

## Safety Data Sheet

### Alkaline batteries

Issued:  
03/02/2025

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

Version: 1.0.0

##### 1.1. Product identifier

**Trade name:** Alkaline batteries

**Synonyms:** LR44  
LR1130  
MN21  
MN27  
MN9100

##### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Recommended uses:** According to REACH, the product is an article and is consequently not subject to the requirement for a safety data sheet.

**AC:** Electrical batteries and accumulators (AC3)

##### 1.3. Details of the supplier of the safety data sheet

###### Supplier

**Company:** LAKUDA ApS  
**Address:** Spettrupvej 1A  
**Zip code:** 8722  
**City:** Hedensted  
**Country:** DENMARK  
**E-mail:** sales@lakuda.dk  
**Phone:** 7640 7010

##### 1.4. Emergency Telephone Number

Members of the public: 111 (NHS 111 (Scotland: NHS 24))

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

**CLP-classification:** The product shall not be classified as hazardous according to the classification and labeling rules for substance and mixtures.

**Most serious harmful effects:** According to REACH, the product is an article and is consequently not subject to the requirement for a safety data sheet. The intact article does not pose any danger. This safety data sheet describes the danger of the mixture inside the article. Contact is only possible if the article is not intact. The mixture inside the article has the following hazardous characteristics:

Causes skin irritation.  
Causes serious eye damage.  
Causes damage to organs through prolonged or repeated exposure.  
Toxic to aquatic life with long lasting effects.

##### 2.2. Label elements

The product shall not be classified as hazardous according to the classification and labeling rules for substance and mixtures.

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#### Supplemental information

According to REACH the product is an article and thus not subject to the requirements regarding labelling.

#### 2.3. Other hazards

PBT/VPvB: No assessment required, as the product contains inorganic matter only.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

Composition information			
Common Chemical Name	Chemical Formula	CAS CAS No.	Wt %
Manganese Dioxide	MnO <sub>2</sub>	1313-13-9	22.93
Zinc	Zn	7440-66-6	11.29
Iron	Fe	7439-89-6	49.5
Potassium Hydroxide	KHO	71769-53-4	3.07
Graphite	C	7782-42-5	3.06
F:water	H <sub>2</sub> O	7732-18-5	5.24
G:Nyon66	C <sub>12</sub> H <sub>22</sub> O <sub>2</sub>	32131-17-2	2.94
Diaphragm	CHFN <sub>a2</sub> O <sub>8</sub> P	-	0.85
Other	-	-	1.12
Lead	Pb	7439-92-1	Not Detected
Cadmium	Cd	7440-43-9	Not Detected
Mercury	Hg	7439-97-6	Not Detected

Please see section 16 for the full text of H-phrases.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

<b>Inhalation:</b>	Seek fresh air. Seek medical advice in case of persistent discomfort.
<b>Ingestion:</b>	Wash out mouth thoroughly and drink 1-2 glasses of water in small sips. Do not induce vomiting. Seek medical advice in case of discomfort.
<b>Skin contact:</b>	Immediately remove contaminated clothing. Wash skin with soap and water. Seek medical advice in case of persistent discomfort.
<b>Eye contact:</b>	Open eye wide, remove any contact lenses and flush immediately with water (preferably using eye wash equipment). Seek medical advice immediately. Continue flushing until medical attention is obtained.
<b>General:</b>	When obtaining medical advice, show the safety data sheet or label.

#### 4.2. Most important symptoms and effects, both acute and delayed

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Irritating to skin - may cause reddening. Eye contact may result in deep caustic burns, pain, tearing and cramping of the eyelids. Risk of serious eye injury and loss of sight. Causes damage to organs through prolonged or repeated exposure.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptoms. No special immediate treatment required.

### SECTION 5: Fire-fighting measures

#### 5.1. Extinguishing media

**Suitable extinguishing media:** Extinguish with powder, foam, carbon dioxide or water mist. Use water or water mist to cool non-ignited stock.

**Unsuitable extinguishing media:** Do not use water stream, as it may spread the fire.

#### 5.2. Special hazards arising from the substance or mixture

Hazardous fumes are formed in fire conditions.

#### 5.3. Advice for fire-fighters

Wear Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Move containers from danger area if it can be done without risk. Avoid inhalation of vapour and flue gases - seek fresh air.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel:** Wear gloves. Wear safety goggles if there is a risk of eye splash. Provide good ventilation.

**For emergency responders:** In addition to the above: Protective suit equivalent to EN 368, type 3, is recommended.

#### 6.2. Environmental precautions

Prevent spillage from entering drains and/or surface water.

#### 6.3. Methods and material for containment and cleaning up

Wipe up minor spills with a cloth. Rinse with water.

#### 6.4. Reference to other sections

See section 8 for type of protective equipment.

See section 13 for instructions on disposal.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Avoid contact with skin and eyes. Running water and eye wash equipment should be available. Wash hands before breaks, before using restroom facilities, and at the end of work.

#### 7.2. Conditions for safe storage, including any incompatibilities

Do not expose to heat (e.g. sunlight). Storage temperature: 15 - 25 °C. Store in a dry area.

#### 7.3. Specific end use(s)

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None.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limit

Substance name	Time period	ppm	mg/m <sup>3</sup>	fiber/cm <sup>3</sup>	Comments	Remarks
potassium hydroxide	15m		2			

**Measuring methods:** Compliance with the stated occupational exposure limits may be checked by occupational hygiene measurements.

**Legal basis:** EH40/2005 Workplace exposure limits. Last amended January 2020.

### 8.2. Exposure controls

**Appropriate engineering controls:** Wear the personal protective equipment specified below.

**Personal protective equipment, eye/face protection:** Wear safety goggles if there is a risk of eye splash. Eye protection must conform to EN 166.

