Safety Data Sheet

The batteries are exempt articles and are not subject to the OSHA Hazard Communication Standard Requirement. This sheet is only provided as technical information and is referred normal use of the product in question. Fullwin makes no warranty expressed or implied.

Section 1- Identification

- **Product Name**: Alkaline zinc-manganese dioxide batteries
- **Sizes**: LR6/LR03/LR20/LR14
- **Company**: Ningbo Fubang Battery Co., Ltd.
- **Telephone Numbers**: +86 574 86578006
- **Address**: 365 jingu zhong Road (west), yinzhou investment & business of Ningbo China
- **Fax Numbers**: +86 574 86578000
- **Date of preparation**: Jan.1, 2021

Section 2-Hazards Identification

This contains potassium hydroxide solution (KOH), and other combustible materials, all sealed in steel can. For this reason, improper handling of the battery could lead to distortion, leakage*, overheating, explosion and cause human injury or equipment trouble. Please strictly observe safety instructions.

(*leakage is defined as an unintended escape of liquid from a battery.)

Section 3-Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS#</th>
<th>LR6</th>
<th>LR03</th>
<th>LR14</th>
<th>LR20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manganese Dioxide (MnO₂)</td>
<td>1313-13-9</td>
<td>42.6</td>
<td>40.9</td>
<td>40.6</td>
<td>41.8</td>
</tr>
<tr>
<td>Zinc (Zn)</td>
<td>7440-66-6</td>
<td>16.1</td>
<td>14.8</td>
<td>16.0</td>
<td>17.4</td>
</tr>
<tr>
<td>Water (H₂O)</td>
<td>7732-18-5</td>
<td>12.2</td>
<td>11.7</td>
<td>11.0</td>
<td>11.1</td>
</tr>
<tr>
<td>Potassium Hydroxide (KOH)</td>
<td>1310-58-3</td>
<td>5.2</td>
<td>4.8</td>
<td>7.0</td>
<td>7.0</td>
</tr>
</tbody>
</table>

NA=Not Applicable
**Section 4-First Aid Measures**

None unless internal materials exposure. If contents are leaked out, observe following instructions

**Inhalation**  
Fumes can cause respiratory irritation. Remove to fresh air and consult a physician.

**Skin**  
Immediately flush skin with plenty of water. If itch or irritation by chemical burn persists, consult a physician.

**Eyes**  
Immediately flush eye with plenty of water for at least 15 minutes. Consult a physician immediately.

**Ingestion**  
If swallowing a battery, consult a physician immediately.
If contents come into mouth, immediately rinse by plenty of water and consult a physician.

**Section 5-Fire Fighting Measures**

In case of fire, it is permissible to use any class of extinguishing medium on these batteries or their packing material. Cool exterior of batteries if exposed to fire to prevent rupture.

Fire fighters should wear self-contained breathing apparatus.

**Section 6-Accidental Release Measures**

Steps to be taken in case material is released or spilled.

Batteries that are leakage should be handled with rubber gloves.

Avoid direct contact with electrolyte.

Wear protective clothing and a positive pressure Self-Contained Breathing Apparatus (SCBA).
Section 7-Handling and Storage

1) Handling

2) Storage
Never store the battery in hot and high humid place.

Section 8-Exposure Controls/Personal Protection
No engineering measure is necessary during normal use. If internal cell materials are leaked, the information in Section 4 & Section 6 will be useful.

Section 9-Physical and Chemical Characteristics
Nominal Voltage: 1.5V

Section 10-Stability and Reactivity
Stability: Stable
Hazardous polymerization: Will not occur
Condition to avoid: See section 7.
Hazardous Decomposition or Byproducts: Hydrogen

Section 11-Toxicological Information
NA

Section 12-Ecological Information
NA

Section 13- Disposal Considerations
The battery may be regulated by national or local regulation. Please follow the instructions of proper regulation. As electric capacity is left in a discarded battery and it comes into contact with other metals, it could lead to distortion, leakage, overheating, or explosion, so make sure to cover the (+) and (-) terminals with friction tape or some other insulator before disposal.

NA=Not Applicable
Section 14-Transportation 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 Fullwin 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 ADR European Agreement Concerning the International Carriage of Dangerous Goods by Road, the IMDG International Maritime Dangerous Goods Code, UN Dangerous Good Regulations, 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.

<table>
<thead>
<tr>
<th>Regulatory Body</th>
<th>Special Provisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADR</td>
<td>Not regulated</td>
</tr>
<tr>
<td>IMDG</td>
<td>Not regulated</td>
</tr>
<tr>
<td>UN</td>
<td>Not regulated</td>
</tr>
<tr>
<td>US DOT</td>
<td>49 CFR 172.102 Provision 130</td>
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<tr>
<td>IATA</td>
<td>A123</td>
</tr>
<tr>
<td>ICAO</td>
<td>Not regulated</td>
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</tbody>
</table>

All Fullwin alkaline batteries are packed in such a way to prevent short circuits or the generation dangerous quantities of heat and meet the special provisions listed above. In addition, the 2021 IATA (62nd edition) 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.

Section 15-Regulatory Information

USA EPA Mercury Containing & Rechargeable Battery Management Act of 1996: No mercury added
EU Battery Directive 2006/66/EC Amended 2013/56/EU: Fullwin batteries are compliant with all aspects of the Directive

Section 16-Other Information

If you want further information, please contact Fullwin sales representative