

## Safety Data Sheet

Printing date :Dec.20th,2016

Revision: Dec.20th,2016

## 1 Identification of the substance/preparation and of the company/undertaking

### · Product details

· **Trade name:** Alkaline Battery LR6 LR03 LR20 LR14 6LR61

· **Registration number:** Not available.

· **Application of the substance / the preparation:**

To provide power, mainly for remote control, flashlight and so on.

· **Manufacturer/Supplier:**

WUXI NORAN BATTERY CO., LTD.

Zhetangbang village, qianzhou town, huishan district, wuxi, jiangsu, China.

Tel: +86-510-83381858

Fax: +86-510-83399778

· **Further information obtainable from:** WUXI NORAN BATTERY CO., LTD.

· **Information in case of emergency:**

Andrew

MP: 13376218678

· **Email:** enquiries@live.cn

· **Reference Number:** OGCSH090122-1; SH9000538-1/CHEM

## 2 Hazards identification

### · Hazard description:



N Dangerous for the environment

· **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

## 3 Composition/information on ingredients

### · Chemical characterization

#### · Description:

Mixture of substances listed below with nonhazardous additions.

For the wording of the listed risk phrases refer to section 16.

#### · Dangerous components:

CAS: 1313-13-9 EINECS: 215-202-6 EU Number: 025-001-00-3	manganese dioxide	☒ Xn; R 20/22	35-40 %
CAS: 7440-66-6 EINECS: 231-175-3	Zinc powder - zinc dust (pyrophoric)	☒ F, ☒ N; R 15-17-50/53	10-22 %
CAS: 1310-58-3 EINECS: 215-181-3 EU Number: 019-002-00-8	potassium hydroxide	☒ C, ☒ Xn; R 22-35	5-9 %
CAS: 7782-42-5 EINECS: 231-955-3	Graphite	☒ Xi; R 36/37	2.5- 3 %

#### · Non-dangerous component:

CAS: 12597-69-2	Steel	15-20%
CAS: 7440-50-8 EINECS: 231-159-6	copper	2-4 %
CAS: 32131-17-2	Nylon-66	1- 2 %

(Contd. on page 2)

# Safety Data Sheet

Printing date: Dec.20th,2016

Revision: Dec.20th,2016

**Trade name:** Alkaline Battery LR6 LR03 LR20 LR14 6LR61

(Contd. of page 1)

- **Remark :**  
manganese dioxide (CAS No. 1313-13-9)  
Synonym:  $MnO_2$
- Zinc (CAS No. 7440-66-6)  
Synonym: Zn
- potassium hydroxide (CAS No. 1310-58-3)  
Synonym: KOH
- copper (CAS No. 7440-50-8)  
Synonym: Cu

## 4 First aid measures

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.

## 5 Fire-fighting measures

- **Suitable extinguishing agents:**  $CO_2$ , sand, extinguishing powder. Do not use water.
- **Protective equipment:**  
Wear fully protective suit.  
Wear self-contained respiratory protective device.  
Do not inhale explosion gases or combustion gases.

## 6 Accidental release measures

- **Person-related safety precautions:**  
Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation.  
Use respiratory protective device against the effects of fumes/dust/aerosol.  
Keep away from ignition sources.
- **Measures for environmental protection:**  
Do not allow product to reach sewage system or any water course.  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:** Do not flush with water or aqueous cleansing agents

## 7 Handling and storage

- **Handling**
- **Information for safe handling:**  
Ensure good ventilation/exhaustion at the workplace.  
Keep away from heat and direct sunlight.  
Open and handle receptacle with care.
- **Information about fire - and explosion protection:**  
Protect against electrostatic charges.  
Keep ignition sources away - Do not smoke.  
Keep respiratory protective device available.
- **Storage**
- **Requirements to be met by storerooms and receptacles:**  
Store in a cool location.  
Store only in the original receptacle.

(Contd. on page 3)

## Safety Data Sheet

Printing date: Dec.20th,2016

Revision: Dec.20th,2016

Trade name: Alkaline Battery LR6 LR03 LR20 LR14 6LR61

(Contd. of page 2)

- **Information about storage in one common storage facility:**

Store away from foodstuffs.  
Store away from flammable substances.