**Personal protective equipment, hand protection:** Wear gloves. Type of material: Neoprene rubber/ Nitrile rubber/ Latex. Gloves must conform to EN 374. Breakthrough time has not been determined for the product. Change gloves often.

**Personal protective equipment, respiratory protection:** Not required.

**Environmental exposure controls:** Ensure compliance with local regulations for emissions.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Parameter	Value/unit
State	Liquid
Colour	N/A
Odour	N/A
Solubility	N/A
Explosive properties	N/A
Oxidising properties	N/A

Parameter	Value/unit	Remarks
pH (solution for use)	No data	
pH (concentrate)	No data	
Melting point	No data	
Freezing point	No data	
Initial boiling point and boiling range	No data	
Flash Point	No data	
Evaporation rate	No data	
Flammability (solid, gas)	No data	
Flammability limits	No data	
Explosion limits	No data	

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Vapour pressure	No data	
Vapour density	No data	
Relative density	No data	
Partition coefficient n-octanol/water	No data	
Auto-ignition temperature	No data	
Decomposition temperature	No data	
Viscosity	No data	
Odour threshold	No data	

#### 9.2 Other information

Other Information: None.

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No known data.

#### 10.2. Chemical stability

The product is stable when used in accordance with the supplier's directions.

#### 10.3. Possibility of hazardous reactions

None known.

#### 10.4. Conditions to avoid

Do not expose to heat (e.g. sunlight). Avoid contact with moisture and water.

#### 10.5. Incompatible materials

Strong oxidisers.

#### 10.6. Hazardous decomposition products

None, if stored at the recommended storage conditions. Product decomposes in fire conditions or when heated to high temperatures, and inflammable and toxic gases may be released.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Acute toxicity - oral

##### manganese dioxide, cas-no 1313-13-9

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		> 3478mg/kg			

##### potassium hydroxide, cas-no 1310-58-3

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		> 273mg/kg			

The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

**Acute toxicity - dermal:** The product does not have to be classified. Test data are not available.

**Acute toxicity - inhalation:** The product does not have to be classified. Test data are not available.

**Skin corrosion/irritation:** Irritating to skin - may cause reddening.

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<b>Serious eye damage/eye irritation:</b>	Eye contact may result in deep caustic burns, pain, tearing and cramping of the eyelids. Risk of serious eye injury and loss of sight.
<b>Respiratory sensitisation or skin sensitisation:</b>	The product does not have to be classified. Test data are not available.
<b>Germ cell mutagenicity:</b>	The product does not have to be classified. Test data are not available.
<b>Carcinogenic properties:</b>	The product does not have to be classified. Test data are not available.
<b>Reproductive toxicity:</b>	The product does not have to be classified. Test data are not available.
<b>Single STOT exposure:</b>	The product does not have to be classified. Test data are not available.
<b>Repeated STOT exposure:</b>	Causes damage to organs through prolonged or repeated exposure.
<b>Aspiration hazard:</b>	The product does not have to be classified. Test data are not available.

## SECTION 12: Ecological information

### 12.1. Toxicity

Toxic to aquatic life with long lasting effects.

### 12.2. Persistence and degradability

Test data are not available.

### 12.3. Bioaccumulative potential

Test data are not available.

### 12.4. Mobility in soil

Test data are not available.

### 12.5. Results of PBT and vPvB assessment

No assessment required, as the product contains inorganic matter only.

### 12.6. Other adverse effects

None known.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

If this product as supplied becomes a waste, it does not meet the criteria of a hazardous waste (Dir. 2008/98/EU). Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

**Category of waste:** EWC code: Depends on line of business and use, for instance 16 06 04 alkaline batteries (except 16 06 03)

## SECTION 14: Transport information

**14.1. UN-No.:** Not applicable. **14.4. Packing group:** Not applicable.

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**14.2. UN proper shipping name:**

Not applicable.

**14.5. Environmental hazards:**

Not applicable.

**14.3. Transport hazard class(es):**

Not applicable.

#### 14.6. Special precautions for user

None.

#### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable.

### SECTION 15: Regulatory information

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

**Special Provisions:**

None.

#### 15.2. Chemical Safety Assessment

**Other Information:**

Chemical safety assessment has not been performed.

### SECTION 16: Other information

#### Version history and indication of changes

Version	Revision date	Responsible	Changes
1.0.0	04/03/2021	KDCL/Joblife a/s	

**Abbreviations:**

PBT: Persistent, Bioaccumulative and Toxic  
STOT: Specific Target Organ Toxicity  
vPvB: Very Persistent and Very Bioaccumulative

**Other Information:**

This safety data sheet has been prepared for and applies to this product only. It is based on our current knowledge and the information that the supplier was able to provide about the product at the time of preparation. The safety data sheet complies with applicable law on preparation of safety data sheets in accordance with 1907/2006/EC (REACH) as subsequently changed.

**Training advice:**

A thorough knowledge of this safety data sheet should be a prerequisite condition.

**Classification method:**

Calculation based on the hazards of the known components.

#### List of relevant H-statements

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H351	Suspected of causing cancer.
H360D	May damage the unborn child.
H360Fd	May damage fertility. Suspected of damaging the unborn child.
H360FD	May damage fertility. May damage the unborn child.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H362	May cause harm to breast-fed children.
H372	Causes damage to organs through prolonged or repeated exposure.



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H400

Very toxic to aquatic life.

H410

Very toxic to aquatic life with long lasting effects.

**Document language:**

GB