

MATERIAL SAFETY DATA SHEET

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NANFU™(Excell™)Alkaline Battery

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity

Product Name: NANFU(Excell) Alkaline Battery

SAP Material No:

Company

FUJIAN NANPING NANFU BATTERY Co., Ltd.

Telephone Numbers

+86 755 88307145

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	(by weight)
Manganese Dioxide	1313-13-9	30-40%
Graphite	7782-42-5	2-5%
Zinc	7440-66-6	10-25%
Potassium Hydroxide	1310-58-3	4-10%

3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye

Contents of an open battery can cause severe irritation and chemical burns. Immediately flush eyes thoroughly with water for at least 15 minutes, lifting upper and lower lids, until no evidence of the chemical remains. Seek medical attention.

Skin

Contents of an open battery can cause skin irritation and/or chemical burns. Remove contaminated clothing and wash skin with soap and water. If a chemical burn occurs or if irritation persists, seek medical attention.

Swallowing

Contents of an open battery can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract. If battery or open battery is ingested, do not induce vomiting or give food or drink. Seek medical attention immediately.

Inhalation

Contents of an open battery can cause respiratory irritation. Provide fresh air

and seek medical attention.

Symptoms of Exposure

Severe irritation and chemical burns.

Target Organ Effects

No data

Developmental Information

No data

Cancer Information

No data

Other Health Effects

No data

Primary Route(s) of Entry

Route of entry - Inhalation: NO

Route of entry - Skin: YES

Route of entry - Ingestion: NO

4. FIRST AID MEASURES

Eyes

Not anticipated. If battery is leaking and material contacts eyes, flush with copious amounts of clear, tepid water for 30 minutes. Contact physician at once.

Skin

Not anticipated. If battery is leaking, irrigate exposed skin with copious amounts of clear, tepid water for at least 15 minutes. If irritation, injury or pain persists, consult a physician.

Swallowing

Not anticipated. Rinse the mouth and surrounding area with clear, tepid water for at least 15 minutes. Consult a physician immediately for treatment and to rule out involvement of the esophagus and other tissues.

Inhalation

Not anticipated. If battery is leaking, contents may be irritating to respiratory passages. Remove to fresh air. Contact physician if irritation persists.

5. FIRE FIGHTING MEASURES

Flash Point(closed cup)

NA

Explosive Limit

NA

Autoignition Temperature

NA

Hazardous Products of Combustion

NA

Fire and Explosion Hazards

NA

Extinguishing Media

Use water, foam or dry powder, as appropriate.

Fire Fighting Instructions

As with any fire, wear self-contained breathing apparatus to avoid inhalation of hazardous decomposition products. Like any sealed container, battery cells may rupture when exposed to excessive heat; this could result in the release of flammable or corrosive materials.

NFPA Rating

Health – 0, Flammability – 0, Reactivity – 0

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Notify safety personnel of large spills. Caustic potassium hydroxide may be released from leaking or ruptured batteries. Avoid eye or skin contact and inhalation of vapors. Increase ventilation. Clean-up personnel should wear appropriate protective wear.
Environmental precautions:	In the event of battery rupture, prevent released material from entering drains.
Methods for cleaning up:	In the event of battery rupture, collect all released material in plastic bag for waste disposal. Flush residue with Plenty of water. Care for well-Ventilated conditions. Recycle or dispose of the materials in an appropriate way.

7. HANDLING AND STORAGE

Handling

Avoid mechanical or electrical abuse. Do not short or install incorrectly. Batteries may explode, pyrolyze or vent if disassembled, crushed, recharged or exposed to high temperatures. Install batteries in accordance with equipment instructions. Do not mix battery systems, such as alkaline and zinc carbon, in the same equipment. Replace all batteries in equipment at the same time. Do not carry batteries loose in pocket or bag. Do not remove battery label.

Storage

Store in a cool, well ventilated area. Elevated temperatures can result in shortened battery life.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Eye Protection

Not required under normal conditions of use.

Skin Protection

Not required under normal conditions of use.

Respiratory Protections

Not required under normal conditions of use.

Engineering Controls

Not required under normal conditions of use.

Exposure Guidelines

No exposure limits established

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point

Not applicable for an Article

Vapor Pressure

Not applicable for an Article

Specific Vapor Density

Not applicable for an Article

Specific Gravity

3.0 – 4.2 g/cm³

Liquid Density

0.9-1.1

Percent Volatiles

0%

Evaporation Rate

Not applicable for an Article

Appearance

Cylinder

State

Solid object

Physical Form

Solid

Color

Silvery white

Odor

No odor

pH

7~11

10. STABILITY AND REACTIVITY

Hazardous polymerization

Product will not undergo hazardous polymerization.

Hazardous Decomposition

May form: Oxides or fumes of manganese, zinc, potassium hydroxide

Chemical Stability

Stable.

Incompatibility

Avoid contact with fire source

11. TOXICOLOGICAL INFORMATION

Alkaline batteries are not hazardous waste. Under normal conditions of use, alkaline batteries are non-toxic.

12. ECOLOGICAL INFORMATION

Issues such as ecotoxicity, persistence and bioaccumulation are not applicable for articles.

13. TRANSPORT INFORMATION

Waste Management Information

Individual consumers may dispose of spent (used) batteries with household trash. Nanfu does not recommend that spent batteries be accumulated (quantities of five gallons or more should be disposed of in a secure landfill), if recycling is not possible, the product have to be disposed of in accordance with your local legislation and regulations. Do not incinerate, since batteries may explode at excessive temperatures.

14. TRANSPORT INFORMATION

In general, all batteries in all forms of transportation (ground, air, or ocean) must be packaged in a safe and responsible manner. Regulatory concerns from all agencies for safe packaging require that batteries be packaged in a manner that prevents short circuits and be contained in "strong outer packaging" that prevents spillage of contents. All original packaging for Nanfu alkaline batteries has been designed to be compliant with these regulatory concerns.

Alkaline batteries (sometimes referred to as "Dry cell" batteries) are not listed as dangerous goods under the IATA Dangerous Goods Regulations, ICAO Technical Instructions and the U.S. hazardous materials regulations (49 CFR). These batteries are not subject to the dangerous goods regulations provided they meet the requirements contained in the following special provisions. Special Provision A123 in the IATA Dangerous Goods Regulations and ICAO Technical Instructions and Special Provision 130 in 49 CFR 172.102 of the U.S. hazardous materials regulations require alkaline batteries are packed in such a way to prevent short circuits or generating a dangerous quantity of heat. In addition, the IATA Dangerous Goods Regulations and ICAO Technical

Instructions require the words "not restricted" and the Special Provision number A123 be provided on the air waybill, when an air waybill is issued. Special provision 304 of the IMDG Code(Amdt,34-08) provides batteries, dry, containing corrosive electrolyte which will not flow out of the battery if the battery case is cracked are not subject to the provision of this Code provided the batteries are securely packed and protected against short-circuits. Examples of such batteries are alkali-manganese, zinc-carbon, nickel-metal hydride and nickel-cadmium batteries.

15. REGULATORY INFORMATION

Batteries marketed by Fujian Nanping Nanfu Battery Co., Ltd. are not classified as dangerous goods by the US Department of Transportation or the major international regulatory bodies and are therefore not regulated.

OSHA Status :

NA

TSCA Export Notification:

NA.

TSCA Inventory Status:

NA.

16. OTHER INFORMATION

None.

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