- **Further information about storage conditions:**

Keep container tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.

## 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **Ingredients with limit values that require monitoring at the workplace:**

### 1313-13-9 manganese dioxide (35-40%)

WEL (Great Britain)	5 mg/m <sup>3</sup> as Mn
PEL (USA)	Short-term value: C 5 mg/m <sup>3</sup> as Mn
REL (USA)	Short-term value: 3 mg/m <sup>3</sup> Long-term value: 1 mg/m <sup>3</sup> as Mn
TLV (USA)	0,2 mg/m <sup>3</sup> as Mn

### 1310-58-3 potassium hydroxide (5-9%)

WEL (Great Britain)	Short-term value: 2 mg/m <sup>3</sup>
REL (USA)	2 mg/m <sup>3</sup>
TLV (USA)	Short-term value: C 2 mg/m <sup>3</sup>

### 7440-50-8 copper (2-4,0%)

WEL (Great Britain)	Short-term value: 2** mg/m <sup>3</sup> Long-term value: 0,2* 1** mg/m <sup>3</sup> *fume **dusts and mists (as Cu)
PEL (USA)	1* 0,1** mg/m <sup>3</sup> as Cu *dusts and mists **fume
REL (USA)	Short-term value: II (2)** mg/m <sup>3</sup> Long-term value: 1* 0,1 R** mg/m <sup>3</sup> as Cu *dusts and mists **fume
TLV (USA)	Short-term value: (0,1)** mg/m <sup>3</sup> Long-term value: (1)* (02)** mg/m <sup>3</sup> *dusts and mists; **fume; as Cu

### 7782-42-5 Graphite (2,5-3%)

PEL (USA)	15 mppcf mg/m <sup>3</sup>
REL (USA)	2,5* mg/m <sup>3</sup> *respirable dust
TLV (USA)	2 R mg/m <sup>3</sup> all forms except graphite fibers

- **DNELs:** Not available.
- **PNECs:** Not available.
- **Additional information:** The lists valid during the making were used as basis.

- **Personal protective equipment**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.

- **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

(Contd. on page 4)

## Safety Data Sheet

Printing date: Dec.20th,2016

Revision: Dec.20th,2016

Trade name: Alkaline Battery LR6 LR03 LR20 LR14 6LR61

(Contd. of page 3)

· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

· **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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Safety glasses.

## 9 Physical and chemical properties

· **General Information:**

<b>Form:</b>	Solid
<b>Colour:</b>	Silvery
<b>Odour:</b>	Odourless

· **Change in condition:**

<b>Melting point/Melting range:</b>	Not available.
<b>Boiling point/Boiling range:</b>	Not available.

· **Flash point:** Not available.

· **Flammability (solid, gaseous):** Not available.

· **Ignition temperature:** Not available.

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

<b>Lower:</b>	Not available.
<b>Upper:</b>	Not available.

· **Oxidizing properties:** Not available.

· **Vapour pressure:** Not available.

· **Density:** Not available.

· **Relative density:** Not available.

· **Vapour density:** Not available.

· **Evaporation rate:** Not available.

· **Solubility in / Miscibility with water:** Not available.

· **pH-value:** Not available.

· **Segregation coefficient (n-octanol/water):** Not available.

· **Viscosity:**

**Dynamic:** Not available.

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(Contd. on page 5)

# Safety Data Sheet

Printing date: Dec.20th,2016

Revision: Dec.20th,2016

Trade name: Alkaline Battery LR6 LR03 LR20 LR14 6LR61

(Contd. of page 4)

## 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions:** No dangerous reactions known.
- **Dangerous decomposition products:** Heavy metal pollution: manganese, Zinc and copper.

## 11 Toxicological information

- **Acute toxicity**

- **LD/LC50 values relevant for classification:**

**1310-58-3 potassium hydroxide**

Oral	LD50	273 mg/kg (rat)
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- **Primary irritant effect**
- **on the skin:** Irritating effect possible.
- **on the eye:** Irritating effect possible.
- **Sensitization:** Sensitization possible.
- **Toxicokinetics, metabolism and distribution:** Not available.
- **Acute effects (acute toxicity, irritation and corrosivity):** Not available.
- **Repeated dose toxicity:** Not available.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):** Not available.

