroughly after handling. Use this material with adequate ventilation.
The product is not explosive.

Conditions for safe storage, including any incompatibilities

The storage area should be clean, cool, dry, ventilated and weatherproof. Incompatibilities: strong oxidizing agents, corrosives and foods. Such batteries must be packed in inner packaging in such a manner as to effectively prevent short circuits and to prevent movement which could lead to short circuits.
For normal storage, the temperature should be between +10℃ and +25℃ and never exceed +30℃. Extremes of humidity (over 95% and below 40% relative humidity) for sustained periods should be avoided since they are detrimental to both batteries and packaging. Batteries should therefore not be stored next to radiators or boilers, nor in direct sunlight.
The above recommendations are equally valid for storage conditions during prolonged transit. Thus, Batteries shall be stowed away from ships' engines and not left for long periods in unventilated metal box cars during summer.

Incompatible Products None known.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control parameters

none

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962(11th Cir., 1992).

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Ensure adequate ventilation.

Individual protection measures, such as personal protective equipment

Eye/Face Protection:



Tightly sealed goggles

Body protection:

Protective work clothing.

Skin protection:



Protective gloves

Material of gloves:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the

resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material:

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

Respiratory Protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Form: Cylindrical
	Color: Silvery
	Odour: Monotony
	Odor Threshold: No information available
Change in condition:	
pH, with indication of the concentration	Not determined.
Melting point/freezing point	Not determined.
Initial boiling point and Boiling range:	Not determined.
Flash Point	Not determined.
Evaporation rate	Not determined.
Flammability (solid, gas)	Not determined.
Upper/lower flammability or explosive limits	Not determined.
Vapor Pressure:	Not determined.
Vapor Density:	Not determined.
relative density:	Not determined.
Solubility in Water:	Not determined.
Solubility in other solvents	Not determined.
n-octanol/water partition coefficient	Not determined.
Auto-ignition temperature	Product is not self-igniting.
Decomposition temperature	Not determined.
Odout threshold	Not determined.
Evaporation rate	Not determined.
Viscosity	Not determined.
Other Information	No further relevant information available.

10. STABILITY AND REACTIVITY

Reactivity: Stable under recommended storage and handling conditions (see section 7, Handling and storage).
Chemical stability: Stable under normal conditions of use, storage and transport.
Thermal decomposition/conditions to be avoided: No decomposition if used according to specifications.
Possibility of Hazardous Reactions: None under normal processing.
Hazardous Polymerization: Hazardous polymerization does not occur.
Conditions to avoid: Strong heating, fire, Incompatible materials.
Incompatible materials: Strong oxidizing agents. Strong acids.Base metals.
Hazardous Decomposition Products: Carbon oxides, Other irritating and toxic gases.

11. TOXICOLOGICAL INFORMATION

Acute toxiciy: No data available.
Skin corrosion/irritation: No irritant effect.
Serious eye damage/irritation: Cause serious eye irritation.
Respiratory or skin sensitization: No sensitizing effects known.
Specific target organ system toxicity: No information available.
CMR effects(carcinogenity, mutagenicity and toxicity for reproduction): No information available.

12. Ecological Information

Toxicity:

Acquatic toxicity:
No further relevant information available.

Persistence and degradability: No further relevant information available.
Bioaccumulative potential: No further relevant information available.
Mobility in soil: No further relevant information available.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects: No information available.

13. DISPOSAL CONSIDERATIONS

· **Waste treatment methods**
Recommendation: Must not be disposed together with household garbage.
Do not allow product to reach sewage system
Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

Land transport

ADR/RID class: Not regulated.

Maritime transport

Non-Hazardous for sea transport: Non-hazardous for sea transport.

Air transport

Not restricted to IATA DGR according to special provision A123.

The Panasonic Zinc Manganese Dry Battery according to SP A 123 of the 2018 IATA Dangerous Goods regulations 59th Edition may be transported. and applicable U.S. DOT regulations for the safe transport of Panasonic Zinc Manganese Dry Battery.

The packaging shall be adequate to avoid mechanical damage during transport, handling and stacking. The materials and pack design shall be chosen so as to prevent the development of unintentional electrical conduction, corrosion of the terminals and ingress of moisture.

The Nickel-cadmium rechargeable batter having the potential of a dangerous evolution of heat must be prepared for transport so as to prevent: (a) a short-circuit (e.g. in the case of batteries, by the effective insulation of exposed terminals; or, in the case of equipment, by disconnection of the battery and protection of exposed terminals); and

(b) Accidental activation.

The words “Not Restricted” and the Special Provision number must be included in the description of the substance on the Air Waybill as required by 8.2.6, when an Air Waybill is issued.

The package must be handled with care and that a flammability hazard exists if the package is damaged;

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation:

Authorisations: No information available.

Restrictions on use: No information available.

Regulatory information

CAS No.	EU (EINECS)	**US (TSCA)**	**Japan (ENCS)**	**Canada (DSL/ NDSL)**	**Austrlia (AICS)**	**Korea (ECL)**	**China (IECSC)**
1313-13-9	Listed	Not listed	Not listed	NDSL	Not listed	Not listed	Not listed
1310-58-3	Listed	Listed	Listed	DSL	Listed	Listed	Listed
7782-42-5	Listed	Listed	Listed	DSL	Listed	Listed	Listed
7439-89-6	Not listed	Listed	Not listed	DSL	Listed	Listed	Listed
7440-66-6	Not listed	Listed	Not listed	DSL	Listed	Listed	Listed
1314-13-2	Listed	Listed	Listed	DSL	Listed	Listed	Listed
7440-44-0	Listed	Listed	Listed	DSL	Listed	Listed	Listed
7440-50-8	Listed	Listed	Listed	DSL	Listed	Listed	Listed
623-53-0	Listed	Listed	Listed	DSL	Listed	Listed	Listed

Chemical safety assessment A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases:

R20/22: Harmful by inhalation and if swallowed.

R36: Irritating to eyes.

H302: Harmful if swallowed.

**********End of SDS**********