



B.P. 231, 38522 Saint Egreve, Cedex, France,

**Material Safety Data Sheet**

\* We would like to inform our customers that these batteries are exempt articles and are not subject to the 29 CFR 1910.1200 OSHA requirement, or to the Canadian WHMIS requirements and the sheets are supplied as a service to you.

**1. IDENTIFICATION**

Product Name: **Super Alkaline Batteries**  
Sizes: **All**  
Volts: **1.5V & 9V**  
Trade Name: **Enix Energies**  
Chemical System: **Zinc-manganese Dioxide**  
Designed for Recharge: **No**

**2. INGREDIENTS (COMPOSITION)**

Chemical Nature: Alkaline Zinc-manganese Dioxide Batteries

CAS-No/EINECS NO.: Not applicable

Dangerous ingredients which have to be mentioned acc. to 99/45/EEC and its adaptations

Chemical Name	%/wt	TLV (ACGIH)	CAS No.
Manganese dioxide	35-40	0.2 mg/m <sup>3</sup> TWA	1313-13-9
Graphite	3-5	2 mg/m <sup>3</sup> TWA	7782-42-5
Zinc	10-25	10mg/m <sup>3</sup> TWA	7440-66-6
Potassium hydroxide (38%)	5-10	2 mg/m <sup>3</sup> Ceiling	1310-58-3
Water, paper, plastic, other	--	Balance	--

**3. PHYSICAL AND CHEMICAL DATA**

Boiling Point:	N/A
Boiling Point:	N/A
Flash Point:	N/A
Explosion Limit:	N/A
Vapor Pressure:	N/A

Vapor Density:	N/A
Density:	N/A
Percent Volatile by Volume:	N/A
Evaporation Rate	N/A
Physical State:	N/A
Solubility in Water:	N/A
pH:	N/A
Partition Coefficient:	N/A
Appearance :	Geometric Solid Object

#### 4. HAZARDS IDENTIFICATIONS

##### **General advice:**

The common known rules for handling of chemicals should be obeyed. These chemicals are contained in a sealed steel can. For consumer use, adequate hazard warnings are printed on both the package and the battery. Potential for exposure should not exist unless the battery leaks, is exposed to high temperatures or is mechanically, or electrically abused. Concentrated potassium hydroxide contained is caustic. Anticipated potential leakage of potassium hydroxide is 2-20 mL, depending on battery size. Do not eat and drink batteries. Keep batteries away from small children.

##### **Physical-Chemical Hazards:**

This preparation is not classified as dangerous according to the criteria of directive 99/45/EEC.

##### **Hazards to man:**

If battery leaking, exposure to caustic ingredients may occur. Therefore, may cause sensitization by skin contact.

##### **Hazards to environment:**

Not applicable

#### 5. FIRST-AID MEASURES

##### **Inhalation:**

In case of excessive inhalation due to leaking batteries remove to fresh air. Obtain medical advice.

##### **Skin Contact:**

If exposed to a leaking battery, remove contaminated clothing. Wash exposed areas with plenty of water and soap. If irritation occurs, consult a physician.

##### **Eye contact:**

If a battery is leaking and materials contact eyes, flush immediately with running water for at least 15 minutes. Consult an ophthalmologist at once.

##### **Ingestion:**

Not anticipated due to size of batteries. Choking may occur with the smaller size batteries. If exposed to a leaking battery, rinse mouth and surrounding areas with running water for at least 15 minutes. Give plenty of water to drink. Do not induce vomiting. Obtain medical advice.

#### 6. FIRE-FIGHTING MEASURES

##### **Suitable extinguishing media:**

Carbon dioxide (CO<sub>2</sub>), foam, dry chemical powder.

**Extinguishing media not to be used:**

Never use a direct water jet.

**Exposure hazards ITom combustion products:**

In case of fire, carbon dioxide, carbon monoxide and other toxic organic substances will be generated.

Do not inhale fumes and smoke.

**Personal protective equipments:**

Wear full protective clothing. Use self-contained breathing apparatus.

## 7. 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 vapours. Increase the ventilation.

Wear protective clothing. Keep unprotected persons away.

**Environmental precautions:**

Avoid discharge and penetration into sewerage systems, waterways, pits, and cellars.

**Methods for cleaning up:**

Collect spilled material with an inert standard absorbent like sand or silica. Care for well-ventilated conditions.

Recycle or dispose of the materials in an appropriate way.

## 8. HANDLING AND STORAGE

**General handling:**

Obey the common known rules and precautions for handling with chemicals. Avoid mechanical and electrical abuse. Do not short battery or install incorrectly. Batteries may explode, pyrolyze or vent if disassembled, crushed, recharged or exposed to high temperatures. Install batteries according to equipment instructions. Do not mix battery systems, such as alkaline and zinc-carbon.

Replace all batteries in equipment at the same time. Do not carry batteries loose in pocket or bag. Do not remove battery labels.

**Storage:**

Store product in well-filled, appropriate coated and tightly closed containers avoiding influence of oxygen/air, light and humidity. Store at room temperature.

## 9. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Exposition/Technical measures:**

Atmospheric vapour concentrations must be minimized by adequate ventilation.

Protection of hands, eyes and skin: None required under normal use conditions. When handling leaking batteries, use neoprene, rubber or nitrile gloves and wear safety glasses to protect hands, eyes and skin.

**General safety and hygiene measures:**

Use only as directed.

## 10. TOXICOLOGICAL INFORMATION

Toxicity information is available on the battery ingredients noted in Section 2, but in general, not applicable to intact batteries.

**Chronic health effects:**

Not applicable to intact batteries.

**12. ECOLOGICAL INFORMATION:** Not available

**13. DISPOSIBLE CONSIDERATIONS**

**Product:**

Dispose in accordance with appropriate regulations. If in doubt, contact your local government office concerned for information. Do not incinerate, since batteries may explode at excessive temperatures.

**14. TRANSPORT INFORMATION**

**Road (ADRIRID):** Not regulated

**Air (ICAOIATA):** Not regulated

**Sea (IMDG):** Not regulated

These batteries are not regulated by international agencies as hazardous materials or dangerous goods when shipped.

A shipping name of "Alkaline Batteries - Non-hazardous" may be used on all domestic and international bills of lading.

**15. REGULATORY INFORMATION**

**Symbol:** N/A

**EC labeling:** None

**Risk phrases:** None

**Safety phrases:** None

Labeling is not required because alkaline batteries are classified as "articles" under the Dangerous Preparations

Directive and as such are exempt from the requirements of the Directive.

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**NOTICE: The information and recommendations set forth are made in good faith and are believed to be accurate at the date of preparation. Enix Energies . Makes no warranty expressed or implied.**