## 12 Ecological information

- **Information about elimination (persistence and degradability):** Not available.
- **Behaviour in environmental systems**
- **Mobility and bioaccumulation potential:** Not available.
- **Ecotoxicological effects**
- **Aquatic toxicity:** Not available.
- **Remark:** Very toxic for fish
- **General notes:**  
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
Very toxic for aquatic organisms
- **PBT assessments:** Not available.

## 13 Disposal considerations

- **Product**
- **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

Manganese dioxide battery is considered as "dry cell" battery and not to subject to hazardous materials and dangerous materials regulations for the transportation by U.S. Department of Transportation (US-DOT), the International Civil Organization (ICAO), the International Air Transport Association (IATA) or International Maritime Organization (IMO) and also is not classified as dangerous under the current edition of the IATA DANGEROUS GOODS REGULATIONS (Edition 57th), with complying to the Special Provision A123, and all applicable carrier and government regulations. During the transportation of batteries by ship, trailer or railway, do not leave them in the places of high temperature and do not allow densation. During transportation, do not allow packages to be fallen down or damaged.

(Contd. on page 6)

## Safety Data Sheet

Printing date: Dec.20th,2016

Revision: Dec.20th,2016

Trade name: Alkaline Battery LR6 LR03 LR20 LR14 6LR61

(Contd. of page 5)

· **Tunnel restriction code:** -· **Maritime transport IMDG**· **IMDG Class:** -· **UN Number:** -· **Label:** -· **Packaging group:** -· **EMS Number:** -· **Marine pollutant:** No· **Proper shipping name:** -· **Remarks:** The product is not subject to IMO IMDG Code.

The goods are packaged according to the packaging requirement of ordinary goods.

· **Air transport ICAO-TI and IATA-DGR**· **ICAO/IATA Class:** -· **UN/ID Number:** -· **Label:** -· **Packaging group:** -· **Proper shipping name:** -· **Remarks:** The product is not subject to IATA-DGR.

The goods are packaged according to the packaging requirement of ordinary goods.

**15 Regulatory information**· **Sara**· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

7440-50-8 copper

· **TSCA (Toxic Substances Control Act):**

1313-13-9 manganese dioxide

1310-58-3 potassium hydroxide

7782-42-5 Graphite

7440-50-8 copper

· **Proposition 65**· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Cancerogenity categories**· **EPA (Environmental Protection Agency):**

1313-13-9 manganese dioxide

D

7440-50-8 copper

D

· **IARC (International Agency for Research on Cancer):**

None of the ingredients is listed.

· **NTP (National Toxicology Program):**

None of the ingredients is listed.

(Contd. on page 7)

# Safety Data Sheet

Printing date: Dec.20th,2016

Revision: Dec.20th,2016

**Trade name: Alkaline Battery LR6 LR03 LR20 LR14 6LR61**

(Contd. of page 6)

**· TLV(Threshold Limit Value established by ACGIH):**

None of the ingredients is listed.

**· NIOSH-Ca(National Institute for Occupational Safety and Health):**

None of the ingredients is listed.

**· OSHA-Ca(Occupational Safety & Health Administration):**

None of the ingredients is listed.

**· Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

**· Code letter and hazard designation of product:**

N Dangerous for the environment

**· Hazard-determining components of labelling:**

manganese dioxide  
potassium hydroxide

**· Risk phrases:**

50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**· Safety phrases:**

1/2 Keep locked up and out of the reach of children.  
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
29/56 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.  
36/37/39 Wear suitable protective clothing, gloves and eyeface protection.  
43 In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.  
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**· National regulations:**
**· Waterhazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

## 16 Other information

**· Relevant R-phrases**

15 Contact with water liberates extremely flammable gases.  
17 Spontaneously flammable in air.  
20/22 Harmful by inhalation and if swallowed.  
22 Harmful if swallowed.  
35 Causes severe burns.  
36/37 Irritating to eyes and respiratory system.  
50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

\*\*\*\*\*  
The contents and format of this MSDS/SDS are in accordance with REGULATION (EC) No 1907/2006, EU Commission Directive 1999/45/EC, 67/548/EEC.

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